Ted Kaczynski's Letter Correspondence With David Skrbina

Ted Kaczynski, David Skrbina

2003—2005

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From Skrbina to Ted — 2003

DAVID: The letters the 1st letter I wrote to him was in late 2003. I was teaching a course in environmental ethics and one of the root causes of environmental damage is technology, so I was. Pursuing that. The area of interest to what extent and how precisely does technology impact the environment. It was about the same time that I was developing a new course at University of Michigan on the philosophy of technology. So I was compiling arguments pro and con historical critiques looking at what philosophers had thought over over history about technology and then up to the current times. I was curious, even the most recent critics, what they were thinking and saying so. That naturally raised the question of Kaczynski, his manifesto, which I obviously had read when it came out in 1996.

SEAN: When it was published by the New York Times and the Washington Post, exactly.

DAVID: And I had known that this was 2003, so this was several years after he was incarcerated. Several years after his trial, which lingered on for about a year after he was arrested and we heard really almost nothing from him or about him. So I'd heard somehow rumblings that he was still active. He was still writing, he was still corresponding with people, and I was curious what that process was like, and. I was pretty sure I wasn't going to get that from the mainstream media, so I said, well, the only way to know what's going on. Is I have to write? To him myself, so I wrote directly to him in late 2003. Not really expecting answer. And having no experience writing to prisoners before.

SEAN: Do you remember what you said?

DAVID: I just introduced myself, I told him who I was, I had a PhD in philosophy. I had also have a Masters degree in mathematics from University of Michigan, and of course Ted Kaczynski has his math degree from University of Michigan. So we had that in common. I told him I was a philosopher. Now working in the philosophy of technology and I had several questions and it was just general things, did he...? Because I knew nothing, did he admit to writing the manifesto? Did he have any assistance? What was this cryptic acronym, FC? What did this stand for? What was life like in a supermax prison? I didn't know any of those things and among those other things I also asked him about writings. So I said.

SEAN: 'Is is he still writing?'

DAVID: Yeah, so this was in 2003. So I was asking him, are you still writing? Are you active? Are you able to correspond and if so can you tell me something? And again, I was expecting no answer. But it was only about two or three weeks later I got a short one page letter from him back saying thanks for your letter, they were good questions and I will write you a longer letter soon, wait.

From Ted to Skrbina — January 2, 2004

I've been able to identify only three ways (apart from modest reforms) in which human beings' intentions concerning the future of their own society can be realized successfully:

(i) Intelligent administration can prolong the life of an existing social order. (E.g., if 19th-century Russian Tsars had been a great deal less competent than they were, tsarism might have broken down earlier than it did. If Nicholas II had been a great deal more competent than he was, tsarism might have lasted a few decades longer.)

(ii) Revolutionary action can bring about, or at least hasten, the breakdown of an existing social order. (E.g., if there had been no revolutionary movement in Russia, a new Tsar would doubtless have been appointed on the abdication of Nicholas II and tsarism would have survived for a while.)

(iii) An existing social order can sometimes be extended to encompass additional territory. (E.g., the social order of the West was successfully extended to Japan following World War II.)

If I'm right, and if we want to exert any rational influence (beyond modest reforms) on the future of our own society, then we have to choose one of the foregoing alternatives.

From Ted to Skrbina — August 29, 2004

You sent me a copy of Bill Joy's article "Why the Future Doesn't Need Us," and you said you would be interested in my assessment of it. I read the article soon after it came out. I had already read elsewhere of most of the technological hazards described by Joy, but I considered his article useful because it gave further information about such hazards. Also, the fact that even a distinguished technophile like Bill Joy is scared about where technology is taking us should help to persuade people that the dangers of technology are real. Apart from that I was unimpressed by Joy's article. I assume that his technical expertise is solid, but it seems to me that his understanding of human nature and of how human societies work is at a naive level. A couple of people who wrote to me about the article expressed similarly unenthusiastic opinions of it.

To give an example of what I consider to be Joy's naiveté, he writes:

"Verifying compliance will also require that scientists and engineers adopt a strong code of ethical conduct...and that they have the courage to whistleblow as necessary, even at high personal cost.... [T]he Dalai Lama argues that the most important thing is for us to conduct our lives with love and compassion for others, and that our societies need to develop a stronger notion of universal responsibility and of our interdependency...."

If Bill Joy thinks that anything will be accomplished by this kind of preaching, then he is out of touch with reality. This part of his article would be funny if what is at stake weren't so desperately serious.

I've reread Joy's article to see if I had been missing anything, but I found that my impression of it was the same as before. Of course, it's possible that the article has merits that I've overlooked.

# # #

I don't particularly consider small-scale technology to be acceptable; it's simply inevitable. See ISAIF, paragraphs 207-212. I see no way of getting rid of it. People can't use organization-dependent technology if the social organization breaks down. E.g., you can't drive a car if the refineries aren't producing gasoline. But how could people be prevented from using small-scale technology? E.g., working steel, building a water-wheel, or ploughing and planting fields?

You ask whether I would consider a primitive steam-engine to be small-scale technology. To give a confident answer I would have to know more than I do about primitive steam-engines and their possible applications, but I think that steam-engines probably cannot be small-scale technology. "[Newcomen steam-engines'] heavy fuel consumption made them uneconomical when used where coal was expensive, but in the British coalfields they performed an essential service by keeping deep mines clear of water...."[1] An autonomous local community, without outside assistance, would find it very difficult to build an adequate steam-engine, and the engine probably would be of little use to such a community. Considering the effort required to build and maintain the engine, to produce oil to lubricate it, and to collect firewood to fuel it, any work the engine might do for a small community could probably be done more efficiently with human or animal muscle-power. Steam engines very likely could have been invented much earlier than they were, but—I would guess—they would have been of little use until certain 17th-and 18th-century economic and technological developments offered work for which steam engines were appropriate.

# # #

I'm quite sure that it will be impossible to control post-revolution conditions, but I think you're quite right in saying that a "positive social vision" is necessary. However, the social ideal I would put forward is that of the nomadic hunting-and-gathering society.

First, I would argue that in order to be successful a revolutionary movement *has* to be extremist. Jacques Ellul says somewhere that a revolution must take as its ideal

[1] *Encyclopœdia Britannica*, 15th Ed., 2003, Vol. 28, article "Technology," p. 451.

the opposite of what it intends to overthrow.[2] Trotsky wrote: "The different stages of a revolutionary process [are] certified by a change of parties in which the more extreme always supersedes the less...."[3] The nomadic hunting-and-gathering society recommends itself as a social ideal because it is at the opposite extreme of human culture from the technological society.

Second, if one takes the position that certain appurtenances of civilization must be saved, e.g., cultural achievements up to the 17th century, then one will be tempted to make compromises when it comes to eliminating the technoindustrial system, with the possible or probable result that one will not succeed in eliminating the system at all. If the system breaks down, what will happen to the art museums with their priceless paintings and statues?

Or to the great libraries with their vast stores of books? Who will take care of the artworks and books when there are no organizations large enough and rich enough to hire curators and librarians, as well as policemen to prevent looting and vandalism? And what about the educational system? Without an organized system of education, children will grow up uncultured and perhaps illiterate. Clearly, anyone who feels it is important to preserve human cultural achievements up to the 17th century will be very reluctant to see a complete breakdown of the system, hence will look for a compromise solution and will not take the frankly reckless measures that are necessary to knock our society off its present technological-determined course of development. Hence, only those can be effective revolutionaries who are prepared to dispense with the achievements of civilization.

Third, to most people, a hunting-and-gathering existence will appear much more attractive than that offered by preindustrial civilization. Even many modern people enjoy hunting, fishing, and gathering wild fruits and nuts. I think few would enjoy such tasks as ploughing, hoeing, or threshing. And in civilized societies the majority of the population commonly have been exploited in one way or another by the upper classes: If they were not slaves or serfs, then they often were hired laborers or tenant-farmers subject to the domination of landowners. Preindustrial civilized societies often suffered from disastrous epidemics or famines, and the common people in many cases had poor nutrition. In contrast, hunter-gatherers, except in the far north, generally

[2] Or something to that effect. This is probably from Ellul's *Autopsy of Revolution*. Here, and in any letter I may write you, please bear in mind the caveat about the unreliability of memory that I mentioned in an earlier letter. Whenever I fail to cite a source, down to the page number, for any fact I state, you can assume that I'm relying for that fact on my (possibly wrong) memory of something I've read (possibly many years ago), unless the fact is common knowledge or can be looked up in readily available sources such as encyclopedias or standard textbooks."

[3] Leon Trotsky, *History of the Russian Revolution*, trans. by Max Eastman, 1980 ed., Vol. One, pp. xviii-xix.

had good nutrition.[4] Famines among them were probably rare.[5] They were relatively little troubled by infectious diseases until such diseases were introduced among them by more "advanced" peoples.[6] Slavery and well-developed social hierarchies could exist among *sedentary* hunter-gatherers, but (apart from the tendency of women to be in some degree subordinate to men), *nomadic* hunter-gatherer societies typically (not always) were characterized by social equality, and normally did not practice slavery. (Though I know of one exception: Apparently some Cree Indians who were probably hunter-gatherers did take slaves.)[7]

Just in case you've read anarcho-primitivist writings that portray the hunter-gatherer lifestyle as a kind of politically correct Garden of Eden where no one ever had to work more than 3 hours a day, men and women were equal, and all was love, cooperation and sharing, that's just a lot of nonsense, and at your request I'll prove it with numerous citations to the literature. But even when one discounts the anarcho-primitivists' idealized version and takes a hard-headed look at the facts, nomadic hunter-gatherer societies seem a great deal more attractive than preindustrial civilized ones.

I imagine that your chief objection to hunter-gatherer societies as opposed to (for example) late medieval or Renaissance European civilization would be their relatively very modest level of cultural achievement (in terms of art, music, literature, scholarship, etc.). But I seriously doubt that more than a small fraction of the population of modern industrial society cares very much about that kind of cultural achievement.

Hunter-gatherer society moreover has proved its appeal as a social ideal: Anarcho-primitivism seems to have gained wide popularity. One can hardly imagine equal success for a movement taking as its ideal—for example—late medieval society. Of course, one has to ask to what extent the success of anarcho-primitivism is dependent on its idealized portrayal of hunter-gatherer societies. My guess, or at least my hope, is that certain inconvenient aspects of hunter-gatherer societies (e.g., male dominance, hard work) would turn off the leftists, the neurotics, and the lazies but that such societies, depicted realistically, would remain attractive to the kind of people who could be effective revolutionaries.

I don't think that a worldwide return to a hunting-and-gathering economy would actually be a plausible outcome of a collapse of industrial society. No ideology will persuade people to starve when they can feed themselves by planting crops, so presumably agriculture will be practiced wherever the soil and climate are suitable for it. Reversion

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[4] E.g., Elizabeth Cashdan, "Hunters and Gatherers: Economic Behavior in Bands," in S. Plattner (editor), *Economic Anthropology*, 1989, pp. 22-23.

[5] "In every well-documented instance, cases of hardship [=starvation. may be traced to the intervention of modern intruders." Carleton S. Coon, *The Hunting Peoples*, 1971, pp. 388-89.

[6] I take this to be "common knowledge" among anthropologists. However, I have little specific information on this subject.

[7] *Encyclopœdia Britannica*, 15th ed., 1997, Vol. 10, article "Slave," p. 873.

to hunting and gathering as the sole means of subsistence could occur only in regions unsuitable for agriculture, e.g., the subarctic, arid plains, or rugged mountains.

# # #

I'm not terribly interested in questions of values of the kind you discuss here, such as "herd values" versus the "will to power." As I see it, the overwhelmingly dominant problem of our time is that technology threatens either to destroy the world or to transform it so radically that all past questions of human values will simply become irrelevant, because the human race, as we have known it, will no longer exist. I don't mean that the human race necessarily will become physically extinct (though that is a possibility), but that the way human beings function socially and psychologically will be transformed so radically as to make traditional questions of values practically meaningless. The old-fashioned conformist will become as obsolete as the old-fashioned individualist.

Since this is the most critical juncture in the history of the human race, all other issues must be subordinated to the problem of stopping the technological juggernaut before it is too late. If I advocate a break with conventional morality, I do so not because I disapprove of the herd mentality, but because conventional morality acts as a brake on the development of an effective revolutionary movement. Furthermore, any effective revolutionary movement probably has to make use of the herd mentality. Imitativeness is part of human nature, and one has to work with it rather than preach against it.

Possibly you misinterpret my motives for emphasizing the "power process." The purpose of doing so is not to exalt the "will to power." There are two main reasons for discussing the power process. First, discussion of the power process is necessary for the analysis of the psychology of the people whom I call "leftists." Second, it is difficult to get people excited about working to avoid a future evil. It is less difficult to get people excited about throwing off a *present* evil. Discussion of the power process helps to show people how a great deal of *present* dissatisfaction and frustration results from the fact that we live in a technological society.

I should admit, though, that I personally am strongly inclined to individualism. Ideally, I shouldn't allow my individualistic predilections to influence my thinking on revolutionary strategy but should arrive at my conclusions objectively. The fact that you have spotted my individualistic leanings may mean that I have not been as objective as I should have been.

But even leaving aside all questions of "political" utility and considering only my personal predilections, I have little interest in philosophical questions such as the desirability or undesirability of the "herd mentality." The mountains of Western Montana offered me nearly everything I needed or wanted. If those mountains could have remained just as they were when I first moved to Montana in 1971, I would have been satisfied. The rest of the world could have had a herd mentality, or an individualistic

mentality or whatever, and it would have been all the same to me. But, of course, under modern conditions there was no way the mountains could have remained isolated from the rest of the world. Civilization moved in and squeezed me, so.....

# # #

Yes, growth in the population of nations and increasing racial/ethnic diversity no doubt affected social values. But increasing racial/ethnic diversity was unquestionably a consequence of technological events, namely, the development of relatively safe and efficient sailing ships, along with economic (therefore also technological) factors that provided incentives to trade, travel, and migrate widely. Presumably, population growth too was dependent on technological factors, such as improvements in agriculture that made it possible to feed more people.

# # #

I'll draw a distinction between a revolutionary movement and a reform movement. The distinction is not valid in all situations, but I think it is valid in the present situation.

The objective of a revolutionary movement, as opposed to a reform movement, is not to make piecemeal corrections of various evils of the social order. The objectives of a revolutionary movement are (i) to build its own strength, and (ii) to increase the tension within the social order until those tensions reach the breaking point.

Correcting this or that social evil is likely to *decrease* the tensions within the social order. This is the reason for the classic antagonism between revolutionary movements and reform movements.

Generally speaking, correction of a given social evil serves the purposes of a revolutionary movement only if it (a) constitutes a victory for the revolutionary movement that enhances the movement's prestige, (b) represents humiliating defeat for the existing social order, (c) is achieved by methods that, if not illegal, are at least offensive to the existing order, and (d) is widely perceived as a step toward dissolution of the existing order.

In the particular situation that the world faces today, there may be also another case in which partial or piecemeal correction of a social evil may be useful: It may buy us time. For example, if progress in biotechnology is slowed, a biological catastrophe will be less likely to occur before we have time to overturn the system.

# # #

To address specifically your argument that a focus on population reduction is appropriate, at least as an "ancillary approach," I disagree for two reasons:

(I) An effort to reduce population would be futile. (II) Even if it could be achieved, population reduction would accomplish nothing against the system. For these reasons,

a focus on population reduction would waste time and energy that should be devoted to efforts that are more useful.

(I) If you were as old as I am and had watched the development of our society for 50 years, I don't think you would suggest a campaign against population growth. It has been tried and it has failed. Back in the 1960s and early 1970s, concern about "the population problem" was "in." There was even a national organization called "Zero Population Growth" whose goal was its name. Of course, it never accomplished anything. In those days, the fact that population was a problem was a new discovery, but nowadays it's "old hat," people are blasé, and it's much harder to get people aroused about population than it was back in the 1960s. Especially since the latest predictions are that world population will level off at about 9 billion some time around the middle of this century. Such predictions are unreliable, but they nevertheless reduce anxiety about runaway population growth.

In any case, you could never get large numbers of people to have fewer children simply by pointing out to them the problems caused by overpopulation. As professional propagandists are well aware, reason by itself is of little use for influencing people on a mass basis.[8] To have any substantial effect, you would have to resort to the system's own techniques of propaganda. By dirtying its hands in this way, an anti-system movement would perhaps discredit itself. Anyhow, it's wildly improbable that such a movement could be rich enough to mount an effective worldwide or even nationwide campaign to persuade people to have fewer children. "Propaganda that aims to induce major changes is certain to take great amounts of time, resources, patience, and indirection, except in times of revolutionary crisis when old beliefs have been shattered...."[9] The *Encyclopædia Britannica* Macropædia article "Propaganda" provides a good glimpse of the technical basis of modern propaganda, hence an idea of the vast amount of money you would need in order to make any substantial impression on the birthrate through persuasion. "Many of the bigger and wealthier propaganda agencies...conduct 'symbol campaigns' and 'image-building' operations with mathematical calculation, using quantities of data that can be processed only by computers...,"[10] etc.,etc.. (This should lay to rest your suggestion that "Propaganda can be opposed by counter-propaganda." Unless you have billions of dollars at your disposal, there's no way you can defeat the system in a head-on propaganda contest. A revolutionary movement has to find other means of making an impact.)

How difficult it would be to reduce the birthrate can be seen from the fact that the Chinese government has been trying to do that for years.

According to the latest reports I've heard (several years ago), they've had only very limited success, even though they have vastly greater resources than any revolutionary movement could hope to have.

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[8] *Ibid.*, Vol. 26, article "Propaganda," pp. 175-76 ("The propagandist must realize that neither rational arguments nor catchy slogans can, by themselves, do much to influence human behavior. ")

[9] *Ibid.*, p. 176.

[10] *Ibid.*, p. 174.

Furthermore, a campaign against having children could be a kind of suicide for a movement. The people who were with you wouldn't have children, your opponents *would* have children. Since the political orientation of children tends statistically to resemble that of their parents, your movement would get weaker with each generation.

And, to put it bluntly, a revolutionary movement needs an enemy, it needs someone or something to hate. If you are working against overpopulation, then who is your enemy? Pregnant women? I don't think that would work very well.

(II) Even assuming you could reduce the birthrate, a population decline would be of little use and might well be counterproductive. I fail to understand your statement (page 7 of your letter) that population growth "seems to drive the whole technoindustrial process forward at an accelerating rate." Population increase no doubt is an important stimulus for economic growth, but it's hardly a decisive factor. In developed countries, economic growth probably occurs more through increasing demand for goods and services on the part of each individual than through an increase in the number of individuals. In any case, do you seriously believe that scientists would stop developing supercomputers and biological technology if the population started to decline? Of course, scientists need financial support from large organizations such as corporations and governments. But the large organizations' support for research is driven not by population growth but by competition for power among the large organizations.

So I think we can say that population is a dependent variable, technology is the independent variable. It's not primarily population growth that drives technology, but technology that makes population growth possible. Furthermore, because overcrowding makes people uncomfortable and increases stress and aggression, a reduction of population would tend to decrease the tensions in our society, hence would be contrary to the interests of a revolutionary movement, which, as already noted, needs to *increase* social tension. Even in the unlikely event that a victory on the population issue could be achieved, I don't think it would satisfy any of the conditions (b), (c),

(d) that I listed earlier in this letter. Arguably, population decline could "buy us time" in the sense I've mentioned, but when this is weighed against the other factors I've just described I think the balance comes down decisively against an effort to reduce population. But a revolutionary movement can make use of the population issue by pointing to overpopulation as one of the negative consequences of technological progress.

# # #

I don't think the U.S. situation is as unique as you do. In any case, I wouldn't emphasize the U.S. situation, because there are too many people who are too ready to focus on the U.S. as the world's villain. I'm not a patriot and not particularly interested in defending the U.S. But obsessive anti-Americanism distracts attention from the technology problem just as the issues of sexism, racism, etc., do. Given the present global technological and economic situation, if the U.S. weren't playing the

role of the world's bully then probably some other country or group of countries would be doing so. And if the Russians, for example, were playing that role, I suspect they would play rougher than the U.S. does.

I'm not sure exactly what you mean by your final remark that there are "many roads to revolution." But I would argue that a revolutionary movement can't afford to be diverse and eclectic. It must be flexible, and up to a point must allow for dissent within the movement. But a revolutionary movement needs to be unified, with a clear doctrine and goals. I believe that a catchall movement that tries to embrace simultaneously all roads to revolution will fail. A couple of cases in point:

A. Under the Roman Empire there were several salvational religious movements analogous to Christianity. You'll find a discussion of this in Jerome Carcopino's *Daily Life in Ancient Rome*. It seems that, with the exception of Christianity, all of these religious movements were syncretistic and mutually tolerant; one could belong to more than one of them.[11] Only

Christianity required exclusive devotion. And I don't have to tell you which religion became in the end the dominant religion of Europe.

B. In the early stage of the Russian Revolution of 1917, the Social Revolutionary Party was dominant; the Bolshevik Party was small and isolated. But the Social Revolutionary Party was a catch-all party that took in everyone who was vaguely in favor of the revolution. "To vote for the Social Revolutionaries meant to vote for the revolution in general, and involved no further obligation."[12] The Bolsheviks, in contrast, were reasonably unified and developed a program of action with clear goals. "The Bolsheviks acted, or strove to act...like uncompromising revolutionists."[13] And in the end it was the Bolsheviks, not the Social Revolutionaries, who determined the outcome of the revolution.

From Ted to Skrbina — September 18, 2004

I think that as a preliminary to answering your letter of July 27, it would be a good idea for me to give a more detailed outline of the "road to revolution" that I envision. The "road" is of course speculative. It's impossible to foretell the course of events, so any movement aspiring to get rid of the technoindustrial system will have to be flexible and proceed by trial and error. It's nevertheless necessary to give a *tentative* indication of the route to be followed, because without some idea of where it is going the movement will flounder around aimlessly. Also, an outline of at least a *possible* route to revolution helps to make the idea of revolution seem plausible. Probably the biggest current obstacle to the creation of an effective revolutionary movement is the

[11] *Encyclopædia Britannica*, 15th ed., 2003, Vol. 16, article "Christianity," p. 261.

[12] Trotsky, *op. cit.*, Vol. One, p. 223.

[13] *Ibid.*, p. 324. On this subject generally, see *Ibid.*, pp. 223-331.

mere fact that most people (at least in the U.S.) don't see revolution as a plausible possibility.

In the first place, I believe that illegal action will be indispensable.

I wouldn't be allowed to mail this letter if I appeared to be trying to incite illegal action, so I will say only this much about it: A revolutionary movement should consist of two separate and independent sectors, an illegal, underground sector, and a legal sector. I'll say nothing about what the illegal sector should do. The legal sector (if only for its own protection) should carefully avoid any connection with the illegal sector.

With the possible exceptions listed in my letter of 08/29/04, the function of the legal sector would not be to correct any evils of technology. Instead, its function would be to prepare the way for a future revolution, to be carried out when the right moment arrives.

Advance preparation is especially important in view of the fact that the occasion for revolution may arrive at any time and quite unexpectedly.

The spontaneous insurrection in St. Petersburg in February 1917 took all of Russia by surprise. It is safe to say that this insurrection (if it had occurred at all) would have been no more than a massive but purposeless outburst of frustration if the way to revolution had not been prepared in advance. As it happened, there was already in existence a strong revolutionary movement that was in a position to provide leadership, and the revolutionaries moreover had for a long time been educating (or indoctrinating) the workers of St.

Petersburg so that when the latter revolted they were not merely expressing senseless anger, but were acting purposefully and more or less intelligently.[14]

In order to prepare the way for revolution, the legal sector of the movement should:

(I) Build its own strength and cohesiveness. Increasing its *numbers* will be far less important than collecting members who are loyal, capable, deeply committed, and prepared for practical action. (The example of the Bolsheviks is instructive here.)[15]

(II) Develop and disseminate an ideology that will (a) show people how many dangers the advance of technology presents for the future; (b) show people how many of their present problems and frustrations derive from the fact that they live in a technological society; (c) show people that there have existed past societies that have been more or less free of these problems and frustrations; (d) offer as a positive ideal a life close to nature; and (e) present revolution as a realistic alternative.[16]

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[14] Trotsky, *op. cit.*, Vol. One, Chapter VIII, pp. 136-152.

[15] See Trotsky, *op. cit.*, or any history of Russia during the relevant period.

[16] Admittedly, one would have to stretch a point to say that (II) here is identical with the second objective for a revolutionary movement that I listed in my letter of 8/29/04: "to increase the tensions within the social order until those tensions reach the breaking point." But one thing I've learned about expository writing is that too much precision is counterproductive. In order to be understood one has to simplify as much as possible, even at the cost of precision. For the purposes of my letter of 8/29/04, the point I needed to emphasize was that a revolutionary movement has to increase social tensions rather than relieving them through reform. If I had given a more detailed and precise account of the task of a revolutionary movement, as in the present letter, it would only have distracted attention from the point

The utility of (II) is as follows:

As matters stand at the moment, revolution in the stable parts of the industrialized world is impossible. A revolution could occur only if something happened to shake the stability of industrial society. It is easy to imagine events or developments that could shake the system in this way. To take just one example, suppose a virus created in an experimental laboratory escaped and wiped out, say, a third of the population of the industrialized world. But if this happened *now*, it hardly seems possible that it could lead to revolution. Instead of blaming the technoindustrial system as a whole for the disaster, people would blame only the carelessness of a particular laboratory. Their reaction would be not to dump technology, but to try to pick up the pieces and get the system running again—though doubtless they would enact laws requiring much stricter supervision of biotechnological research in the future.

The difficulty is that people see problems, frustrations, and disasters in isolation rather than seeing them as manifestations of the one central problem of technology. If Al Qaeda should set off a nuclear bomb in Washington, D.C., people's reaction will be, "Get those terrorists!" They will forget that the bomb could not have existed without the previous development of nuclear technology. When people find their culture or their economic welfare disrupted by the influx of large numbers of immigrants, their reaction is to hate the immigrants rather than take account of the fact that massive population movements are an inevitable consequence of economic developments that result from technological progress. If there is a worldwide depression, people will blame it merely on someone's economic mismanagement, forgetting that in earlier times when small communities were largely self-sufficient, their welfare did not depend on the decisions of government economists. When people are upset about the decay of traditional values or the loss of local autonomy, they preach against "immorality" or get angry at "big government," without any apparent awareness that the loss of traditional values and of local autonomy is an unavoidable result of technological progress.

But, if a revolutionary movement can show a sufficient number of people how the foregoing problems and many others all are outgrowths of one central problem, namely, that of technology, and if the movement can successfully carry out the other tasks listed under (II), then, in case of a shattering event such as the epidemic mentioned above,[17] or a worldwide depression, or an accumulation of diverse factors that make life difficult or insecure, a revolution against the technoindustrial system may be possible.

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that I needed to make in my letter of 8/29/04. So I beg your indulgence for my failure to be perfectly consistent in this instance.

[17] The suggestion that a biotechnological accident could provide a trigger for revolution is in tension with my earlier suggestion (letter of 8/29/04, page 12) that it might be desirable to slow the progress of biotechnology in order to postpone any biotechnological catastrophe. On the one hand, such a catastrophe might be so severe that afterward there would be nothing left to save; on the other hand, a lesser catastrophe might provide the occasion for revolution. It's arguable which consideration should be given more weight. But on the whole I think it would be best to try to slow the progress of biotechnology.

Furthermore, the movement does not have to wait passively for a crisis that may weaken the system. Quite apart from any activities of the illegal sector, the dissention sown by the legal sector of the movement may help to bring on a crisis. For example, the Russian Revolution was precipitated by the tsarist regime's military disasters in World War I, and the revolutionary movement may have helped to create those disasters, since "[i]n no other belligerent country were political conflicts waged as intensively during the war as in Russia, preventing the effective mobilization of the rear."[18]

In carrying out the task (II) described above, the movement will of course use rational argument. But as I pointed out in my letter of 8/29/04, reason by itself is a very weak tool for influencing human behavior on a mass basis. You have to work also with the nonrational aspects of human behavior. But in doing so you can't rely on the system's own techniques of propaganda. As I argued in my letter of 8/29/04, you can't defeat the system in a head-on propaganda contest. Instead, you have to circumvent the system's superiority in psychological weaponry by making use of certain advantages that a revolutionary movement will have over the system. These advantages would include the following:

(i) It seems to be felt by many people that there is a kind of spiritual emptiness in modern life. I'm not sure exactly what this means, but "spiritual emptiness" would include at least the system's apparent inability to provide any positive values of wide appeal other than hedonistic ones or the simple worship of technological progress for its own sake. Evidence that many people find these values unsatisfactory is provided by the existence within modern society of groups that offer alternative systems of values—values that sometimes are in conflict with those of the system. Such groups would include fundamentalist churches and other, smaller cults that are still farther from the mainstream, as well as deviant political movements on the left and on the right. A successful revolutionary movement would have to do much better than these groups and fill the system's spiritual vacuum with values that can appeal to rational, self-disciplined people.

(ii) Wild nature still fascinates people. This shown by the popularity of magazines like National Geographic, tourism to such (semi-)wild places as remain, and so forth. But, notwithstanding all the nature magazines, the guided wilderness tours, the parks and preserves, etc., the system's propaganda is unable to disguise the fact that "progress" is destroying wild nature. I think that many people continue to find this seriously disturbing, even apart from the practical consequences of environmental destruction, and their feelings on this subject provide a lever that a revolutionary movement can utilize.

(iii) Most people feel a need for a sense of community, or for belonging to what sociologists call a "reference group." The system tries to satisfy this need to the extent that it is able: Some people find their reference group in a mainstream church, a Boy Scout

[18] *The New Encyclopædia Britannica*, 15th ed., 2003, Vol. 28, article "Union of Soviet Socialist Republics," p. 1000.

troop, a "support group," or the like. That these system-provided reference groups are for many people unsatisfactory is indicated by the proliferation of independent groups that lie outside the mainstream or even are antagonistic toward it. These include, inter alia, cults, gangs, and politically dissident groups. Possibly the reason why many people find the system-provided reference groups unsatisfactory is the very fact that these groups are appendages of the system. It may be that people need groups that are "their own thing," i.e., that are autonomous and independent of the system.

A revolutionary movement should be able to form reference groups that would offer values more satisfying than the system's hedonism. Wild nature perhaps would be the central value, or one of the central values.

In any case, where people belong to a close-knit reference group, they become largely immune to the system's propaganda to the extent that that propaganda conflicts with the values and beliefs of the reference group.[19] The reference group thus is one of the most important tools by means of which a revolutionary movement can overcome the system's propaganda.

(iv) Because the system needs an orderly and docile population, it must keep aggressive, hostile, and angry impulses under firm restraint. There is a good deal of anger toward the system itself, and the system needs to keep this kind of anger under especially tight control. Suppressed anger therefore is a powerful psychological force that a revolutionary movement should be able to use against the system.

(v) Because the system relies on cheap propaganda and requires willful blindness to the grim prospect that continued technological progress offers, a revolutionary movement that develops its ideas carefully and rationally may gain a decisive advantage by having reason on its side. I've pointed out previously that reason *by itself* is a very weak tool for influencing people in the mass. But I think nevertheless that if a movement gives ample attention to the non-rational factors that affect human behavior, it may profit enormously in the long run by having its key ideas established on a solidly rational foundation. In this way the movement will attract rational, intelligent people who are repelled by the system's propaganda and its distortion of reality. Such a movement may draw a smaller number of people than one that relies on a crude appeal to the irrational, but I maintain that a modest number of high-quality people will accomplish more in the long haul than a large number of fools. Bear in mind that rationality does not preclude a deep commitment or a powerful emotional investment.

Compare Marxism with the irrational religious movements that have appeared in the U.S. The religious movements achieved little or nothing of lasting importance, whereas Marxism shook the world. Marxism to be sure had its irrational elements: To many people belief in Marxism served as an equivalent of religious faith. But Marxism was far from being wholly irrational, and even today historians recognize Marx's contribution

[19] *Ibid.*, Vol. 26, article "Propaganda," p. 176 ("the most effective media as a rule... are not the impersonal mass media but rather those few associations or organizations [reference groups. with which the individual feels identified.... Quite often the ordinary man not only avoids but actively distrusts the mass media...but in the warmth of his reference group he feels at home....").

to the understanding of the effect of economic factors on history. From the perspective of the 19th and early 20th centuries, Marxism was plausible and highly relevant to the problems of the time, hence it attracted people of an entirely different stamp from those who were drawn to religious revivals.

It's possible however that faith in Marxism as dogma may have played an essential role in the success of the Russian Revolutionary movement. I read somewhere years ago that Lenin himself did not believe dogmatically in Marxist doctrine, but considered it inexpedient to challenge the faith of the true believers,[20] and I suspect that the same must have been true of others among the more rational and intelligent Marxists of Lenin's time. It may be that a movement should not try to impose too rigid a rationality on its adherents, but should leave room for faith. If the movement's ideology has an underlying rational basis, I would guess that it should be able to attract rational and intelligent people notwithstanding a certain amount of nonrational or irrational ideological superstructure. This is a delicate question, and the answer to it can be worked out only through trial and error. But I still maintain that a largely rational basis for its position should give a revolutionary movement a powerful advantage vis-à-vis the system.

In any case, the kind of people who constitute the movement will be of decisive importance. The biggest mistake that such a movement could make would be to assume that the more people it has, the better, and to encourage everyone who might be interested to join it. This is exactly the mistake that was made by the original Earth First! As it was originally constituted in the early 1980s, Earth First! may have had the makings of a genuine revolutionary movement. But it indiscriminately invited all comers, and—of course!—the majority of comers were leftish types. These swamped the movement numerically and then took it over, changing its character.

The process is documented by Martha F. Lee, *Earth First!: Environmental Apocalypse*, Syracuse University Press, 1995. I do not believe that Earth First! as *now* constituted is any longer a potentially revolutionary movement.

The green anarchist/anarcho-primitivist movement, in addition to attracting leftish types, manifests another kind of personnel problem: It has attracted too many people who are mentally disorganized and seriously deficient in self-control, so that the movement as a whole has an irrational and sometimes childish character, as a result of which I think it is doomed to failure.

Actually there are some very good ideas in the green anarchist/anarcho-primitivist movement, and I believe that in certain ways that movement takes the right approach. But the movement has been ruined by an excessive influx of the wrong kinds of people.

So a critically important problem facing a nascent revolutionary movement will be to keep out the leftists, the disorganized, irrational types, and other unsuitable persons who come flocking to any rebel movement in America today.

[20] Here, the usual caveat about the unreliability of memory.

Probably the hardest part of building a movement is the very first step: One has to collect a handful of strongly committed people of the right sort. Once that small nucleus has been formed, it should be easier to attract additional adherents.

A point to bear in mind, however, is that a group will not attract and hold adherents if it remains a mere debating society. One has to get people involved in practical projects if one wants to hold their interest. This is true whether one intends to build a revolutionary movement or one directed merely toward reform. The first project for the initial handful of people would be library research and the collection of information from other sources. Information to be collected would include, for example, historical data about the ways in which social changes have occurred in past societies, and about the evolution of political, ideological, and religious movements in those societies, information about the development of such movements in our own society during recent decades; results of scholarly studies of collective behavior; and data concerning the kinds of people involved in Earth First!, green anarchism, anarcho-primitivism, and related movements today. Once the group had gathered sufficient information it could design a provisional program of action, perhaps modifying or discarding many of the ideas I've outlined on the preceding pages.

But for anyone who seriously wants to do something about the technology problem, the initial task is quite clear: It is to build a nucleus for a new movement that will keep itself strictly separate from the leftists and the irrational types who infest the existing anti-technological movement.

From Ted to Skrbina — October 12, 2004

I. I'll begin by summarizing some information from Martin E. P. Seligman, *Helplessness: On Depression, Development, and Death*. Here I have to rely on memory, because I do not have a copy of Seligman's book, nor do I have extensive notes on it. Seligman arrived at the following conclusions through experiments with animals:

Take an animal, subject it repeatedly to a painful stimulus, and each time block its efforts to escape from the stimulus. The animal becomes frustrated. Repeat the process enough times, and the state of frustration gives way to one of depression. The animal just gives up. The animal has now acquired "learned helplessness." If, at a later time, you subject the animal to the same painful stimulus, it will not try to escape from the stimulus even if it could easily do so.

Learned helplessness can be unlearned. I don't recall the details, but the general idea is that the animal gets over learned helplessness by making *successful* efforts.

Both learning and unlearning of helplessness occur within the specific area of behavior in which the animal is trained. For example, if an animal acquires learned helplessness through repeated frustration of its efforts to escape from electrical shocks, it will not necessarily show learned helplessness in relation to efforts to get food. But learned helplessness does to some extent carry over from one area to another: If an

animal acquires learned helplessness in relation to electrical shocks, subsequently it will more easily become discouraged when its efforts to get food are frustrated. The same principles apply to *un*learning of helplessness.

An animal can be partly "immunized" to learned helplessness: If an animal is given prior experience in overcoming obstacles through effort, it will be much more resistant to learned helplessness (hence also to depression) than an animal that has not had such experience. For example, if caged pigeons are able to get food only by pushing a lever on an apparatus that gives them one grain of wheat or the like for each push of the lever, then they will later acquire learned helplessness much less easily than pigeons that have not had to work for their food.

My memory of the following is not very clear, but I think Seligman indicates that laboratory rats and wild rats differ in that wild rats are far more energetic and persistent than laboratory ones in trying to save themselves in a desperate situation. Presumably the wild rats have been immunized to learned helplessness through successful efforts made in the course of their earlier lives.

At any rate, it does appear that purposeful effort plays an essential role in the psychological economy of animals.

I first read Seligman's book in the late 1980s. The book originally came out in the early 1970s, and I haven't had much opportunity to read later work on learned helplessness. But the theory is believed to be valid also for human beings, and I believe it is the subject of continuing work.

I don't necessarily accept a psychological theory just because some psychologists say it's true. There's a lot of nonsense in the field, and even experimental psychologists sometimes draw silly conclusions from their data. But the theory of learned helplessness squares very neatly with my own personal experience and with my impressions of human nature gained from observation of others.

The need for purposeful, successful effort implies a need for competence, or a need to be able to exercise control, because one's goals can't be attained if one does not have the competence, or the power to exercise control, that is necessary to reach the goals. Seligman writes:

"Many theorists have talked about the need or drive to master events in the environment. In a classic exposition, R. W. White (1959) proposed the concept of *competence*. He argued that the basic drive for control had been overlooked by learning theorists and psychoanalytic thinkers alike. The need to master could be more pervasive than sex, hunger, and thirst in the lives of animals and men.... J. L. Kavanau (1967) has postulated that the drive to resist compulsion is more important to wild animals than sex, food, or water. He found that captive white-footed mice spent inordinate time and energy just resisting experimental manipulation. If the experimenters turned the

lights up, the mouse spent his time setting them down. If the experimenters turned the lights down, the mouse turned them up."[21]

This suggests a need not only for power but for autonomy. In fact, such a need would seem to be implied by the need to attain goals through effort; for if one's efforts are undertaken in subordination to another person, then those efforts will be directed toward the other person's goals rather than toward one's own goals.

Yet the inconvenient fact is that human individuals seem to differ greatly in the degree of autonomy that they need. For some people the drive for autonomy is very powerful, while at the other extreme there are people who seem to need no autonomy at all, but prefer to have someone else do their thinking for them. It may be that these people, automatically and without even willing it, accept as their own goals whatever goals are set up for them by those whose authority they recognize. Another view might be that for some reason certain people need purposeful effort that exercises their powers of thinking and decision-making, while other people need only to exercise their physical and their strictly routine mental capacities. Yet another hypothesis would be that those who prefer to have others set their goals for them are persons who have acquired learned helplessness in the area of thinking and decision-making.

So the question of autonomy remains somewhat problematic. In any case, it's clear how ISAIF's concept of the power process is related to the foregoing discussion. As ISAIF explains in §33, the need for the power process consists in a need to have goals, to make efforts toward those goals, and to succeed in attaining at least some of the goals; and most people need a greater or lesser degree of autonomy in pursuing their goals.

If one has had insufficient experience of the power process, then one has not been "immunized" to learned helplessness, hence one is more susceptible to helplessness and consequently to depression. Even if one has been immunized, long-continued inability to attain goals will cause frustration and will lead eventually to depression. As any psychologist will tell you, frustration causes anger, and depression tends to produce guilt feelings, self-hatred, anxiety, sleep disorders, eating disorders, and other symptoms. (See ISAIF, §44 and Note 6.) Thus, if the theory of learned helplessness is correct, then ISAIF's definition of "freedom" in terms of the power process is not arbitrary but is based on biological needs of humans and of animals.

This picture has support in other quarters. The zoologist Desmond Morris, in his book *The Human Zoo*, describes some of the abnormal behavior shown by wild animals when they are confined in cages, and he explains the prevalence of abnormal behavior (e.g., child abuse and sexual perversion) among modern people by comparing present-day humans to zoo animals: Modern society is our "cage." Morris shows no awareness of the theory of learned helplessness, but much of what he says dovetails very nicely with

[21] Martin E. P. Seligman, *Helplessness: On Depression, Development, and Death*, W. H. Freeman and Company, New York, 1975, p. 55.

that theory. He even mentions "substitute activities" that are equivalent to ISAIF's "surrogate activities."

The need for power, autonomy, and purposeful activity is perhaps implicit in some of Ellul's work. Shortly after my trial, a Dr. Michael Aleksiuk sent me a copy of his book *Power Therapy*, which contains ideas closely related to that of the power process. A major theme of Kenneth Keniston's study *The*

Uncommitted is the sense of purposelessness that afflicts many people in the modern world. I think he mentions an "instinct of workmanship," meaning a need to do purposeful work. In the first part of his book *Growing Up Absurd*,

Paul Goodman discusses as a source of social problems the fact that men no longer need to do hard, demanding work that is essential for survival. Reviewing a book by Gerard Piel, Nathan Keyfitz wrote:

"Among other signs of the lack of adaptation [in modern society] is... purposelessness. Our ancestors, whose work was hard and often dangerous, always necessary simply to keep alive, seemed to know what they were here for. Now 'anomie and preoccupation with the isolated self recur as a central theme of U.S. popular culture. That they find resonance in every other industrial country suggests that the solving of the economic problem brings on these quandaries everywhere.'"[22]

Thus, I argue that the power process is not a luxury but a fundamental need in human psychological development, and that disruption of the power process is a critically important problem in modern society.

Because of my lack of access to good library facilities I haven't been able to explore the relevant psychological literature to any significant extent, but for anyone interested in modern social problems such an exploration should be well worth the time it would cost.

In answering your letters I'm not going to stick rigidly with the definition of freedom given in ISAIF, §94, but I will assume throughout that the kind of freedom that really matters is the freedom to do things that have important practical consequences, and that the freedom to do things merely for pleasure, or for "fulfillment," or in pursuit of surrogate activities, is relatively insignificant. See ISAIF, §72.

"Human dignity" is a very vague term and a broadly inclusive one. But I will assume that one essential element of human dignity is the capacity to exert oneself in pursuit of important, practical goals that one has selected either by oneself or as a member of a small, autonomous group. Thus, both freedom and dignity, as I will use those terms, are closely involved with the power process and with the associated biological need.

II. You ask for a "core reason" why things are getting worse. There are two core reasons.

A. Until roughly ten thousand years ago, all people lived as hunter-gatherers, and that is the way of life to which we are adapted physically and mentally. Many of us,

[22] Nathan Keyfitz, reviewing Gerard Piel's *Only One World: Our Own to Make and to Keep*, in *Scientific American*, February, 1993, p. 116.

including some Europeans,[23] lived as hunter-gatherers much more recently than ten thousand years ago. We may have undergone some genetic changes since becoming agriculturalists, but those changes are not likely to have been massive.[24] Hunter-gatherers who survived into modern times were people very much like ourselves.

As technology has advanced over the millennia, it has increasingly altered our way of life, so that we've had to live under conditions that have diverged more and more from the conditions to which we are adapted. This growing maladaptation subjects us to an ever-increasing strain. The problem has become particularly acute since the Industrial Revolution, which has been changing our lives more profoundly than any earlier development in human history. Consequently, we are suffering more acutely than ever from maladaptation to the circumstances in which we live. (Robert Wright has developed this thesis in an article that you might be interested to read.)[25]

I argue that the most important single maladaptation involved derives from the fact that our present circumstances deprive us of the opportunity to experience the power process properly. In other words, we lack freedom as the term is defined in ISAIF, §94.

The argument that "people now have more freedom than ever" is based on the fact that we are allowed to do almost anything we please *as long as it has no practical consequences*. See ISAIF, §72. Where our actions have practical consequences that may be of concern to the system (and few important practical consequences are not of concern to the system), our behavior, generally speaking, is closely regulated. Examples: We can believe in any religion we like, have sex with any consenting adult partner, take a plane to China or Timbuktu, have the shape of our nose changed, choose any from a huge variety of books, movies, musical recordings, etc., etc., etc. But these choices normally have no important practical consequences. Moreover, they do not require any serious effort on our part. We don't change the shape of our own nose, we pay a surgeon to do it for us. We don't go to China or Timbuktu under our own power, we pay someone to fly us there.

On the other hand, within our own home city we can't go from point A to point B without our movement being controlled by traffic regulations, we can't buy a firearm without undergoing a background check, we can't change jobs without having our background scrutinized by prospective employers, most people's jobs require them to work according to rules, procedures, and schedules prescribed by their employers,

[23] See, e.g., Tacitus, *Germania* 46 (hunter-gatherers present in the Baltic area $<$ 2,000 years ago); *Encyclopœdia Britannica*, 15th ed., 2003, Vol. 28, article "Spain," p. 18 (hunter-gatherers present in Spain up to 5,500 years ago).

[24] "Ten thousand years ago all men were hunters, including the ancestors of everyone reading this book. The span of ten millennia encompasses about four hundred generations, too few to allow for any notable genetic changes." Carleton S. Coon, *The Hunting Peoples*, 1971, p. xvii. Admittedly, it may be open to argument whether 400 generations allow for any "notable genetic changes."

[25] Robert Wright, "The Evolution of Despair," *Time* magazine, August 28, 1995. [26. There is no claim here that this is an exhaustive list of the ways in which human intentions for a society can be realized on a historical scale. If you can identify any additional ways that are relevant for the purposes of the present discussion, I'll be interested to hear of them.

we can't start a business without getting licenses and permits, observing numerous regulations, and so forth.

Moreover, we live at the mercy of large organizations whose actions determine the circumstances of our existence, such as the state of the economy and the environment, whether there will be a war or a nuclear accident, what kind of education our children will receive and what media influences they will be exposed to. Etc., etc., etc.

In short, we have more freedom than ever before to *have fun*, but we can't intervene significantly in the life-and-death issues that hang over us. Such issues are kept firmly under the control of large organizations. Hence our deprivation with respect to the power process, which requires that we have *serious* goals and the power to reach those goals through our own effort.

B. The second "core reason" why things are getting worse is that there is no way to prevent technology from being used in harmful ways, especially because the ultimate consequences of any given application of technology commonly cannot be predicted. Therefore, harm cannot be foreseen until it is too late.

Of course, the consequences of primitive man's actions may often have been unpredictable, but because his powers were limited, the negative consequences of his actions also were limited. As technology becomes more and more powerful, even the unforeseeable consequences of its well- intentioned use,—let alone the consequences of its irresponsible or malicious use— become more and more serious, and introduce into the world a growing instability that is likely to lead eventually to disaster. See Bill Joy's article, "Why the Future Doesn't Need Us," *Wired* magazine, April 2000, and

Martin Rees, *Our Final Century*.

III. A. *"Objective" factors in history.* I assert that the course of history, in the large, is normally determined primarily by "objective" factors rather than by human intentions or by the decisions of individuals. Human intentions or the decisions of individuals may occasionally make a major, long-term difference in the course of history, but when this happens the results do not fulfill the intentions of the individuals or groups that have made the decisions. Some exceptions, however, can be identified. Human intentions can sometimes be realized in the following three ways (see my letter of 1/2/04): (i) Intelligent administration may prolong the life of an existing social order. (ii) It may be possible to cause, or at least to hasten, the breakdown of an existing social order. (iii) An existing social order can sometimes be extended so as to encompass additional territory.[26]

I need to explain what the foregoing means. Human intentions often are realized, even for a long period, with respect to some particular factor in society. But, in such cases, human intentions for the society as a whole are not realized.

For example, in the Soviet Union the Communists achieved some of their goals, such as rapid industrialization, full employment, and a significant reduction in social inequality, but the society they created was very different from what the Bolsheviks had originally intended. (And in the *long* run the socialist system failed altogether.) Since the onset of the Industrial

Revolution in the 18th century, people have succeeded in achieving material abundance, but the result is certainly not the kind of society that was envisioned by 18th-century proponents of progress. (And today people like Bill Joy and Martin Rees fear that industrial society may not survive much longer.) The Prophet Mohammed succeeded in establishing his new religion as the faith of millions of people; that religion has flourished for nearly fourteen centuries and may well do so for many centuries more. But: "At the end of the rule of the 'rightly guided' caliphs, the Prophet's dream of ushering in a new era of equality and social justice remained unfulfilled...,"[26] nor has that dream been fulfilled today.

To explain further what I mean when I say that history is generally guided by "objective" factors and not by human intentions or human will, I'll use an example that presents the issue in simplified form.

Given three factors:

(i) the presence of hunting-and-gathering bands at the eastern extremity of Siberia;

(ii) the presence of good habitat for humans at the western extremity of Alaska; and

(iii) the existence of a land-bridge across what is now the Bering strait, the occupation of the Americas by human beings was a historical inevitability and was in a certain sense independent of human intention and of human will.

Of course, human intentions were involved. In order for the Americas to be occupied, some hunting-and-gathering band at some point had to choose intentionally to move eastward across the land-bridge. But the occupation of the Americas did not depend on the intentions of any one hunting-and-gathering band—or any dozen bands—because, given the three conditions listed above, it was inevitable that *some* band sooner or later would move across the land-bridge. It is in this sense that major, long-term historical developments normally result from the operation of "objective" factors and are independent of human intentions.

The foregoing does not mean that history is rigidly deterministic in the sense that the actions of individuals and small groups can *never* have an important, long-term effect on the course of events. For example, if the period during which the Bering Strait could be crossed had been short, say 50 or 100 years, then the decision of a single hunting-and-gathering band to cross or not to cross to Alaska might have determined whether Columbus would find the Americas populated or uninhabited. But even in this case the occupation of the Americas would not have been a realization of the intentions of the single band that made the crossing. The intention of that band would have been only to move into one particular patch of desirable habitat, and it could have had no idea that its action would lead to the occupation of two great continents.

B. *Natural selection.* A principle to bear in mind in considering the "objective" factors in history is the law of what I call "natural selection": Social groups (of any size, from two or three people to entire nations) having the traits that best suit them to sur-

[26] -77, 279, 288.

vive and propagate themselves, are the social groups that best survive and propagate themselves. This of course is an obvious tautology, so it tells us nothing new. But it does serve to call our attention to factors that we might otherwise overlook. I have not seen the term "natural selection" used elsewhere in connection with this principle, but the principle itself has not gone unnoticed. In the *Encyclopædia Britannica* we find:

"These processes were not inevitable in the sense that they corresponded to any 'law' of social change. They had the tendency, however, to spread whenever they occurred. For example, once the set of transformations known as the agrarian revolution had taken place anywhere in the world, their extension over the rest of the world was predictable. Societies that adopted these innovations grew in size and became more powerful. As a consequence, other societies had only three options: to be conquered and incorporated by a more powerful agrarian society; to adopt the innovations; or to be driven away to the marginal places of the globe. Something similar might be said of the Industrial Revolution and other power-enhancing innovations, such as bureaucratization and the introduction of more destructive weapons."[27]

Notice that there is a difference between the "natural selection" that operates among human groups and the natural selection that we are familiar with in biology. In biology, more successful organisms simply replace less successful ones and are not imitated by them. But in human affairs less successful groups tend to try to imitate more successful ones. That is, they try to adopt the social forms or practices that appear to have made the latter groups successful. Thus, certain social forms and practices propagate themselves not only because groups having those forms and practices tend to replace other groups, but also because other groups adopt those forms and practices in order to avoid being replaced. So it is probably more correct to describe natural selection as operating on social forms and practices rather than as operating on groups of people.

The principle of natural selection is beyond dispute because it is a tautology. But the principle could produce misleading conclusions if applied carelessly. For example, the principle does not a priori exclude human will as a factor guiding history.

C. *Human will versus "objective" forces of history.* In Western Europe, until recently, bellicosity—a readiness and ability to make war—was an advantageous trait in terms of "natural selection": Militarily successful nations increased their power and their territory at the expense of other nations that were less successful in war. However, I think this is no longer true, because there is a strong consensus in Western Europe today that war between two Western European nations is absolutely unacceptable. Any nation that initiated such a war would be pounced upon by all the rest of Western Europe and soundly defeated. Thus, in Western Europe, bellicosity (at least as directed against other Western European nations), is now a *dis*advantageous trait in terms of natural selection, and it is so because of the human will to avoid war in Western Europe. This shows that human will can be a "selective force" involved in the process of "natural selection" as it operates in human affairs.

[27] *Encycl. Britannica*, 15th ed., 2003, Vol. 27, article "Social Structure and Change," p. 369.

However (to the extent that it does not rely on the U.S. for protection) Western Europe as a whole still needs to be prepared for war, because outside Western Europe there exist other entities (nations or groups of nations) that might well make war on Western Europe if they thought they could get away with it. As it is, if any nation outside Western Europe made war on a Western European nation, and if the latter were unable to defend itself adequately, the rest of Western Europe would help it to defeat the aggressor. Thus, by eliminating *internal* warfare and acquiring a certain degree of unity, Western Europe has become more formidable in war against any outside entity.

What has happened in Western Europe is simply a continuation of a process that has been going on for thousands of years: Smaller political entities group together (whether voluntarily or through conquest) to form a larger political entity that eliminates internal warfare and thereby becomes a more successful competitor in war against other political entities. Size does not always guarantee survival (e.g., consider the breakup of the Roman Empire), but in the course of history smaller political entities generally have tended to coalesce to form larger and therefore militarily more powerful ones; and this process is not dependent on human intention but results from "natural selection."

Thus, when we take a relatively localized view of history and consider only Western Europe over the last several decades, human will appears to be an important factor in the process of natural selection, but when we take a broader view and look at the whole course of history, human will appears insignificant: "Objective" factors have determined the replacement of smaller political entities by larger ones.

Of course, it's conceivable that human will might some day eliminate war altogether. A world government might not even be necessary. It would be enough that there should exist a strong worldwide consensus, similar to the consensus now existing in Western Europe, that war was unacceptable and that any nation initiating a war should be promptly crushed by all the other nations. Bellicosity would then become a highly disadvantageous trait in terms of natural selection. And, since the whole world would be encompassed by the consensus, there would be no outside competitor left against whom it might be necessary to make war.

But you can see how difficult it is to reach the necessary consensus.

Efforts to end war have been going on at least since the end of World War I with the League of Nations, and outside of Western Europe there has been little progress in that regard. Moreover, even if conventional warfare could be ended through an international consensus, organized violence might well continue, because there are forms of organized violence (e.g., guerrilla warfare, terrorism) that would be extremely difficult to suppress even if vigorously opposed by every nation on Earth.

The purpose of the foregoing discussion is not to prove that it is never possible for human will to change the course of history. If I didn't believe it were possible, then I wouldn't waste my time writing letters like this one.

But we have to recognize how powerful the "objective" forces of history are and how limited is the scope for human choice. A realistic appraisal will help us to discard solutions that appear desirable but are impossible to put into practice, and concentrate

our attention on solutions that may be less than ideal but perhaps have a chance of success.

D. *Democracy as a product of "objective" forces.* In your letter of 7/27/04, you and your colleague offer "democracy" as an example of an improvement in the human condition brought about by "human action." I assume that by "democracy" you mean representative democracy, i.e., a system of government in which people elect their own leaders. And I assume that in referring to "human action" you mean that representative democracy became the dominant form of government in the modern world through a process that more or less fits the following model: problem perceived— solution devised— solution implemented— problem solved. If this is what you mean, then I think you are wrong.

I think the problem of political oppression has been perceived for thousands of years. Presumably, people have resented political oppression ever since the beginning of civilization; this is indicated by numerous peasant revolts and the like that have been recorded in history. If representative democracy is the solution to the problem of political oppression, then the solution, too, has long been known and sometimes implemented.

The idea and the practice of representative democracy go back at least to ancient Athens, and may well go back to prehistoric times, for some of the aborigines of southeastern Australia practiced representative democracy.[28]

Sixteenth-century Cossacks had "a military organization of a peculiarly democratic kind, with a general assembly (*rada*) as the supreme authority and elected officers, including the commander in chief...."[29] Seventeenth-century buccaneers elected their own captains, who could be deposed by the crew at any time when an enemy was not in sight.[30] Fifteenth-century Geneva had a democratic government, though perhaps not strictly speaking a representative democracy since the legislative body consisted of all citizens.[31] In addition to fully democratic systems, there have been some partially democratic ones. Under the Roman Republic, for example, public officials were elected by the assembled people, but the aristocratic Senate was the dominant political force.[32]

Thus, representative democracy has been tried with varying degrees of success at many times and places. Nevertheless, among preindustrial civilized societies the dominant forms of government remained the monarchical, oligarchic, aristocratic, and feudal ones, and representative democracy was only a sporadic phenomenon. Clearly, under the conditions of preindustrial civilization, democracy was not as well adapted for sur-

[28] "[E]ach territorial clan had its own headman and council, and there was also a paramount chief for the entire tribe. The council members of each clan were elected in a meeting between the middle-aged and elderly men, and a few of the outstanding younger ones as well." Coon, *op. cit.*, p. 253.

[29] *Encycl. Britannica*, 15th ed., 2003; Vol. 28, article "Ukraine," p. 985.

[30] Buccaneers elected their own captains: *Encycl. Britannica*, Vol. 2, article "buccaneers," p. 592. For deposition of captains I'm relying on my memory of books read 40 years ago.

[31] *Encycl. Britannica*, 15th ed., 2003, Vol. 19, article "Geneva," p. 743.

[32] *Ibid.*, Vol. 20, article "Greek and Roman Civilizations," p. 294.

vival and propagation as other forms of government were. This could have been due to internal weakness (instability, or a tendency to transmute into other forms of government), or to external weakness (a democratic government may have been unsuccessful in competing economically or militarily with its more authoritarian rivals).

Whatever it was that made preindustrial democracy weak, the situation changed with the advent of the Industrial Revolution. Suddenly people began to admire the (semi-)democratic systems of Britain and the United States, and attempts were made to imitate those systems. If Britain had been economically poor and militarily weak, and if the United States had been a stagnant backwater, would their systems have been admired and imitated?

Not likely! Britain was economically and militarily the most successful nation in Europe, and the United States was a young but dynamically growing country, hence these two countries excited the admiration and envy of the propertied classes in other countries. It was the propertied classes, not the laboring classes, who were primarily responsible for the spread of democracy. That's why Marxists always referred to the democratic revolutions as "bourgeois revolutions."

The democracies had to survive repeated contests with authoritarian systems, and they did survive, largely because of their economic and technological vigor. They won World Wars I and II, and they didn't do so because soldiers were more willing to fight for a democratic than for an authoritarian government. No one has ever questioned the bravery or the fighting spirit of the German and Japanese soldiers. The democracies won largely because of their industrial might.[33]

Notice that fascism was popular, even to some extent in the U.S.,[34] between the two World Wars. (Here I use the term "fascism" in its generic sense, not referring specifically to Mussolini's Fascists.) After World War II, fascism lost its popularity. Why? Because the fascists lost the war. If the fascists had won, fascism undoubtedly would have been admired and imitated.

During much of the Cold War, "socialism" was the watchword throughout the Third World. It represented the state of bliss to which most politically-conscious people there

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[33] The Russian armies played a much greater role in the defeat of Germany in World War II than the Western armies did, but the Russians received massive quantities of military aid—trucks, for example—that were produced by American industry. Moreover, British and American factories produced the thousands of bombers—not to mention bombs—that shattered German cities, though admittedly the military utility of World War ii strategic bombing is a matter of controversy. see *Encycl. Britannica*, 15th ed., 2003, Vol. 29, article "World Wars," pp. 997, 999, 1019; John Keegan, *The Second World War*, Penguin Books, 1990, pp. 44 (photo caption), 215, 218, 219, 416, 430, 432; Freeman Dyson, "The Bitter End," *The New York Review*, April 28, 2005, p. 4 ("German soldiers consistently fought better than Britons or Americans. Whenever they were fighting against equal numbers, the Germans always won....").

[34] Jeffrey Kaplan and Leonard Weinberg, *The Emergence of a Euro-American Radical Right*, Rutgers University Press, 1998, Chapter II. William E. Leuchtenburg, *Franklin D. Roosevelt and the New Deal, 1932-1940*, Harper & Row, New York, 1963, pages 26, 27, 30 & footnote 43, 102 & footnote 22, 182-83, 221 & footnote 78, 224,

aspired. But that lasted only as long as the Soviet Union appeared to be more dynamic and vigorous than the U.S. When it became clear that the Soviet Union and other socialist countries could not keep up with the West economically or technologically, socialism lost its popularity, and the new watchwords were "democracy" and "free market."

Thus, democracy has become the dominant political form of the modern world not because someone decided that we needed a more humane form of government, but because of an "objective" fact, namely, that under the conditions created by industrialization, democratic systems are more vigorous technologically and economically than other systems.

Bear in mind that, as technology continues to progress, there is no guarantee that representative democracy will always be the political form best adapted to survive and propagate itself. Democracy may be replaced by some more successful political system. In fact, it could be argued that this has already happened. It could plausibly be maintained that, notwithstanding the continuation of democratic forms such as reasonably honest elections, our society is really governed by the elites that control the media and lead the political parties. Elections, it might be claimed, have been reduced to contests between rival groups of propagandists and image-makers.

From Ted to Skrbina — November 23, 2004

Are things bad and getting worse, and is technology primarily responsible?

A. Arguments that technology has made things bad and is making them worse are presented throughout ISAIF (the Manifesto), as well as in the writings of Jacques Ellul, Lewis Mumford, Kirkpatrick Sale, and others. Your colleague has not addressed these arguments in any specific way. The only substantive arguments that he offers are the four examples of ways in which things are allegedly getting better. I would be perfectly justified in dismissing these four examples by pointing out that neither I nor any responsible commentator has claimed that technology makes *everything* worse—everyone knows that technology does some good things. I could then simply refer your colleague to ISAIF, Ellul, etc., for arguments that the evil done by technology outweighs the good, and challenge him to answer those arguments, which so far he has not attempted to do.

Nevertheless, I will consider the four examples in detail (below) because they offer scope for interesting discussion, and I will make your colleague's question about whether things are bad and getting worse into an opportunity to supplement some of the arguments offered in ISAIF and elsewhere.

B. Obviously, any determination as to whether things are bad and getting worse, and, if so, how bad, involves value judgments, so the question will have no answer that will be provably correct independently of the system of values that is applied.

I should mention by the way that in order to justify revolution it is not necessary, in my opinion, to prove that things will get worse: With respect to concerns that could be grouped under the very broad rubric of "freedom and dignity," things are *already* bad enough to justify revolution. This is another value-judgment, and I feel safe in assuming that it would be a waste of time to try to persuade your colleague to agree with it. Even so, I do not think it will be an idle exercise to call attention here to some facts that are relevant to the questions of whether things are bad and whether they are getting worse.

C. First let me point out that the answers to your questions as to whether there is a core reason why things are getting worse, and when the downhill trend began, are found in my letter of 10/12/04.

D. Your colleague suggests that "things have *always* been bad for human society, and that we have no rational reason to expect anything better than simply staying one step ahead of death." This is a highly pessimistic attitude, even a defeatist one, and on the basis of my readings about primitive societies I would be rather surprised if such an attitude had been current in any primitive society prior to the time when the society was damaged by the intrusion of civilization. But I actually agree that we have no rational reason to expect anything better than simply staying one step ahead of death—because simply staying one step ahead of death is just fine. We've been adapted by a couple of million years of evolution to a life in which our survival has depended on the success of our daily efforts—efforts that typically were strenuous and demanded considerable skill. Such efforts represented the perfect fulfillment of the power process, and, though the evidence admittedly is anecdotal, such evidence as I've encountered strongly suggests that people thrive best under rugged conditions in which their survival demands serious efforts—provided that their efforts are reasonably successful, and that they make those efforts as free and independent men and women, not under the demeaning conditions of servitude. A few examples:

W. A. Ferris, who lived in the Rocky Mountains as a fur trapper during the 1840s, wrote that the "Free Men" (hunters and trappers not connected with an organized fur-company) "lead[ ] a venturous and dangerous life, governed by no laws save their own wild impulses, and bound[ ] their desires and wishes to what their own good rifles and traps may serve them to procure.... [T]he toil, the danger, the loneliness, the deprivation of this condition of being, fraught with all its disadvantages, and replete with peril, is, they think, more than compensated by the lawless freedom, and the stirring excitement, incident to their situation and pursuits.... Yet so attached to [this way of life] do they become, that few ever leave it, and they deem themselves, nay are, ...far happier than the indwellers of towns and cities...."[35]

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[35] Warren Angus Ferris, *Life in the Rocky Mountains*, edited by Paul C. Phillips, pp. 40-41.

Concerning Notes 36, 41, and 43: These citations are from notes that I made many years ago, at a time when I was often careless about the completeness (though not about the accuracy) of bibliographical information that I recorded. I neglected to write down the dates of publication of the

Ferris reported that during his own rugged and dangerous life in the mountains he usually felt "resolute, cheerful, contented."[36]

Gontran de Poncins wrote of the Eskimos with whom he lived about 1939–1940:

"[T]he Eskimo is constantly on the march, driven by hunger..."[37] "[T]hese Eskimos afforded me decisive proof that happiness is a disposition of the spirit. Here was a people living in the most rigorous climate in the world,...haunted by famine...; shivering in their tents in the autumn, fighting the recurrent blizzard in the winter, toiling and moiling fifteen hours a day merely in order to get food and stay alive. ...[T]hey ought to have been melancholy men, men despondent and suicidal; instead, they were a cheerful people, always laughing, never weary of laughter."[38]

The 19th-century Argentine thinker Sarmiento wrote of the gaucho of his time:

"His moral character shows the effects of his habit of overcoming obstacles and the power of nature; he is strong, haughty, energetic...he is happy in the midst of his poverty and his privations, which are not such for him, who has never known greater enjoyments or desired anything higher..."[39]

Sarmiento was not romanticizing the gaucho. On the contrary, he wanted to replace what he called the "barbarism" of the gaucho with "civilization."

These examples are by no means exceptional. There's plenty more in the literature that suggests that people thrive when they have to exert themselves in order to "stay one step ahead of death," and I've encountered very little that indicates the opposite.

E. It would be instructive to compare the psychological state of primitive man with that of modern man, but such a comparison is difficult because, to my knowledge, there were hardly any systematic studies of psychological conditions in primitive societies prior to the time when the latter were disrupted by the intrusion of civilization. The evidence known to me is almost exclusively anecdotal and/or subjective.

Osborne Russell, who lived in the Rocky Mountains in the 1830s and 1840s, wrote:

"Here we found a few Snake Indians comprising 6 men 7 women and 8 or 10 children who were the only Inhabitants of this lonely and secluded spot. They were all neatly clothed in dressed deer and sheep skins of the best quality and seemed to be perfectly contented and happy. ...I almost wished I could spend the remainder of my days in a place like this where happiness and contentment seemed to reign in wild romantic splendor...."[40]

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books cited here. So if you should consult different editions of these books than the ones I used, you may not find the words I've quoted on the pages that I've cited.

[36] *Ibid.*, p. 289.

[37] Gontran de Poncins, *Kabloona*, Time-Life Books, 1980, p. 78.

[38] *Ibid.*, p. 111.

[39] Domingo Faustino Sarmiento, *Civilización y Barbarie*. Regrettably, I can't give the page number. But the quotation should be accurate, since I copied it (i.e., I copied the Spanish original of it) years ago out of a book that quoted Sarmiento. However, I neglected to record the author or the title of the latter book.

[40] Osborne Russell, *Journal of a Trapper*, Bison Books, p. 26.

Such impressions of very primitive peoples are not uncommon, and are worth noting. But they represent only superficial observations and almost certainly overlook interpersonal conflicts that would not be evident to a traveler merely passing through. Colin Turnbull, who studied the Mbuti pygmies of Africa thoroughly, found plenty of quarreling and fighting among them.[41] Nevertheless, his impression of their social and psychological life was on the whole very favorable; he apparently believed that hunter-gatherers were "untroubled by the various neuroses that accompany progress."[42] He also wrote that the Mbuti "were a people who had found in the forest something that made their life more than just worth living, something that made it, with all its hardships and problems and tragedies, a wonderful thing full of joy and happiness and free of care."[43] Turnbull's book *The Forest People* has been called "romantic," but Schebesta, who studied the Mbuti a couple of decades earlier than

Turnbull, and who as far as I know has never been accused of romanticism, expressed a similar opinion of the pygmies:

"How many and varied are the dangers, but also the joyous experiences, on their hunting excursions and their innumerable travels through the primeval forest!"[44]

"Thus the pygmies stand before us as one of the most natural of human races, as people who live exclusively in accord with nature and without any violation of their organism. In this they show an unusually sturdy naturalness and heartiness, an unparalleled cheerfulness and freedom from care."[45]

This "freedom from care," or as we would say nowadays, freedom from stress, seems to have been generally characteristic of peoples at the hunting-and-gathering stage or not far beyond it. Poncins's account makes evident the absence of psychological stress among the Eskimos with whom he lived:

"[The Eskimo] had proved himself stronger than the storm. Like the sailor at sea, he had met it tranquilly, it had left him unmoved. ...In mid-tempest this peasant of the Arctic, by his total impassivity, had lent me a little of his serenity of soul."[46]

"Of course he would not worry. He was an Eskimo."[47]

"[My Eskimos'] minds were at rest, and they slept the sleep of the unworried."[48]

In discussing the reasons why many whites during colonial times voluntarily chose to live with the Indians, the historian James Axtell quotes two white converts to Indian life who referred to "the absence [among the Indians] of those cares and corroding

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[41] Colin M. Turnbull, *The Forest People* and *Wayward Servants*, passim.

[42] Colin M. Turnbull, *The Mountain People*, p. 21.

[43] Colin M. Turnbull, *The Forest People*, Simon & Schuster, 1962, p. 26.

[44] Paul Schebesta, *Die Bambuti-Pygmäen vom Ituri*, Vol. I, Institut Royal Colonial Belge, 1938, p. 73. I have not had an opportunity to examine Vols. II and III of this work, which contain most of the ethnographic information.

[45] *Ibid.*, p. 205.

[46] Gontran de Poncins, *op. cit.*, pp. 212-213.

[47] *Ibid.*, p. 292.

[48] *Ibid.*, p. 273.

solicitudes which so often prevail [among the whites]."[49] As we would put it, the absence of anxiety and stress. Axtell notes that while many whites chose to live as Indians, very few

Indians made the transition in the opposite direction.[50] Information from other sources confirms the attractiveness of Indian life to many whites.[51]

What I've just said about anxiety and stress probably applies to depression as well, though here I'm on shaky ground since I've encountered very little explicit information about depression in primitive societies. Robert Wright, without citing his source, states that "when a Western anthropologist tried to study depression among the Kaluli of New Guinea, he couldn't find any."[52] Though Schebesta met thousands of Mbuti pygmies,[53] he heard of only one case of suicide among them, and he never found or heard of any case of mental illness (Geisteskrankheit), though he did find three persons who were either feeble-minded (schwachsinnig) or peculiar (Sonderling).[54]

Even in classical (Greek & Roman) civilization, depression may have been rare: "Harris illuminatingly comments on the virtual absence of reference to anything like depression in [classical] antiquity."[55]

Needless to say, stress and depression were not completely absent from every hunting-and-gathering society. Depression and suicide could occur among Poncins's Eskimos, at least among the old people.[56] The Ainu (hunter-gatherers who were nearly sedentary)[57] suffered from such anxiety about following correct ritual procedure that it often led to serious psychological disorders.[58] But look at the psychological condition of modern man:

"About 45 percent of Australian men said they 'often' or 'almost always' felt stress."[59]

"There is certainly a lot of anxiety going around. Anxiety disorder...is the most common mental illness in the U.S. In its various forms...it afflicts 19 million Americans...."[60]

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[49] James Axtell, *The Invasion Within*, Oxford University Press, 1985, pp. 326-27.

[50] *Ibid.* also at various other places in the same book.

[51] E.g., Francis Parkman, *The Conspiracy of Pontiac*, Little, Brown and Company, 1917, Vol. II, p. 237; *The Old Regime in Canada*, same publisher, 1882, pp. 375-76.

[52] Robert Wright, "The Evolution of Despair," *Time* magazine, August 18, 1995.

[53] Paul Schebesta, *op. cit.*, p. 228.

[54] *Ibid.*, p. 213.

[55] Catherine Edwards, "Look Back at Anger" (book review), *Times Literary Supplement*, August 23, 2002, p. 25. However, it seems to me that I recall stories from Ovid's *Metamorphoses* that could be understood as portraying depression.

[56] Gontran de Poncins, *op. cit.*, pp. 169-175, 237.

[57] Coon, *op. cit.,* pp. 72, 184.

[58] *Ibid.*, pp. 372-373.

[59] *The Denver Post*, December 30, 2003, p. 5A, reporting on a paper by Daniel Hamermesh and Jungmin Lee published during December 2003 by the National Bureau of Economic Research.

[60] *Time* magazine, June 10, 2002, p. 48.

"According to the surgeon general, almost 21 percent of children age 9 and up have a mental disorder, including depression, attention deficit hyperactivity disorder, and bipolar disorder."[61]

"The state of college students' mental health continues to decline. ...The number of freshmen reporting less than average emotional health has been steadily rising since 1985...76 percent of students felt 'overwhelmed' last year while 22 percent were sometimes so depressed they couldn't function. ...85 percent of [college counseling-center] directors surveyed noted an increase in severe psychological problems over the past five years...."[62]

"Rates of major depression in every age group have steadily increased in several of the developed countries since the 1940s. ...Rates of depression, mania and suicide continue to rise as each new birth cohort ages...."[63]

"In the U.S., ...the suicide rate in the age group between 15 and 24 tripled between 1950 and 1990; suicide is the third leading cause of death in this age group."[64]

"A new UC Berkeley study reports that Mexican immigrants to the United States have only about half as many psychiatric disorders as U.S.-born Mexican Americans."[65]

One could go on and on.

F. Psychological problems of course represent only one of the ways in which "things are bad and getting worse." I will discuss a few of the other ways later. I want to make clear, though, that statistics on mental disorders, environmental damage, or other such problems fail to touch certain central issues. Though improbable, it's conceivable that the system might some day succeed in eliminating most mental disorders, cleaning up the environment, and solving all its other problems. But the human individual, however well the system may take care of him, will be powerless and dependent. In fact, the better the system takes care of him, the more dependent he will be. He will have been reduced to the status of domestic animal. See ISAIF, §174

& Note 12. A conscientious owner may keep his house-dog in perfect physical and psychological health. But would you want to be a well cared-for domestic pet? Maybe your colleague would be willing to accept that status, but I would choose an independent and autonomous existence, no matter how hard, in preference to comfortable dependence and servitude.

G. Your colleague's argument that things are getting better because "Humanity is 'flourishing'...based on sheer numbers" makes no sense. One of the principal objections to the technological society is that its food-producing capacity has allowed the

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[61] *U.S. News & World Report*, March 6, 2000, p. 45.

[62] *Ibid.*, February 18, 2002, p. 56.

[63] Elliot S. Gershon and Ronald O. Rieder, "Major Disorders of Mind and Brain," *Scientific American*, September 1992, p. 129.

[64] *Funk & Wagnalls New Encyclopedia*, 1996, Vol. 24, article "Suicide," p. 423.

[65] *Los Angeles Times*, September 15, 1998, p. A1. The study was reported at about that date in the *Archives of General Psychiatry*, according to the *L.A. Times* article.

world to become grotesquely overcrowded. I don't think I need to explain to you the disadvantages of overcrowding.

H. As for you colleague's claim that the "overall material standard of living seems to be increasing," the way that works is that the technoindustrial system simply defines the term "high standard of living" to mean the kind of living that the system itself provides, and the system then "discovers" that the standard of living is high and increasing. But to me and to many, many other people a high material standard of living consists not in cars, television sets, computers, or fancy houses, but in open spaces, forests, wild plants and animals, and clear-flowing streams. As measured by that criterion our material standard of living is falling rapidly.

IV. Your colleague claims that reform offers a better chance of success than revolution. He claims that "we...would act... to restrict technology as it becomes necessary," and that such action represents "the general pattern." You and your colleague offer four examples to illustrate this general pattern: "slavery," "political oppression," "sanitation and waste disposal," and "air and water pollution."

A. Let's take "political oppression" first.

1. As I argued in my letter to you of 10/12/04, representative democracy replaced authoritarian systems not through human choice or human planning but as a result of "objective" factors that were not under rational human control. Thus the spread of democracy is not an instance of the "general pattern" that you propose.

2. Political oppression has existed virtually since the beginning of civilization, i.e., for several thousand years. An alternative to authoritarian political systems—representative democracy—has been known at least since the days of ancient Athens. Yet, even under the most generous view, the time at which democracy became the world's dominant political form could not possibly be placed earlier than the 19th century. Thus, even after a workable solution was known, it took well over 2,000 years for the problem of political oppression to be (arguably) solved. If it takes 2,000 years for our present technology-related problems to be solved, we may as well forget about it, because it will be far, far too late. So your example of political oppression gives us no reason whatever to be hopeful that our technology-related problems can be solved in a peaceful and orderly way, and in time.

3. You admit that the replacement of authoritarian systems by democratic ones often occurred through revolution, but you claim that "many times it did not (e.g. England, Spain, S. Africa, Eastern European communist bloc)." However, you're wrong about England and S. Africa; or, at best, you can claim you are right about them only by insisting on strict adherence to a technical definition of the term "revolution."

England developed into a full-fledged democracy through a process that took roughly 6 1/2 centuries. Since the process took so long, one can't say it was a revolution. But the process certainly did involve violence and armed insurrection. The first step toward democracy in England was Magna Carta, which became law ca 1225 only through a revolt of the barons and an ensuing civil war (arguably a

revolution).[66] At least one other step toward democracy in England required a very violent insurrection, 1642–49 (again, arguably a revolution), and the "revolution" of 1688 was nonviolent only because of the accidental fact that James II declined to fight.[67]

As for South Africa, democracy there *for whites only* goes back to the

19th century and was peacefully established,[68] but whites never comprised more than a fifth of the population,[69] and I assume that what you have in mind is the recent extension of democracy to the entire population. This, however, occurred at least in part through violent revolutionary action.[70] "Resistance by black workers continued, and saboteurs caused an increasing number of deaths and injuries."[71] If the process was not a revolution, then it was saved from being one only by the fact that the government decided to grant democracy to all races through a negotiated settlement rather than let the situation get further out of hand.[72]

In most of the principal nations of Western Europe, democracy was established through revolution and/or war: In England, partly through violent insurrection, as noted above; in France, through revolution (1789, 1830, 1848) and war (1870); in Germany and Italy democracy was imposed from the outside through warfare (World War II). Among the larger Western European nations, only Spain achieved democracy peacefully, in 1976, after Franco's death in 1975. But Spanish democracy clearly was only a spin-off of the democracy that had been established by violence throughout the rest of Western Europe. Spain was an outlier of a thoroughly democratized, powerful, and economically highly successful Western Europe, so it was only to be expected that Spain would follow the rest of Western Europe and become democratic. Would Spain have become democratic if the rest of Western Europe had been fascist? Probably not. So you can't maintain that the democratization of Spain occurred independently of the violence that established democracy throughout the rest of Western Europe.

The same can be said of much of that part of the "Eastern European communist bloc" that actually has become democratic and done so peacefully. Countries like Poland and the Czech Republic lie on the fringes of Western Europe and are very heavily influenced by it. When one looks at Eastern European countries less closely linked with Western Europe, the status of democracy there seems considerably less secure. As far as I know, Serbia has become democratic, but it did not achieve democracy peacefully. I suppose you realize what is happening in Russia: "President Putin continues to move his country away from democracy...," etc.[73] As for Belarus: "Belarussian President

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[66] *The New Encyclopædia Britannica*, 15th ed., 2003, Vol. 29, article "United Kingdom," p. 38.
[67] *Ibid.*, pp. 61-66.
[68] *Ibid.*, Vol. 27, article "Southern Africa," section "South Africa," p. 920.
[69] *Ibid.*, p. 925.
[70] *Ibid.*, pp. 928-929.
[71] *Ibid.*, p. 929.
[72] *Ibid.*, p. 925.
[73] *Newsweek*, September 27, 2004, p. 36.

Alexander Lukashenko said...that he won a mandate from voters to stay in power in a...referendum scrapping presidential term limits. But foreign observers said the vote process was marred by violations.... That allows the authoritarian president...who has led the nation since 1994, to run again in 2006."[74] "Lukashenko [is] often branded as Europe's last dictator...."[75] In Ukraine, the future of democracy is still uncertain.[76]

So your purported examples of democracy peacefully achieved look rather unimpressive. You would have done better to cite the Netherlands and the Scandinavian countries.[77] The Netherlands' evolution toward democracy was quite peaceful,[78] though seemingly influenced by the violence elsewhere in Europe in 1848.[79] Sweden's evolution toward democracy began early in the 18th century and apparently was entirely peaceful.[80] Norway's democratization seems to have been equally nonviolent;[81] though Norway much of the time was not an independent nation. In Denmark on the other hand I think the absolute monarchy was abolished only as a result of the 1848 revolutions; however, Denmark's progress toward democracy thereafter was reasonably orderly.[82] Note that all of the foregoing countries, as well as England, are Germanic countries. Predominantly Germanic Switzerland, too, adopted democracy readily,[83] though the 1848 revolutions apparently played an important role.[84] Compare this with the often violent and for a long time unsuccessful struggles toward democracy of the Latin and Slavic countries. Germanics seem to take to democracy relatively easily, a point that I will have occasion to mention later. (It's true that in Germany itself the first attempt at democracy—the Weimar Republic—failed, but this can be attributed to peculiarly difficult conditions, namely, the Versailles treaty and disastrous economic problems.)

But what happened in particular countries is somewhat beside the point. Consider the worldwide democratization process as a whole: Democracy was an indigenous and partly violent development in England. It was established in America through a violent insurrection. As I pointed out in my letter of 10/12/04, democracy became the world's dominant political form only because of the economic and technological success of the democracies, especially the English-speaking countries.

And this economic and technological success was achieved not only through industrialization at home but also through worldwide expansion that involved violent

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[74] *The Denver Post*, October 19, 2004, p. 15A.

[75] *Ibid.*, October 18, 2004, p. 15A.

[76] As of 2008.

[77] Here I am not including Finland among the Scandinavian countries.

[78] *Encycl. Britannica*, 15th ed., 2003, Vol. 24, article "Netherlands," pp. 891-94.

[79] *Ibid.*, p. 894 ("When the crisis of the 1848 revolutions broke... [a. new constitution was written...").

[80] *Ibid.*, Vol. 28, article "Sweden," pp. 335-38.

[81] *Ibid.*, Vol. 24, article "Norway," pp. 1092-94.

[82] *Ibid.*, Vol. 17, article "Denmark," pp. 240-41.

[83] *Ibid.*, Vol. 28, article "Switzerland," pp. 352-56.

[84] *Ibid.*, p. 354 ("a new constitution, modeled after that of the United States, was established in 1848...").

displacement of native peoples in North America, Australia, and New Zealand, and economic exploitation elsewhere that was often enforced by violence. The democracies repeatedly had to defend themselves in war against authoritarian systems, notably in World Wars I and II, and they won those wars only because of the vast economic and industrial power that they had built, and built in part through violent conquest and exploitation all over the world.

Thus, democracy became the world's dominant political form through a process that involved violent insurrection and extensive warfare, including predatory warfare against weaker peoples who were to be displaced or exploited.

It should also be noted that democracy, as a political form, cannot be viewed in isolation; it is just one element of a whole cultural complex that is associated with industrialization and that we call "modernity." Usually democracy (in its present-day form) can be successfully and lastingly implanted in a country only when that country has become culturally modernized. (India and Costa Rica are probable exceptions.) In my letter of 10/12/04, I maintained that democracy had become the world's dominant political form because it was the political form most conducive to economic and technological success under conditions of industrialization. It might possibly be argued that it is not democracy itself, but other elements of the associated cultural complex that are mainly responsible for economic and technological success. Singapore achieved outstanding economic success without democracy; Spain achieved good and Taiwan achieved excellent economic success even before they were democratized. I still think that democracy as a political form is an important element of the cultural complex that confers success in an industrialized world. But whether it is or not, the fact remains that modern democracy is not a detached phenomenon but a part of a cultural complex that *tends* to be transmitted as a whole.

When a country becomes democratized peacefully, what typically happens is that either the country is so impressed by the success and dominance of the leading democracies that it willingly tries to absorb their culture, including democracy;[85] or else, due to the economic dominance of the democracies, economic forces compel the country to permit the infiltration of modern culture, and once the country has become sufficiently assimilated culturally and economically, it will be capable of democracy.

But in either case the peaceful advent of democracy in any country in modern times (say, since 1900) is usually a consequence of the fact that the cultural complex of which democracy is a part has already become economically and technologically dominant throughout the world. And, as noted above, democracy and modernity have achieved this dominance, in important part, through violence.

So your example of democracy—as an allegedly *nonviolent* reform designed to solve the problem of political oppression—is clearly invalid. I want to make clear that my

[85] Sometimes a country can be intentionally and calculatedly assimilated to the technoindustrial system and the culture thereof. This falls under one of the exceptions (exception [iii], my letter of 10/12/04) that I noted, in which human intentions for the future of a society can be successfully realized.

intention in the foregoing discussion has not been to indict democracy morally, but simply to show that it does not serve your purpose as an example of nonviolent reform.

B. Much of what I've said about the spread of democracy applies also to the elimination of slavery. Since the arguments applicable to slavery are analogous to those I've given in the case of democracy, I'll only sketch them briefly. First note that rejection of slavery, like democracy and industrialization, is a feature of the cultural complex that we call "modernity."

1. I would argue that slavery was (partly)[86] eliminated only because, in the modern world, there are more efficient means of getting people to work. In other words slavery, due to its economic inefficiency, has been eliminated from the industrialized world by "natural selection" (see my letter of 10/12/04), not primarily by human will. True, much slavery was eliminated through conscious humanitarian efforts,[87] but those efforts could not have had much success if slave societies had been more efficient economically than the industrializing countries where the antislavery efforts originated. Hence, the basic cause of the elimination of slavery was economic, not humanitarian.

2. Slavery was widespread for thousands of years before it was (partly) eliminated in modern times. As I pointed out above, we can't afford to wait thousands of years for a solution to our technology-related problems, so your example of slavery gives us no reason to hope for a timely and peaceful solution to those problems.

3. The elimination of slavery was by no means a nonviolent process. Slavery was expunged from Haiti through bloody revolution.[88] Slave revolts occurred repeatedly in at least some slave societies,[89] and, while these revolts rarely achieved lasting success, it seems safe to assume that they contributed to the economic inefficiency of slavery that led to its eventually being superseded by more efficient systems. When slavery was eliminated in modern times, it was often eliminated through *violent* intervention from outside. For example, slavery in the American South was ended by the Civil War, the bloodiest conflict in U.S. history, and the Arab slave trade in

Southeast Africa was closed down in 1889 only after war between the slave-dealers and the colonial powers.[90]

So your example of slavery gives us no reason to hope for a *peaceful* solution to anything.

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[86] "[A]ntislavery groups estimated that 27 million people were enslaved at the beginning of the 21st century, more than in any previous historical period," *Encycl. Britannica*, 15th ed., 2003, Vol. 27, article "Slavery," p. 293. I assume, however, that the *percentage* of the world's population that lives in slavery today is smaller than in earlier times, and that the elimination of slavery from fully modernized countries is very nearly complete.

[87] "The fate of slavery [in most of the world outside the British Isles. depended on the British abolition movement...," *Encycl. Britannica*, 15th edition, 2003, Vol. 27, article "Slavery," p. 293.

[88] *Ibid.*, p. 299.

[89] *Ibid.*, pp. 298-99.

[90] G. A. Zimmermann, *Das Neunzehnte Jahrhundert*, Zweite Hälfte, Zweiter Teil, Milwaukee, 1902, pp. 30-31.

C. Before I address your other two examples, I want to point out that in focusing on isolated, formal features of societies— on whether governments were representative democracies or whether human beings were technically owned as property—you distract attention from more important questions: How much personal freedom did people have in practice and how satisfactory were their lives?

If I had to live in a specified society, would I rather live as a slave or as a non-slave? Of course, I would rather live as a non-slave. Would I prefer that the society's government should be democratic or authoritarian? *All else being equal*, I would prefer that the government should be democratic. For example, if I were to live in Spain I would rather live in Spain as it was in 1976, after democratization, than in Spain as it was in 1974, when Franco was still alive.

If I had to live in Rome in AD 100, I would rather live there as a freeman than as a slave.

When the questions are framed as above, democracy and the elimination of slavery appear to be unequivocally beneficial. But, as we've seen, democracy and the elimination of slavery have prevailed not as isolated and detached features but as part of the cultural complex that we call "modernity." So what we really need to ask is: How does the quality of life in modern society compare with that in earlier societies that may have had authoritarian governments or practiced slavery? Here the answer is not so obvious.

Slavery has taken a wide variety of forms, some of which were very brutal, as everyone knows. But: "Various Greek and Roman authors report on how Etruscan slaves dressed well and how they often owned their own homes. They easily became liberated and rapidly rose in status once they were freed."[91] In as much of Spanish America as came under Simón Bolívar's observation, the slave-owner "has made his slave the companion of his indolence"; he "does not oppress his domestic servant with excessive labor: he treats him as a comrade...."[92] "The slave...vegetates in a state of neglect...enjoying, so to speak, his idleness, the estate of his lord, and many of the advantages of liberty; ...he considers himself to be in his natural condition, as a member of his master's family...."[93] Such examples are not rare exceptions,[94] and it will immediately occur to you to ask whether under these conditions slaves might not have been better off than modern wage-workers. But I would go farther and argue that even under the harsher forms of servitude many slaves and serfs had more freedom—the kind of freedom that really counts (see my letter of 10/12/04)—than modern man does. This, however, is not the place to make that argument.

I could make a much stronger argument that nominally free (non-slave, non-serf, etc.) people living under authoritarian systems of past ages often had greater personal

[91] *Encycl. Britannica*, 15th ed., 2003, Vol. 20, article "Greek and Roman Civilizations," p. 277.

[92] Simón Bolívar, letter to the editor of the *Gaceta Real de Jamaica*, September 1815; in Graciela Soriano (ed.), *Simón Bolívar: Escritos políticos*, Madrid, 1975, p. 86.

[93] *Ibid.*, p. 87.

[94] *Encycl. Britannica*, 15th ed., 2003, Vol. 27, article "Slavery," p. 288.

freedom—of the kind that counts—than the average citizen of a modern democracy does. Again, this is not the place to make such an argument.

But I do want to suggest here that democracy (in the modern sense of the word) could actually be regarded as a sign of servitude in the following sense: A modern democracy is able to maintain an adequate level of social order with a relatively decentralized power structure and relatively mild instruments of physical coercion only because sufficiently many people are willing to abide by the rules more or less voluntarily. In other words, democracy demands an orderly and obedient population. As the historian Von Laue put it, "Industrial society...requires an incredible docility at the base of its freedoms."[95] I suggest that this is why the Germanic countries adjusted to democracy so easily: Germanic cultures tended to produce more disciplined, obedient, authority-respecting people than the comparatively unruly Latin and Slavic cultures did. The Latins of Europe achieved stable democracies only after experience of industrialized living trained them to a sufficient level of social discipline, and over part of the Slavic world there still is insufficient social discipline for stable democracy. Social discipline is even more insufficient in Latin America, Africa, and the Arabic countries. Democracy succeeded so well in Japan precisely because the Japanese are an especially obedient, conforming, orderly people.

Thus, it could be argued that modern democracy represents not freedom but subjection to a higher level of social discipline,[96] a discipline that is more psychological and based less on physical coercion than old-fashioned authoritarian systems were.

I can't leave the subject of democracy without inviting you to comment on this passage of Nietzsche: "Liberal institutions immediately cease to be liberal as soon as they are attained: subsequently there is nothing more thoroughly harmful to freedom than liberal institutions. ...As long as they are still being fought for, these same institutions produce quite different effects; they then in fact promote freedom mightily. ...For what is freedom? That one has the will to self-responsibility. ...That one has become more indifferent to hardship, toil, privation, even to life. That one is ready to sacrifice men to one's cause, oneself not excepted," *Twilight of the Idols (Götzen-Dämmerung)*, §38 (translation of R. J. Hollingdale).[97]

D. Now let's look at your third example, "Sanitation and waste disposal." It's not clear to me why you chose this particular example. It's just another one of the innumerable technical improvements that have been devised during the last few centuries, and you could equally well have cited any of the others. Of course, none of the responsible opponents of technology has ever denied that technology does some good things, so your example tells us nothing new.

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[95] Theodore H. von Laue, *Why Lenin? Why Stalin?*, J. B. Lippencott Co., New York, 1971, p. 202.

[96] I don't mean to suggest that discipline as such is necessarily bad. I suspect that any successful revolutionary movement directed against the technoindustrial system will have to be well disciplined.

[97] Friedrich Nietzsche, *Twilight of the Idols/The Antichrist*, trans. by R. J. Hollingdale, Penguin Books, 1990, p. 103.

Poor sanitation and inefficient waste disposal were bad for the system *and* bad for people, so the interests of the system coincided with the interests of human beings and it was therefore only to be expected that an effective solution to the problem would be developed.

But the fact that solutions are found in cases where the interests of the system *coincide* with the interests of human beings gives us no reason to hope for solutions in cases where the interests of the system *conflict* with those of human beings.

For instance, consider what happens when skilled craftsmen are put out of work by technical improvements that make them superfluous. I recently received a letter from a professional gravestone sculptor who provided me with a concrete example of this. He had spent years developing skills that were rendered useless a few years ago by some sort of laser-guided device that carved gravestones automatically. He's in his forties, unable to find work, and obviously depressed. This sort of thing has been going on ever since the beginning of the Industrial Revolution, and it will continue to go on because in this situation the interests of the system conflict with those of human beings, so human beings have to give way. Where is the solution that, according to your theory, society is supposed to have developed? As far as I know, only two solutions have been implemented: (i) welfare; and

(ii) retraining programs. My guess is that organized retraining programs cover only a fraction of all workers displaced by technology; at any rate, they apparently hadn't covered the gravestone sculptor who wrote to me. But what if they did cover him? "Okay, John, you're 45 years old and the craft you've practiced all your life has just been rendered obsolete by Consolidated Colossal Corporation's new laser-guided stonecutter. But smile and be optimistic, because we're going to put you through a training program to teach you how to operate a ball-bearing-polishing machine...." Your colleague may think this is consistent with human dignity, but I don't, and I'm pretty sure the above-mentioned gravestone sculptor wouldn't think it was consistent with human dignity either.

It's worth mentioning, by the way, that improved sanitation too seems to have had unanticipated negative consequences. Sanitation no doubt is one of the most important factors in the dramatic, worldwide reduction in infant mortality rates, which presumably has played a major role in the population explosion. In addition, improved sanitation may be responsible for allergies and inflammatory bowel disease. There has been a "sharp increase" in allergies over the past few decades, and it is hypothesized that modern sanitation is responsible for this.[98] The idea is that because we are too clean, children's immune systems don't get enough "exercise," so to speak, and therefore fail to develop properly. Though I can't cite the source, I've read something similar about Crohn's disease, a form of inflammatory bowel disease that was virtually unknown until modern times. It is hypothesized that the disease is caused by lack of

[98] *U.S. News & World Report*, May 8, 2000, pp. 47-49. *National Geographic*, May, 2006, pp. 127, 129.

exposure to intestinal parasites, and one experimental treatment has been based on intentionally infecting patients with certain intestinal worms. I don't know whether the latest research has confirmed these hypotheses and I'm not in a position to dig up the relevant literature.

E. Your fourth example is "air and water pollution." You claim that the (partial) solution to this problem has been acceptable "as defined by the majority."

1. Assuming for the sake of argument that the solution actually has been acceptable to the majority, that means nothing. The great majority of Germans supported Hitler "until the very end."[99]

The majority's opinions about society's problems are to a great extent irrational, for at least two reasons: (i) the majority's outlook is shaped, to a considerable degree, by propaganda. (ii) Most people put very little serious effort into thinking about society's problems. This is not an elitist sneer at the "unthinking masses." The average man's refusal to think seriously about large-scale problems is quite sensible: Such thought is useless to him personally because he himself can't do anything to solve such problems. In fact, some psychologists and physicians have advised people to avoid thinking about problems that they are powerless to solve, because such thinking only causes unnecessary stress and anxiety. It could be argued that people like us, who put substantial time and effort into studying social problems while having only a minimal chance of contributing measurably to the solutions, are freaks. And our thinking may be influenced by propaganda more than we realize or would like to admit.

The point is, however, that the majority's putative acceptance of existing levels of air and water pollution is largely irrelevant.

2. And how do you know that existing levels of air and water pollution are acceptable to the majority? Have you taken a survey? Maybe you simply assume that existing levels of pollution are acceptable to the majority because there currently is very little public agitation over pollution. Though the meaning of the term "acceptable" is not at all clear in this context, it can by no means be assumed that the level of active public resistance is an accurate index of what the public feels is "acceptable." I think most historians would agree that active, organized public resistance is most likely to occur not necessarily when conditions are worst, but when people find new hope that resistance will bring success, or when some other new circumstance or event prods them into action.[100] So the absence of public resistance by no means proves that the majority is satisfied.

3. What the system has done is to alleviate the most visible and obvious signs of pollution, such as murky, stinking rivers and air darkened by smog. Since these symptoms

[99] *Encycl. Britannica*, 15th ed., 2003, Vol. 20, article "Hitler," p. 628.

[100] See, e.g., *Encycl. Britannica*, 15th ed., 1997, Vol. 26, article "Propaganda," p. 175 ("The rank and file of any group, especially a big one, have been shown to be remarkably passive until aroused by quasi-parental leaders whom they admire and trust."); Trotsky, *op. cit.,* Vol. Two, p. vii ("[T]he mere existence of privations is not enough to cause an insurrection....It is necessary that...new conditions and new ideas should open the prospect of a revolutionary way out.").

are directly experienced by the average man, they presumably are the ones most likely to arouse public discontent; and while their (partial) cure may inconvenience certain industries it does not significantly impede the progress of the system as a whole. The most successful industrialized countries, for the present, have easily enough economic surplus to cover the cost of controlling the aforementioned visible forms of pollution. But this may not be true of backward countries that are struggling to catch up with the more advanced ones. For example, the air pollution over Mexico City is notoriously horrible.

In fact, if you look beyond the comforting improvements in air-pollution indices over our cities as reported by the EPA and consider the worldwide pollution situation as a whole, it appears that what the system has done to alleviate the problem is almost negligible. The following by the way goes also to support the argument that things are bad and getting worse:

Acid rain (due to certain forms of air pollution) is still damaging our forests. At least up to a few years ago (and perhaps even today) the Russians were still dumping their nuclear waste in the Arctic Ocean. The public

(in the U.S.) has been warned not to eat too much fish, because fish are contaminated with mercury and PCB's (from water pollution, obviously). For the foregoing I can't cite a source; I'm depending on memory. But:

"The indigenous populations of Greenland and Arctic Canada are being poisoned by toxic industrial chemicals that drift north by wind and water, polluting their food supplies. On January 13, 2004, *The Los Angeles Times* told its readers that the pollutants, which include PCBs and 200 other hazardous compounds, get into the native food chains through zooplankton. 'The bodies of Arctic people...contain the highest human concentrations of industrial chemicals and pesticides found anywhere on Earth—levels so extreme that the breast milk and tissues of some Greenlanders could be classified as hazardous wastes,' the *Times*' Marla Cone reports."[101]

"In the mid-1980s, some researchers in the northern Midwest, Canada, and Scandinavia began reporting alarming concentrations of mercury in freshwater fish. ...[T]he skies already hold so much mercury that even if industrial emissions of the metal ended tomorrow, significant fallout of the pollutant might persist for decades...."[102]

"Measurable levels of cancer-causing pesticides have been found in the drinking water of 347 towns and cities. Creation and use of toxic chemicals continues at a rate far faster than our capacity to learn how safe extended exposures to these substances are. ...The U.S. Environmental Protection Agency was mandated to test existing pesticides—just one class of chemicals—for health risks by 1972, but the job still isn't completed today, and regulators are falling further behind."[103]

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[101] *Vegetarian Times*, May, 2004, p. 13 (quoting *Los Angeles Times* of January 13, 2004).

[102] *Science News*, February 1, 2003, Vol. 163, p. 72.

[103] "Kids Need more Protection From chemicals," *Los Angeles Times*, January 28, 1999, page number not available.

"The new residents [on grounds of former U.S. Clark Air Base, in the Philippines] dug wells, planted crops...unaware that the ground water they drank and bathed in, the soil their rice and sweet potatoes grew in, and the creeks and ponds they fished in were contaminated by toxic substances dumped during a half century of U.S. tenure. Within a few years, health workers began tracking a rise in spontaneous abortions, stillbirths, and birth defects; kidney, skin, and nervous disorders; cancers, and other conditions.... Today, the Pentagon acknowledges polluting major overseas bases, but insists that the Unites States isn't obligated to clean them up."[104]

(On the bright side: "Air-pollution emissions have dropped 7.8% since 2000 [what pollutants are measured, and where, is unstated].... Critics say the drop in water-quality complaints reflects laggard enforcement...."[105])

Anyone who wanted to search the media could go on and on citing things of this sort. And if what I've seen is any indication, he would find vastly more on the negative than on the positive side.

Perhaps the biggest pollution problem of all is global warming, which scientists now agree is due at least in part to human production of "greenhouse gasses," carbon dioxide in particular.[106] It's not just a matter of temperatures rising a few degrees; the consequences of global warming are extremely serious. They include the spread of disease,[107] extreme weather conditions such as storms, tornados, and floods,[108] possible extinction of arctic species such as the polar bear,[109] disruption of the way of life of arctic residents,[110] rising sea levels that will flood parts of the world,[111] and drought.[112] "More of the Earth is turning to dust[.] 'It's a creeping catastrophe', says a U.N. spokesman. Desertification's pace has doubled since the 1970s...."[113] However, global warming is only one of the causes of desertification.[114]

Your colleague's proposed "general pattern" doesn't work here, because you can't just turn something like global warming around when enough people become concerned about it. No matter what measures are taken now, we will be stuck with the consequences of global warming for (at least!) a matter of centuries. In fact, some scientists fear that human modification of the atmosphere may soon "throw a switch" that will trigger a dramatic, disastrous, and irreversible change in the Earth's climate.[115]

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[104] *U.S. News & World Report*, January 24, 2000, pp. 30-31.

[105] *Time* magazine, October 18, 2004, p. 29.

[106] E.g., Bill McKibben, "Acquaintance of the Earth" (book review), *New York Review*, May 25, 2000, p. 49. *U.S. News & World Report*, February 5, 2001, p. 44.

[107] *Time* magazine, July 1, 2002, p. 57. *U.S News & World Report*, February 5, 2001, pp. 46, 48, 50.

[108] *U.S. News & World Report*, February 5, 2001, pp. 44-46.

[109] *Time* magazine, November 22, 2004, pp. 72-73.

[110] *Ibid.*, October 4, 2004, pp. 68-70.

[111] *U.S. News & World Report*, February 5, 2001, pp. 48, 50.

[112] *Ibid.*, p. 50.

[113] *The Denver Post*, June 16, 2004, p. 2A.

[114] *Ibid.*

[115] *Christian Science Monitor*, March 8, 2001, p. 20. Elizabeth Kolbert, "Ice Memory,"

Since it is in the system's own interest to keep pollution and global warming under control, it is conceivable that solutions may be found that will prevent these problems from becoming utterly disastrous. But what will be the cost to human beings? In particular, what will be the cost to human freedom and dignity, which so often get in the way of the system's technical solutions?

From Ted to Skrbina — January 3, 2005

First point (freedom). ...I and some other people place an extremely high value on freedom; and I do so because today there is an acute shortage of freedom as I've defined it. If I had grown up in a society in which there was an abundance of freedom but an acute shortage of (for example) physical necessities, I might well have been willing to sacrifice some of my freedom for physical necessities. Poncins says that the Eskimos he knew considered it a reward and not a punishment to be imprisoned, because in prison they were fed and kept warm without having to exert themselves.[116]

Second point (autonomy/freedom). ...I wouldn't say flatly that medieval peasants (for example) had more freedom than we have today, but I think one could make a strong argument that they did have more of the kind of freedom that really counts. See my letters to J. N. (in the Labadie Collection).

Third point (surrogate activities). I've never said that surrogate activities "must be abandoned." Also, the line between surrogate activities and purposeful activities often is not easy to draw. See ISAIF, §§40, 84, 90. And surrogate activities are not peculiar to modern society. What is true is that surrogate activities have come to play an unusual, disproportionate, and exaggerated role in modern society. ...In any case, I don't see that anything would be accomplished by attacking surrogate activities. But I think that the concept of surrogate activity is important for an understanding of the psychology of modern man.

Fourth point (revolution). ...In the present historical context a successful revolution would consist in bringing about the complete dissolution of the technoindustrial system.

Fifth point (reform). Essentially I agree with this, though I wouldn't express it in exactly the same words.

Sixth point (revolution is demanded). Yes, revolution is demanded. I've never said, and I certainly do not believe, that a revolutionary movement must be peaceful and nonviolent. I have simply declined to discuss the violent aspects of revolution, because I don't want to give the authorities an excuse to cut off my communications with you on the ground that I'm "inciting violence." I do think that a revolutionary movement should have one *branch* that will avoid all violent or otherwise illegal activities in order to be able to function openly and publicly. I've never said that a revolution should be led by a "small group," which to me would mean 10, 20, 50, or at most 100 people.

The New Yorker, January 7, 2002, pp. 30-37.

[116] Poncins, *op. cit.,* pp. 164-65.

(The "Handful" of people I referred to in an earlier letter would be initiators, probably would not retain leadership permanently.)

I do think that the active and effective part of a revolutionary movement would comprise only a small fraction of the entire population. Finally, I've never said that the revolution should be led by intellectuals. Of course, that would depend on what one means by an "intellectual." I suppose that term is most commonly taken to include college and university faculty in the humanities and social sciences, and persons in closely related occupations, such as professional writers who write on serious subjects. When the word "intellectual" is understood in that sense, it is my impression that very, very few if any present-day intellectuals are potential members of a revolutionary movement. I can imagine that some intellectuals could play a very important role in formulating, articulating, and disseminating ideas that would subsequently form part of the basis for a revolutionary movement. But in reading *The New York Review*, *The London Review*, and *The Times Literary*

Supplement over the last several years I've found virtually *no* mention of the technology problem. It's as if the intellectuals were willfully avoiding what is obviously the most critical issue of our time. That's why I'm so pleased to find at least two intellectuals—yourself and your unnamed colleague— who take a serious interest in the technology problem.

Seventh point (avoidance of stress-reduction). ...I decidedly disagree with your sentence, which says: "In fact, [revolutionaries] should actively OPPOSE such actions...." Absolutely not! Let's take minority rights, for example. The big problem there is that the fuss over minority rights absorbs the rebellious energies of would-be radicals and distracts attention from the critical issue of technology. By *opposing* equal rights for non-whites, women, homosexuals, etc., revolutionaries would merely intensify the fuss over minority rights and thus distract even more attention from the issue of technology. What revolutionaries have to do is show people that the fuss over minority rights is largely irrelevant.

Further, the principle that revolutionaries should work to increase the tensions in society is merely a general rule of thumb, not a rigid law that can be applied mechanically. One has to give separate consideration to each individual case. Are the social tensions arising from discrimination against minorities useful from a revolutionary point of view? Clearly not!

For example, if black people are harassed by police, then their attention will be focused on that problem and they will have no time for the technology problem. Thus, again, problems of minority rights distract attention from the technology problem, and we would be better off if all minority problems had already been solved, because the associated tensions are *not* productive. See ISAIF, §§190-92.

For another example, suppose revolutionaries were to oppose political action designed to reduce pollution. In that case people concerned about pollution would become hostile toward the revolutionaries. Further, tension between opponents of pollution and the system would be *reduced*, because opponents of pollution would attribute contin-

ued pollution in part to the obstructive behavior of the revolutionaries. They would say, "The problem is those damned extremists! If it weren't for them, we would be able to swing the system around and reduce pollution." So, instead of *opposing* reformist efforts to reduce pollution, revolutionaries have to emphasize: (i) that such efforts can never really solve the pollution problem, but only alleviate it to a limited extent; (ii) that pollution is only one of many grave problems associated with the technoindustrial system; and (iii) that it is futile to try to attack all of these problems separately and individually—the only effective solution is to bring down the whole system.

The tensions that are useful are the tensions that pit people against the technoindustrial system. Other tensions—e.g, racial tensions, which pit different racial groups against each other rather than against the system—are counterproductive and actually relieve the tension against the system, because they serve as a distraction. See ISAIF, §§190-92.

On page 4 you write that "we should seek *optimum levels* of technology and social order." Several other people who have written to me have raised similar questions about an optimal or acceptable level of technology. My position is that we have *only two choices*. It's like flipping a light-switch.

Either your light is on or your light is off, and there's nothing more to be said. Similarly, with only minor reservations and qualifications, we have only two choices at the present point in history: We can either allow the technoindustrial system to continue on its present course, or we can destroy the technoindustrial system. In the first case, technology will eventually swallow everything. In the second case, technology will find its own level as determined by circumstances over which we have no control. Consequently, it is idle to speak of finding an "optimal" level of technology. Any conclusion we might reach about an "optimal" level of technology would be useless, because we would have no means of applying that conclusion in the real world. The same is true of any "optimal" level of social order.

I've read the pieces by Jacques Ellul and Ivan Illich that you sent me. Illich wrote: "If within the very near future man cannot set limits to the interference of his tools with the environment and practice effective birth control, the next generations will experience the gruesome apocalypse predicted by many ecologists." Illich wrote that 32 years ago, and the "apocalypse" is not yet upon us. I think it's safe to say that the system will break down *eventually*—if only because every previous civilization has broken down eventually—and the breakdown when it comes will no doubt be gruesome, but I see no reason to believe that the system is now on the brink of collapse. Dire predictions made by "ecologists" 30-odd years ago have proved to be exaggerated and/or premature.

To me, a lot of what Illich writes is completely incomprehensible. E.g., on page 109 he says: "When business is normal the procedural opposition between corporations and clients usually heightens the legitimacy of the latter's dependence." Can you explain what this sentence means? I find it hopelessly obscure.

As for Ellul, "Anarchy from a Christian Standpoint, 1. What is Anarchy?," I think he's all wrong. It would take too much time to discuss all the ways in which I think he's wrong, so I'll just mention a couple of points. First, he's wrong in claiming that, in history, violence has proven to be an ineffective tactic. Actually violence has been effective or ineffective, depending on the historical circumstances of each particular case. See James F. Kirkham, Sheldon G. Levy, and William J. Crotty, *Assassination and Political Violence: A Report to the National Commission on the Causes and Prevention of Violence*, Praeger Publishers, New York, 1970, page 4. The authors concluded that, in history, systematic assassination had been "effective in achieving the long-range goals sought, although not so in advancing the short-term goals or careers of the terrorists themselves." On this subject the authors go farther than I would.

Second, Ellul writes: "[The] two great characteristics [of people], no matter what their society or education, are covetousness and a desire for power. We find these traits always and everywhere." It's not completely clear to me what Ellul means by "covetousness." But he writes that covetousness "can never be assuaged or satisfied, for once one thing is acquired it directs its attention to something else." So Ellul evidently has in mind a desire to accumulate property indefinitely. If my interpretation of his meaning is correct, then Ellul is dead wrong about covetousness. There have been many societies in which the desire to accumulate property has been absent. E.g., most if not all nomadic hunting-and-gathering societies. To take a concrete case, the Mbuti pygmies: According to Schebesta, "No urge for possession... seems to dwell in them"; "there is also the fact that among the Mbuti, any intention to pile up supplies, or at all to accumulate wealth, is lacking."[117]

The need for power undoubtedly is universal, but it does not have to take the form of a desire to dominate other people, as Ellul seems to assume. It may well be true that an impulse to dominance is innate in humans, especially in males, but I think Ellul greatly overestimates its strength. Moreover, there have existed societies in which any impulse to dominance has been kept well under control: Among the Mbuti, and among the Bushmen studied by Richard Lee, no one was allowed to set himself up above the rest.[118] Thus, these societies came surprisingly close to the anarchist ideal.

From Ted to Skrbina — March 17, 2005

I. WHY REFORM WILL FAIL

You and your colleague make a series of related assertions: We "would act...to restrict technology as it becomes necessary." "People in the future will likely act to mitigate

[117] Paul Schebesta, *Die Bambuti-Pygmäen vom Ituri*, II. Band, I. Teil, Institut Royal Colonial Belge, Brussels, 1941, pp. 8, 18. I received Schebesta's Vol. II as a Christmas gift this year from my beloved lady, the schoolteacher whom I mentioned to you in an earlier letter. Two years ago I received Schebesta's Vol. I from her as a Christmas gift.

[118] Colin Turnbull, *Wayward Servants*, Natural History Press, 1965, pages 27, 28, 42,

technological advances or effects that begin to significantly undermine their wellbeing." Success in "adequately overcoming technologically-induced adversities" will be more likely through reform than through revolution. There's a "general pattern: A technical problem arises and ... [eventually]... a compromise solution is implemented that reduces the level of harm to 'a generally acceptable level.'"

In my letter of 11/23/04, I answered these claims in part. Addressing your four examples of the purported "general pattern," I argued that even assuming that the achieved solutions to the problems were adequate ones (which in three of the four cases was debatable at best): (i) The "solutions" came about largely through the operation of "objective" factors and independently of human will. (ii) In two of the four cases (political oppression, slavery) the solutions were reached, in important part, through warfare and violent revolution, hence could not fairly be characterized as reform. (iii) In the same two of the four cases, the solutions were not reached until thousands of years after the problems arose. In other words, the solutions did not happen when we needed them, but when the "objective" conditions were by chance right for them.

I.A. The most important point in the foregoing is:

1. The course of history, in the large, is generally determined not by human choice but by "objective" factors, especially by the kind of "natural selection" that I discussed in my letter of 10/12/04. Consequently, we can't achieve a long-lasting solution to a major social problem by superficial tinkering designed merely to correct particular symptoms. If a solution is possible at all, it can be reached only by finding a way to change the underlying "objective" factors that are responsible for the existing situation.

There are several other reasons why acceptable solutions[119] to the problems of the technological society will not be reached through the "general pattern" of compromise and reform that you and your colleague propose.

2. Generally speaking, reform is possible only in cases where the interests of the system coincide with the interests of human beings. Where the interests of the system conflict with those of human beings, there is no meaningful reform.[120] E.g., sanitation has improved because it is in the system's interest to avoid epidemics. But nothing has been done about the unsatisfactory nature of modern work, because if most people worked as independent artisans rather than as cogs in the system, the economic efficiency of the system would be drastically impaired.

[119] Obviously, there may be disagreement as to what constitutes an "acceptable" solution. I suspect that you and I may not be too far apart as to what we would consider acceptable, but I have no idea where your colleague stands in that respect.

[120] Admittedly there is a gray area: Sometimes a reform is in the interest of the system only because conditions are so hard on human beings that they will rebel if there is no alleviation. E.g., the government acted to solve the labor problems of the early 20th century only after violence by workers made clear that it was in the interest of the system to solve the problems. I think there is a chapter on these labor problems in Hugh Davis Graham and Ted Robert Gurr (editors), *Violence in America: Historical and Comparative Perspectives.*

"Natural selection" is at work here: Systems that compromise their own power and efficiency for the sake of "human values" are at a competitive disadvantage vis-à-vis systems that put power and efficiency first. Hence, the latter expand while the former fall behind.

3. You claim that people will act to mitigate problems "that begin to significantly undermine their well-being." But often, once a problem begins to significantly undermine people's well-being, it is too late to solve the problem; or even if the problem can be solved the cost of solving it may be unacceptably high.

For example, it is too late to solve the problem of the Greenhouse Effect (global warming). Whatever is done now, we will be stuck with its consequences for centuries to come. We can hope to "solve" the problem only to the extent of keeping the effect within certain limits, and it's not clear that even that much can be done without drastic cuts in energy consumption that will have unacceptable economic consequences.

Apparently the threat represented by nuclear weapons has not undermined people's well-being enough to lead to the abolition of these weapons. If there is ever a major nuclear war, people's well-being will be undermined very dramatically; but then it will be too late.

Right now biotechnicians are playing with fire. The escape from the laboratory of some artificially-created organisms or genetic material could have disastrous consequences, yet nothing is being done to restrain the biotechnicians. If there is ever a major biological disaster, people's well-being will indeed be undermined, but then it will be too late to correct the problem. For example, the so-called "killer bees" are a hybrid of

South American and African bees that escaped from a research facility somewhere in South America. Once the bees had escaped, all efforts to stop them proved futile. They have spread over much of South America and into the U.S. and have killed hundreds of people. With the experimentation in biotechnology that is now going on, something much, much worse could happen. See Bill Joy's article.

4. Often a bad thing cannot be fixed because its specific cause is not known. Consider for example the steady increase in the rate of mental disorders that I discussed in my letter of 11/23/04. It seems almost certain that this increase is in some way an outgrowth of technological progress, since the entire lifestyle of modern man is essentially determined by his technology. But no one knows *specifically* why the rate of mental disorders has been increasing. My personal opinion is that the high rate of depression has a great deal to do with deprivation with respect to the power process,[121] but even if I'm right that still leaves a great deal unanswered, e.g., in regard to mania and anxiety disorders.

Again, it is believed that the rate of mortality due to cancer has increased by a factor of more than *ten* since the late 19th century,[122] and that this is not a result

[121] See my letter of 10/12/04; ISAIF §§44, 58, 145.

[122] Mel Greaves, *Cancer: The Evolutionary Legacy*, Oxford University Press, 2000, p. 16. Greaves actually writes, "overall *age-related* mortality from the major types of cancer in Western society at

merely of the aging of the population. This too is almost certainly in some way an outcome of the technoindustrial lifestyle, but, while some causes of cancer are known, the reason for the overall massive increase in the incidence of this disease is still a mystery.

5. Even where a problem can be solved, the solution itself often is offensive to human dignity. For example, because the causes of depression, mania and attention-deficit disorder either are unknown or cannot be removed without excessive cost to the system, these problems are "solved" by giving the patients drugs. So the system makes people sick by subjecting them to conditions that are not fit for human beings to live in, and then it restores their ability to function by feeding them drugs. To me, this is a colossal insult to human dignity.

6. Where a problem is of long standing, people may fail to realize even that there is a problem, because they have never known anything better. I've already suggested something like this in regard to stress. See my letter of 5/19/04.

7. Some problems are insoluble because of the very nature of modern technology. For example, the transfer of power from individuals and small groups to large organizations is inevitable in a technological society for several reasons, one of which is that many essential operations in the functioning of the technological system can be carried out only by large organizations. E.g., if petroleum were not refined on a large scale, the production of gasoline would be so costly and laborious that the automobile would not be a practical means of transportation.

8. Your formulations, as quoted on the first page of this letter, rely on such terms as "well-being," "adversities," and "generally acceptable level" of "harm." These terms may be subject to a variety of interpretations, but I assume that what you mean is that when conditions make people sufficiently uncomfortable they will act to reduce their discomfort to an acceptable level. I deny that this is consistently true, but even if it were true it would not solve the problem as I see it.

One of the most dangerous features of the technoindustrial system is precisely its power to make people comfortable (or at least reduce their discomfort to a relatively acceptable level) in circumstances under which they should *not* be comfortable, e.g., circumstances that are offensive to human dignity, or destructive of the life that evolved on Earth over hundreds of millions of years, or that may lead to disaster at some future time. Drugs (as I've just discussed, I.A.5) can alleviate the discomfort of depression and attention-deficit disorder, propaganda can reconcile the majority to environmental destruction, and the entertainment industry gives people forgetfulness so that they won't worry too much about nuclear weapons or about the fact that they may be replaced by computers a few decades from now.

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the end of the twentieth century was probably more than ten times that at the end of the nineteenth century." I assume this means that cancer mortality *in any given age group* has increased by a factor of more than ten. For balance: "overall rates of new cancer cases and deaths from cancer in the U.S. have been declining gradually since 1991... .," *University of California, Berkeley, Wellness Letter*, September 2004, p. 8.

So comfort is not the main issue. On the contrary, one of our most important worries should be that people may be made comfortable with almost anything, including conditions that we would consider horrifying. Perhaps you've read Aldous Huxley's *Brave New World*, a vision of a society in which nearly everyone was supremely comfortable; yet Huxley intended this vision to repel the reader, as being inconsistent with human dignity.

9. What happens is that social norms, and people themselves, change progressively over time in response to changes in society. This occurs partly through a spontaneous process of adaptation and partly through the agency of propaganda and educational techniques; in the future, biotechnology too may alter human beings. The result is that people come to accept conditions that earlier generations would have considered inconsistent with freedom or intolerably offensive to human dignity.

For example, failure or inability to retaliate for an injury was traditionally seen as intensely shameful. To the ancient Romans, it was "the lowest depth of shame to submit tamely to wrongs."[123] To the 17th-century Spanish playwright Calderón de la Barca, a man who had been subjected to a wrong was degraded but could perhaps redeem himself by seeking revenge. The same attitude—that to be wronged is a shame that can be wiped away only through revenge—persists today in the Middle East.[124] In the English-speaking world, even into the early 19th century, duels were fought over points of "honor." (We all know about the famous duel in which Aaron Burr killed Alexander Hamilton, and my recollection is that Andrew Jackson, before he became President, killed a man in a duel.)

Today, however, "revenge" is a bad word. Dueling and private retaliation not only are illegal, but by well-socialized people are seen as immoral. We are expected to submit meekly to an injury or humiliation unless a legal remedy is available through the courts. Of course, it's easy to see why modern society's need for social order makes it imperative to suppress dueling and private revenge.

Prior to the advent of the Industrial Revolution in England and America, police forces were intentionally kept weak because people saw police as a threat to their freedom. People relied for protection not primarily on the police but on themselves, their families and their friends. Effective law enforcement came to be regarded as desirable only as a result of the social changes that the Industrial Revolution brought.[125]

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[123] From speech attributed to Gaius Memmius by Sallust, *Jugurthine War*, Book 31, somewhere around Chapt. 16. Roman historians commonly invented the speeches that they put into the mouths of their protagonists, but the quotation reflects Roman attitudes even if it was invented by Sallust rather than spoken by Memmius.

[124] Pedro Calderón de la Barca, *La vida es sueño*, Jornada primera, Escena cuarta (Edilux Ediciones, Medellin, Colombia, 1989, p. 25): "hombre que está agraviado es infame...," etc. Mark Danner, "Torture and Truth," *The New York Review*, 6/10/04, p. 45.

[125] Hugh Davis Graham and Ted Robert Gurr, *op. cit.*; Chapter 12, by Roger Lane. *The New Encyclopœdia Britannica*, 15th ed., 2003, Vol. 25, article "Police," pp. 959-960.

Today, needless to say, hardly any respectable middle-class person sees the presence of strong police forces as an infringement of his freedom.

I'm not trying to persuade you to advocate the abolition of police or to approve of dueling and private revenge. My point is simply that attitudes regarding what is consistent with human dignity and freedom have changed in the past in response to the needs of the system, and will continue to change in the future, also in response to the needs of the system. Thus, even if future generations are able to "solve" social problems to the extent necessary to secure what *they* conceive of as human dignity and freedom, their solutions may be totally incompatible with what we would want for our posterity.

10. When a problem persists for a long time without substantial progress toward a solution, most people just give up and become passive with respect to it. (Note the connection with "learned helplessness.") This of course is one of the mechanisms that help bring people to accept what they formerly regarded as intolerable indignities as I described above.

For example, back in the late '50s or early '60s, Vance Packard published a book titled *The Hidden Persuaders*, which was an exposé of the manipulative techniques that advertisers used to sell products or political candidates to consumers or voters. When the book first appeared it received a great deal of attention, and my recollection is that the most common reaction among intellectuals and other thinking people was: "Isn't this scandalous? What is the world coming to when people's attitudes, voting choices, and buying habits can be manipulated by a handful of skilled professional propagandists?" At that time I was in my late teens and was naive enough to believe that, as a result of Packard's book and the attention it received, something would be done about manipulative advertising. Obviously nothing was done about it, and nowadays if anyone published a book about manipulative advertising it wouldn't get much attention. The reaction of most well-informed people would be: "Yeah, sure, we know all that. It's too bad... but what can you do?" They would then drop the unpleasant subject and talk or think about something else. They have lapsed into passive resignation.

Of course, nothing could be done about manipulative advertising because it would have cost the system too much to do anything about it. However insulting it may be to human dignity, the system needs propaganda, and as always happens when the needs of the system come into conflict with human dignity, the system's needs take precedence. (See I.A.2 above.)

11. There is the "problem of the commons": It may be to everyone's advantage that everyone should take a certain course of action, yet it may be to the advantage of each particular individual to take the *opposite* course of action. For example, in modern society, it is to everyone's advantage that everyone should pay a portion of his income to support the functions of government, but it is to the advantage of each particular individual to keep all of his income for himself. (That's why payment of taxes has to be compulsory.)

Similarly, I know people who think the technological society is horrible, that the automobile is a curse, and that we would all be better off if no one used modern technology. Yet they drive cars themselves and use all the usual technological conveniences. And why shouldn't they? If individual X refuses to drive a car, the technological system will go on as before; X's refusal to drive a car will accomplish nothing and will cost him a great deal of inconvenience. For the same reason, X in most cases will not participate in an effort to form a movement designed to remedy some problem of the technological society, because his participation would cost him time and energy, and there is at most a minimal chance that his own personal effort would make the difference between success and failure for the movement. People take action on social problems, even the most important ones, only under special circumstances. See my letter of 11/23/04, Note 101.

12. Most people, most of the time, are not particularly foresighted, and take little account of social dangers that lie decades in the future. As a result, preventive measures commonly are postponed until it is too late.

If I remember correctly, the Swedish chemist Svante Arrhenius predicted the Greenhouse Effect way back in the 19th century; certainly it was predicted at least as early as the 1960s. Yet no one tried to do anything about it until recently, when it was already too late to avoid many of its consequences.

The problem of the disposal of nuclear waste was obvious as soon as the first nuclear power-plants were set up decades ago. No one knew of a safe way to dispose of the waste, but it was simply assumed that a solution to the problem would eventually be found and the development of nuclear power-generation was pushed ahead. Worse still, nuclear power-generation was intentionally introduced to third-world countries under the "Atoms for Peace" program without any apparent consideration of the obvious question whether their often irresponsible little governments would dispose of the wastes safely or whether they would use their nuclear capacity for the development of weapons.

Today, in this country, nuclear wastes are still piling up, and there is every reason to think that they will keep piling up indefinitely. And there is still no generally accepted solution to the problem of disposing of these wastes, which will remain dangerous for many thousands of years. It is claimed that the disposal site at Yucca Mountain in Nevada is safe, but this is widely disputed. Experience has shown again and again that technological solutions, excepting only the most minor innovations, need to be tested before they can be relied on. Usually they work only after they have been corrected through trial and error. The Nevada disposal site is an experiment the result of which won't be known for thousands of years—when it will be too late. Simply on the basis of the demonstrated unreliability of *untested* technological solutions, I would guess it's more likely than not that the Nevada disposal site will prove a failure.

Of course, most people would rather stick future generations with the difficult and perhaps insoluble problem of dealing with our nuclear waste, than accept any substantial reduction in the availability of electricity now.

If the nuclear waste problem in the U.S. is worrisome, you can imagine how some of these irresponsible little third-world countries are disposing of their nuclear waste. Not to mention the fact that some of them have made or are trying to make nuclear bombs. So much for the foresight of the presumably intelligent people who promoted nuclear power-generation several decades ago.

13. The threatening aspects of technology often are balanced by temptingly attractive features. And once people have given in to the temptation of accepting an attractive but dangerous technological innovation, there is no turning back—short of a breakdown of technological civilization. See ISAIF §129. Biotechnology can increase agricultural production and provide new medicines; in the future it will probably help to eliminate genetic diseases and allow parents to give their children desired traits. As computers grow faster and more sophisticated, they give people more and more powers that they would not otherwise have. The latest electronic entertainment media give people new and exciting kicks.

Your claim that people will correct problems when these make them sufficiently uncomfortable, even if it were true, would have no clear application to such cases. Technical innovations make people comfortable in some ways and uncomfortable in other ways, and while the comforts are obvious and direct, the discomforts often are indirect and not obvious. It may be difficult or impossible even to recognize and prove the connection between the technology and the discomfort.

E.g., people directly experience the fun that they get from computers and electronic entertainment media, but it is by no means obvious that exposure of children to computers and electronic media may cause attention-deficit disorder. Some research suggests such an effect, but it remains an open question whether the effect is real. As for the possibility of correcting this problem through reform—let's watch your efforts to curtail the use of computers in the schools. If you have any great success even locally, I think you will be doing very well indeed. And I predict with 99.9% certainty that you will not succeed in curtailing the use of computers in the schools on a nationwide basis.

14. Most people, most of the time, follow the path of least resistance. That is, they do what will make them comfortable for the present and the near future. This tendency deters people from addressing the underlying causes of the discomforts of modern life.

The underlying problems are difficult to attack and can be corrected only at a certain price, so most people take the easy way out and utilize one of the avenues of escape that offer them quick alleviation of their discomfort. For those who are not satisfied simply with immersion in the pleasures provided by the entertainment industry, there are surrogate activities and there are religions, as well as ideologies that serve psychological needs in the same way that religions do. For many who suffer from a sense of powerlessness, it will be more effective to strive for a position of power within the system than to try to change the system. And for those who do struggle against the system, it will be easier and more rewarding to concentrate on one or a

few limited issues in regard to which there is a reasonable chance of victory than to address the intractable problems that are the real sources of their discontent.

Consider for example the kook variety of Christianity that has become a serious political force in recent years. I'm referring to people who believe that the world will end within 40 years and that sort of thing (see enclosed article by Bill Moyers).[126] It seems fairly obvious that these people retreat into their fantasy world in order to escape from the anxieties and frustrations of modern life. Who needs to worry about nuclear war or about the environment when the world will end soon anyway, and all the true believers will go to heaven? For those who are disturbed by the decay of traditional morality, it is much easier to fight abortion and gay marriage than to recognize that rapid technological change necessarily leads to rapid changes in social values. See ISAIF §50. In ISAIF §§219-222 and in "The System's Neatest Trick," I argued that the "causes" to which leftists devote themselves similarly represent a form of escapism.

Through recourse to these various forms of escapism, people avoid the need to address the real sources of their discontent.

15. Technological progress brings too many problems too rapidly.

Even if we make the extremely optimistic assumption that any one of the problems could be solved through reform, it is unrealistic to suppose that *all* of the most important problems can be solved through reform, and solved in time. Here is a partial list of problems: War (with modern weapons, not comparable to earlier warfare), nuclear weapons, accumulation of nuclear waste, other pollution problems of many different kinds, global warming, ozone depletion, exhaustion of some natural resources, overpopulation and crowding, genetic deterioration of humans due to relaxation of natural selection, abnormally high rate of extinction of species, risk of disaster from biotechnological tinkering, possible or probable replacement of humans by intelligent machines, biological engineering of humans (an insult to human dignity),[128] dominance of large organizations and powerlessness of individuals, surveillance technology that makes individuals still more subject to the power of large organizations,[127] propaganda and other manipulative psychological techniques, psychoactive medications,[130] mental problems of modern life, including, inter alia, stress, depression, mania, anxiety dis-

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[126] Bill Moyers, "Welcome to Doomsday," *New York Review*, 3/24/05, pp. 8, 10. [128. Some of us would add: biological engineering of other organisms (an insult to the dignity of all life).

[127] *National Geographic*, November 2003, pp. 4-29, had a surprisingly vigorous article on surveillance technology (e.g., p. 9: "Cameras are becoming so omnipresent that all Britons should assume that their behavior outside the home is monitored.... Machines will recognize our faces and our fingerprints. They will watch out for... red-light runners and highway speeders."). For other scary stuff on surveillance, see, e.g., *Denver Post,* 7/13/04, p. 2A ("Mexico has required some prosecutors to have tiny computer chips implanted in their skin as a security measure...."); *Time Bonus*

Section, Oct. 2003, pp. A8-A16; *Time*, 1/12/04, "Beyond the Sixth Sense." [130] The claim here is not that governments or corporations will directly use psychoactive medications to control people, but that people will "voluntarily" medicate themselves (e.g., for depression) or their children (e.g., for hyperactivity or attention-deficit disorder) in order to enable them to meet the system's demands.

orders, attention-deficit disorder, addictive disorders, domestic abuse, and generalized incompetence. If you want more, see the enclosed review of books by Jared Diamond and Richard Posner.[128]

The solution of any *one* of the foregoing problems (if possible at all) would require a long and difficult struggle. If your colleague thinks that *all* of these problems can be solved, and solved in time, by attacking each problem separately, then he's dreaming. The only way out is to attack the underlying source of all these problems, which is the technoindustrial system itself.

16. In a complex, highly-organized system like modern industrial society, you can't change just one thing. Everything is connected to everything else, and you can't make a major change in any one thing without changing the whole system. This applies not only to the physical components of the system, but to the whole mind-set, the whole system of values and priorities that characterizes the technological society.

If you try to fix things by addressing each problem separately, your reforms can't go far enough to fix any one of the problems, because if you make changes that are far-reaching enough to fix problem X, those changes will have unacceptable consequences in other parts of the system. As pointed out in ISAIF §§121-24, you can't get rid of the bad parts of technology and still retain the good parts.

Consider for example the problem of manipulative advertising and propaganda in general. Any serious restriction on manipulative advertising would entail interference with the advertisers' First Amendment right to free expression, so a radical restructuring of our First Amendment jurisprudence would be required. The news media are supported by advertising. If there were a drastic decline in advertising, who would support the vast network that collects information around the world and funnels it to the TV-viewer and the newspaper-reader? Maybe the government would support it, but then the government could control the news we receive, and you know what that implies.

Even more important, with an end to manipulative advertising there would probably be a major drop in consumption, so the economy would go to hell. You can imagine the consequences of that as well as I can.

Since the problems can't be solved one at a time, you have to think in terms of changing the entire system, including the whole mind-set and system of values associated with it.

17. What you ask for has no precedent in history. Societies sometimes fix problems of relatively limited scope; e.g., a country that has suffered a military defeat may be able to reorganize its army on new principles and win the next battle. But historically, short of a radical transformation of the entire social fabric (i.e., revolution), it has proved impossible for societies to solve deep-lying problems of the kind we face today. I challenge you and your colleague to produce even one example from history of a society

[128] Clifford Geertz, "Very Bad News," *New York Review*, 3/24/05, pp. 4-6.

that has solved through piecemeal reform problems of the number and seriousness of those that I've listed above (see I.A.15).

I.B. If, in spite of the foregoing, you still think that reform will work, just look at our past record. To take only a few of the most conspicuous examples:

1. *Environmental destruction.* People damaged their environment to some degree even at the hunting-and-gathering stage. Forests were burned, either through recklessness or because burned-over lands produced more food for hunter-gatherers.[129] Early hunters may have exterminated some species of large game.[130] As technology increased man's power, environmental destruction became more serious. For example, it is well known that the Mediterranean region was largely deforested by pre-modern civilizations.[131] But forests are only one part of the picture: Preindustrial societies had no radioactive waste, no chemical factories, no diesel engines, and the damage they did to their environment was minor in comparison with what is being done today. In spite of the feeble palliative measures that are now being taken, the overall picture is clear: For thousands of years, the damage that humans have done to their environment has been steadily increasing. As for reform—there *is* an environmental movement, but its successes have been very modest in relation to the magnitude of the problem.

2. *War.* War existed among nomadic hunter-gatherers, and could be nasty.[132] But as civilization and military technology advanced, war became more and more destructive. By the 20th century it was simply horrible. As Winston Churchill put it: "War, which once was glorious and cruel, has now become sordid and cruel." Private efforts to end war began at least as early as the 1790s,[133] and efforts by governments began at least as early as the end of World War I with the League of Nations. You can see how little has been accomplished.

3. *Psychological problems incident to modern life.* I discussed these in my letter of 11/23/04. But the presence of such problems was already evident early in the 20th century in the neurotic tendency of the arts. In reading a history of Spanish literature recently, I was struck by the way the neurotic made its appearance as the historian moved from the 19th to the 20th century. E.g.: "The poetry of Dámaso Alonso [born in 1898]...is a cry... of anguish and anger; *an explosion of impotent rage against his own misery and against the pain of the world around him.*"[134] Artists of this type can't

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[129] Julio Mercader (ed.), *Under the Canopy: The Archaeology of Tropical Rain Forests*, Rutgers University Press, 2003, pp. 235, 238, 239, 241, 282. Carleton S. Coon, *The Hunting Peoples*, Little, Brown and Co., 1971, p. 6.

[130] E.g., Mercader, *op. cit.*, p. 233.

[131] *Encyclopædia Britannica*, 15th ed., 2003, Vol. 14, article "Biosphere," pp. 1190, 1202. *Ibid.*, Vol. 19, article "Forestry and Wood Production," p. 410.

[132] E.g., Coon, *op. cit.*, pp. 243-44.

[133] Neil J. Smelser, *Theory of Collective Behavior*, The Macmillan Company, New York, 1971, p. 273 ("The peace movement is a general social movement which has been in existence since its beginning in england during the revolutionary and Napoleonic Wars").

[134] J. García López, *Historia de la literatura española*, 5th ed., Las Americas Publishing Co., New York, 1959, p. 567.

be dismissed simply as individuals with psychological problems peculiar to themselves, because the fact that their work has been accepted and admired among intellectuals is an indication that the neurosis is fairly widespread.

And what has been done about the psychological problems of modern times? Drugs, psychotherapy—in my view insults to human dignity. Where is the reform movement that, according to your theory, is supposed to fix things?

4. *Propaganda.* As I mentioned above (see I.A.10), the problem of propaganda was well publicized by Vance Packard ca 1960, and the problem was certainly recognized by others (e.g., Harold Lasswell) long before that. And what has been done to correct this insult to human dignity? Nothing whatsoever.

5. *Domination of our lives by large organizations.* This is a matter of fundamental importance, and nothing effective has been done to alleviate the problem. As I've pointed out (see I.A.7), nothing *can* be done about this problem in the context of a technological society.

6. *Nuclear weapons.* This is perhaps the star exhibit. Of all our technologically induced problems the problem of nuclear weapons should be the easiest to solve through reform: The danger presented by these weapons is in no way subtle—it is obvious to anyone with a normal IQ. While such things as genetic engineering and superintelligent computers promise benefits that may seem to offset their menace, nuclear weapons offer no benefits whatever—only death and destruction. With the exception only of a tiny minority of dictators, military men, and politicians who see nuclear weapons as enhancing their own power, virtually every thinking person agrees that the world would be better off without nuclear weapons.

Yet nuclear weapons have been around for 60 years, and almost no progress has been made toward eliminating them. On the contrary, they proliferate: The U.S., Russia, Britain, France; then China, Israel, India, Pakistan; now North Korea, and in a few years probably Iran...

If reform can't solve the problem of nuclear weapons, then how can it solve the far more subtle and difficult problems among those that modern technology has created?

So it's clear that reform isn't working, and there's no reason to hope that it will ever work. Obviously it's time to try something else.

II. Why Revolution May Succeed

II. A. There are several reasons why revolution may succeed where reform has made no progress.

1. Until ca 1980 I used to think the situation was hopeless, largely because of people's thoughtlessness and passivity and their tendency to take the easy way out. (See I.A.6, 8-14, above.) Up to that point I had never read much history. But then I read Thomas Carlyle's history of the French Revolution, and it opened my eyes to the fact that, in time of revolution, the usual rules do not apply: People behave differently. Subsequent reading about revolutions, especially the French and the Russian ones, confirmed that conclusion. Once a revolutionary fever has taken hold of a country, people throw off their passivity and are willing to make the greatest efforts and endure the greatest

hardships for the sake of their revolution. In such cases it may be that only a minority of the population is gripped by the revolutionary fever, but that minority is sufficiently large and energetic so that it becomes the dominant force in the country. See ISAIF §142.

2. Long before that large and dominant revolutionary minority develops, that is, long before the revolution actually begins, an avowedly revolutionary movement can shake a much smaller minority out of its apathy and learned helplessness and inspire it to passionate commitment and sacrifice in a way that a moderate and "reasonable" reform effort cannot do. See ISAIF §141. This small minority may then show remarkable stamina and long-term determination in preparing the way for revolution. The Russian revolutionary movement up to 1917 provides a notable example of this.

3. The fact that revolutions are usually prepared and carried out by minorities is important, because the system's techniques of propaganda almost always enable it to keep the attitudes and behavior of the majority within such limits that they do not threaten the system's basic interests. As long as society is governed through the usual democratic processes— elections, public-opinion polls, and other numerical indices of majority choice—no reform movement that threatens the system's basic interests can succeed[135], because the system can always contrive to have the majority on its side. 51% who are just barely interested enough to cast a vote will always defeat 49%, no matter how serious and committed the latter may be. But in revolution, a minority, if sufficiently determined and energetic, can outweigh the relatively inert majority.

4. Unlike reformers, revolutionaries are not restrained by fear of negative consequences (see I.A.16, above). Consider for example the emission of greenhouse gasses and/or creation of nuclear waste associated with the generation of electric power. Because it is unthinkable that anyone should have to do without electricity, the reformers are largely stymied; they can only hope that a technological solution will be found in time. But revolutionaries will be prepared to shut down the power plants regardless of consequences.

5. As noted above (see I.A.15), reformers have to fight a number of different battles, the loss of any one of which could lead either to physical disaster or to conditions intolerably offensive to human dignity. Revolutionaries whose goal is the overthrow of the technoindustrial system have only *one* battle to fight and win.

6. As I've argued (see I.A.1), history is guided mainly by "objective" circumstances, and if we want to change the course of history we have to change the "objective" circumstances to that end. The dominant "objective" circumstances in the world today are those created by the technoindustrial system. If a revolutionary movement could bring about the collapse of the technoindustrial system, it would indeed change the "objective" circumstances dramatically.

[135] Unless it is rich enough to undertake a massive, long-term propaganda campaign on a national scale—a possibility too far-fetched to be considered here.

7. As I've pointed out (see I.A.17), your proposed solution through piecemeal reform has no historical precedents. But there are numerous precedents for the elimination through revolution of an existing form of society. Probably the precedent most apposite to our case is that of the Russian Revolution, in which a revolutionary movement systematically prepared the way for revolution over a period of decades, so that when the right moment arrived the revolutionaries were ready to strike.

8. Even if you believe that adequate reforms are possible, you should still favor the creation of an effective revolutionary movement. It's clear that the necessary reforms—if such are possible—are not currently being carried out. Often the system needs a hard kick in the pants to get it started on necessary reforms, and a revolutionary movement can provide that kick in the pants.

Further, if it is an error to attempt revolution—that is, if adequate reforms are possible—then the error should be self-correcting: As soon as the system has carried through the necessary reforms, the revolutionary movement will no longer have a valid cause, so it will lose support and peter out.

For example, in the U.S. during the early part of the 20th century, insufficient attention was paid to the problems of the working class. Labor violence ensued and provided the kick in the pants necessary to get the government to pay attention to the problems. Because adequate reforms were carried through, the violence died down;[136] this in contrast to what happened in Russia, where the Tsarist regime's stubborn resistance to reform led to revolution.

II. B. You write: "Perhaps it would be useful to focus on specific actions necessary to alter our present technological path rather than to use loaded terms like 'revolution,' which may alienate as many, or more, supporters of change as it would galvanize adherents. Or so my colleague suggests."

1. Once one has decided that the overthrow of the technoindustrial system is necessary, there is no reason to shrink from using the word "revolution." If a person is prepared to embrace a goal as radical as that of overthrowing the technoindustrial system, he is hardly likely to be alienated by the term "revolution."

Furthermore, if you want to build a movement dedicated to such a radical goal, you can't build it out of lukewarm people. You need people who are passionately committed, and you must be careful to avoid allowing your movement to be swamped by a lot of well-meaning do-gooders who may be attracted to it because they are concerned about the environment and all that, but will shrink from taking radical measures. So you *want* to alienate the lukewarm do-gooders. You need to keep them away from your movement.

A mistake that most people make is to assume that the more followers you can recruit, the better. That's true if you're trying to win an election.

A vote is a vote regardless of whether the voter is deeply committed or just barely interested enough to get to the polls. But when you're building a revolutionary move-

[136] See Note 121.

ment, the number of people you have is far less important than the quality of your people and the depth of their commitment. Too many lukewarm or otherwise unsuitable people will ruin the movement. As I pointed out in an earlier letter, at the outset of the Russian Revolution of 1917 the Social Revolutionary party was numerically dominant because it was a catch-all party to which anyone who was vaguely in favor of revolution could belong.[137] The more radical Bolsheviks were numerically far inferior, but they were deeply committed and had clear goals. The Social Revolutionaries proved ineffective, and it was the Bolsheviks who won out in the end.

2. This brings me to your argument that if the nomadic hunting-and-gathering (NHG) society is taken as the social ideal, the pool of potential revolutionaries would be minimal. You yourself (same page of same letter) suggested a possible answer to this, namely, that the NHG ideal might "draw in the most committed activists," and that is essentially the answer that I would give. As I've just argued, level of commitment is more important than numbers. But I would also mention that of all societies of biologically modern humans, the nomadic hunting-and-gathering ones were those that suffered least from the chief problems that modern society brings to the world, such as environmental destruction, dangerous technological powers, dominance of large organizations over individuals and small groups. This fact certainly weighs in favor of the NHG ideal. Moreover, I think you greatly underestimate the number of potential revolutionaries who would be attracted by such an ideal. I may say more about that in a later letter.

III. Necessity Of Revolution

You challenge me to present evidence that "the situation is so urgent that truly revolutionary action is demanded," and you write: "If in fact the situation is as serious as you portray, then surely there would be other rational thinkers who would come to the same conclusion. Where are the other intelligent voices that see this reality, and likewise conclude that revolution is the only option?." But there are two separate issues here: The seriousness and urgency of the situation is one question and the call for revolution is another.

III.A. I shouldn't have to offer you any evidence on the seriousness and urgency of the situation, because others have already done that. You're familiar with Bill Joy's article. Jared Diamond and Richard Posner (U.S. Circuit Judge, conservative, pro-government) have written books about the risk of catastrophe. I'm enclosing herewith a review of these two books.[138] According to a review[139] of *Our Final Century*, by the British Astronomer

Royal, Sir Martin Rees estimates that "the odds are no better than fifty-fifty that our present civilization on Earth will survive to the end of the present century." (E.g.: "[E]xperiments at very high energies, perhaps a hundred times those reached by today's

[137] Trotsky, *op. cit.,* Vol. One, p. 223. See my letter of 8/29/04.

[138] Clifford Geertz, *op. cit.* (see Note 131).

[139] *Times Literary Supplement*, 8/1/03, pp. 6-7.

particle accelerators, [could create] a tiny bubble which then [would] expand[ ] at almost the speed of light, consuming our entire galaxy for a start. In 1983 Martin Rees helped to convince physicists that no all-destroying bubble could be born inside the accelerators of those days. He now stresses the need for caution as accelerator energies grow.")[140] I don't think your colleague will dismiss any of the foregoing people as "raving anarchists."

The people mentioned in the preceding paragraph warn of dangers in the hope that these can be forestalled. I think there are many others who see the situation as hopeless and believe that disaster is inevitable. Several years ago someone sent me what seemed to be a responsible article titled "Planet of Weeds."[141] I didn't actually read the article, I only glanced through it, but I think the thesis was that our civilization would cause the extinction of most life on Earth, and that when our civilization was dead—and the human race with it—the organisms that would survive would be the weed-like ones, i.e., those that could grow and reproduce quickly under adverse conditions. Many of the original members of Earth First!—before it was taken over by the leftists—were political conservatives and I don't think your colleague could reasonably dismiss them as "raving anarchists." Their view was that the collapse of industrial civilization through environmental disaster was inevitable in the relatively near future. They felt that it was impossible to prevent the disaster, and their goal was merely to save some remnants of wilderness that could serve as "seeds" for the regeneration of life after industrial society was gone.[142]

So I think there are significant numbers of intelligent and rational people who see the situation as more serious and urgent than I do. The people I've mentioned up to this point have considered mainly the risk of physical disaster. Ellul and others have addressed the issues of human dignity, and if my recollections of his book *Autopsy of Revolution* are correct, Ellul felt that there was at most a minimal chance of avoiding a complete and permanent end to human freedom and dignity. So Ellul too saw the situation as worse than I see it.

III. B. Why then is rational advocacy of revolution so rare? There are several reasons that have nothing to do with the degree of urgency or seriousness of the situation.

1. In mainstream American society today, it is socially unacceptable to advocate revolution. Anyone who does so risks being classified as a "raving anarchist" merely by virtue of the fact that he advocates revolution.

2. Many would shrink from advocating revolution simply because of the physical risk that they would run if a revolution actually occurred. Even if they survived the revolution, they would likely have to endure physical hardship. We live in a soft society in which most people are much more fearful of death and hardship than the members

[140] *Ibid.* This danger was also discussed by Russell Ruthen in "Science and the Citizen," *Scientific American*, August, 1993.

[141] David Quammen, "Planet of Weeds," *Harper's Magazine*, October 1998, pp. 57-69.

[142] These statements about Earth First! are based mainly on my recollection of Martha F. Lee, *Earth First!: Environmental Apocalypse.*

of earlier societies were. (The anthropologist Turnbull records the contempt that traditional Africans have for modern man's weakness in the face of pain and death.[143])

3. Most people are extremely reluctant to accept fundamental changes in the pattern of life to which they are adapted. They prefer to cling to familiar ways even if they know that those ways will lead to disaster 50 years in the future. Or even 40, 20, or 10 years. Turnbull observes that "few of us would be willing to sacrifice" modern "achievements," "even in the name of survival."[144] Instead of "achievements" he should have said "habitual patterns of living." Jared Diamond has pointed out that societies often cling stubbornly to their established ways of life even when the price of doing so is death.[145] This alone is enough to explain why calls for revolution are hardly ever heard outside of the most radical fringe.

4. Even people who might otherwise accept a radical change in their way of life may be frightened at the prospect of having to get by without the technological apparatus on which they feel themselves to be dependent. For instance, I know of a woman in the Upper Peninsula of Michigan who hates the technological system with a passion and hopes for its collapse. But in a letter to me dated August 19, 2004, she wrote: "A lightning strike on June 30 'fried' our power inverter at the cabin. For three weeks I lived without electricity. ...I realized how much I was dependent. I grew to hate the night. I think that humans will do whatever possible to preserve the electrical power grids...."

5. Many people (e.g., the original Earth First!ers whom I mentioned above, III.A) think the system will collapse soon anyway, in which case no revolution will be necessary.

6. Finally, there is hopelessness and apathy. The system seems so all-powerful and invulnerable that nothing can be done against it. There's no point in advocating a revolution that is impossible. This, rather than that revolution is unnecessary or too extreme, is the objection I've heard from some people. But it is precisely the general assumption that revolution is impossible that makes it impossible in fact. If enough people could be made to *believe* that revolution was possible, then it would *be* possible. One of the first tasks of a nascent revolutionary movement would be to get itself taken seriously.

III. C. Your colleague insists that "the case for revolution needs to be demonstrated virtually *beyond doubt*, because it is so extreme and serious." I disagree. The possible or probable consequences of continued technological progress include the extinction of the human race or even of all of the more complex forms of life on Earth; or the replacement of humans by intelligent machines; or a transformation of the human race that will entail the permanent loss of all freedom and dignity as these have traditionally

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[143] Colin Turnbull, *The Mbuti Pygmies: Change and Adaptation*, Harcourt Brace College Publishers, 1983, pp. 89-90, 92.

[144] *Ibid.*, p. 11.

[145] Malcolm Gladwell, *The New Yorker*, 1/3/05, p. 72. (reviewing Jared Diamond's *Collapse: How Societies Choose to Fail or Succeed).*

been conceived. These consequences are so much more extreme and serious than those to be expected from revolution that I don't think we need to be 100% certain, or even 90% certain, that revolution is really necessary in order to justify such action.[146]

Anyway, the standard that your colleague sets for the justification of revolution ("virtually beyond doubt") is impossibly high. Since major wars are just as dangerous and destructive as revolutions, he would have to apply the same standard to warfare. Does your colleague believe, for example, that the Western democracies acted unjustifiably in fighting World War II? If not, then how would he justify World War II under the "virtually beyond doubt" standard?

III. D. Even if we assume that it is not known at present whether revolution will ever be necessary or justifiable, the time to begin building a revolutionary movement is now. If we wait too long and it turns out that revolution *is* necessary, we may find that it is too late.

Revolutions can occur spontaneously. (For example, the way for the

French Revolution was not consciously prepared in advance.) But that is a matter of chance. If we don't want to merely hope for luck, then we have to start preparing the way for revolution decades in advance as the Russian revolutionaries did, so that we will be ready when the time is ripe.

I suggest that as time goes by, the system's tools for forestalling or suppressing revolution get stronger. Suppose that revolution is delayed until after computers have surpassed humans in intelligence. Presumably the most intelligent computers will be in the hands of large organizations such as corporations and governments. At that point revolution may become impossible because the government's computers will be able to outsmart revolutionaries at every step.

Revolutions often depend for their success on the fact that the revolutionaries have enough support in the army or among the police so that at least some elements of these remain neutral or aid the revolutionaries. The revolutionary sympathies of soldiers certainly played an important part in the French and Russian Revolutions. But the armies and police forces of the future may consist of robots, which presumably will not be susceptible to subversion.

This is not science fiction. "[E]xperts said that between 2011 and 2015, every household will have a robot doing chores such as cleaning and laundering."[147] The Honda company already claims to have "an advanced robot with unprecedented humanlike abilities. ASIMO walks forward and backward, turns corners, and goes up and down stairs with ease....The future of this exciting technology is even more promising. ASIMO has the potential to respond to simple voice commands, recognize faces.... [O]ne day, ASIMO could be quite useful in some very important tasks. Like assisting the elderly, and even helping with household chores. In essence, ASIMO might serve as another set of eyes,

[146] In terms of freedom and dignity I personally feel that the situation is *already* bad enough to justify revolution, but I don't need to rely on that.

[147] *Denver Post*, 1/25/05, p. 11A.

ears and legs for all kinds of people in need."[148] Police and military applications of robots are an obvious next step, and in fact the U.S. military is already developing robotized fighting machines for use in combat.[149]

So if we're going to have a revolution we had better have it before technology makes revolution impossible. If we wait until the need for revolution is "virtually beyond doubt," our opportunity may be gone forever.

III. E. Here's a challenge for your colleague: Outline a plausible scenario for the future of our society in which everything turns out alright, and does so *without* a collapse of the technoindustrial system, whether through revolution or otherwise. Obviously, there may be disagreement as to what is "alright." But in any case your colleague will have to explain, inter alia: (1) How he expects to prevent computers more intelligent than humans from being developed, or, if they are developed, how he expects to prevent them from supplanting humans; (2) how he expects to avoid the risk of biological disaster that biotechnological experimentation entails; (3) how he expects to prevent the progressive lowering of standards of human dignity that we've been seeing at least since the early stages of the Industrial Revolution; and (4) how he expects nuclear weapons to be brought under control. As

I pointed out above (see I.B.6), of all our technology-related problems, the problem of nuclear weapons should be by far the easiest to solve, so if your colleague can't give a good and convincing answer to question (4)—something better than just a pious hope that mankind will see the light and dismantle all the nukes in a spirit of brotherhood and reconciliation— then I suggest it's time to give up the idea of reform.

From Ted to Skrbina — April 5, 2005

First, as to the likelihood that computers will catch up with humans in intelligence by the year 2029, which I think is the date predicted by Ray Kurzweil: My guess is that this will not happen until significantly later than 2029. I have no technical expertise that qualifies me to offer an opinion on this subject. My guess is based mainly on the fact that technical experts tend to underestimate the time it will take to achieve fundamental breakthroughs. In 1970, computer experts predicted that computers would surpass humans in intelligence within 15 years,[150] and obviously that didn't happen.

I do think it's highly probable that machines will *eventually* surpass humans in intelligence. I'm enough of a materialist to believe that the human brain functions solely according to the laws of physics and chemistry. In other words, the brain is in a sense a machine, so it should be possible to duplicate it artificially. And if the brain can be duplicated artificially, it can certainly be improved upon.

[148] Advertisement by Honda in *National Geographic*, February 2005 (unnumbered page).
[149] *Denver Post*, 2/18/05, pp. 28A-29A.
[150] *Chicago Daily News*, November 16, 1970. I don't have a record of the page number.

Second, while I think it's highly probable that the technosystem is headed for *eventual* physical disaster, I don't think the risk of a massive, worldwide physical disaster within the next few decades is as high as some people seem to believe. Again, I have no technical expertise on which to base such an opinion. But back in the late 1960s there were supposedly qualified people who made dire predictions for the near future—e.g., Paul Ehrlich in his book *The Population Bomb*. Their predictions were not entirely without substance. They predicted the Greenhouse Effect, for example;[151] they predicted epidemics, and we have AIDS. But on the whole the consequences of overpopulation and reckless consumption of natural resources have been nowhere near as severe as these people predicted.

On the other hand, there is a difference between the doomsday prophets of the 1960s and people like Bill Joy and Martin Rees. Certainly Paul Ehrlich and probably many of the other 1960s doomsdayers were leftish types, and leftish types, as we know, look for any excuse to rail against the existing society; hence, their criticisms tend to be wildly exaggerated. But Bill Joy and Martin Rees are not leftish types as far as I know; in fact, they are dedicated technophiles. And dedicated technophiles are not likely to be motivated to exaggerate the dangers of technology. So maybe I'm naive in feeling that the risk of physical disaster is less imminent than Joy and Rees seem to think.

The foregoing remarks are intended to clarify matters that I discussed in my letter of 3/17/05. Now I'd like to address specifically some points raised in your letters.

I. You write: "Art, music, literature, and (for the most part) religion are considered by most people to be true and important achievements of humanity....You seem to undervalue any such accomplishments, and in fact virtually advocate throwing them away...; art and literature are nothing more than 'a harmless outlet for rebellious impulses.'"

I A. I did write in "Morality and Revolution": "Art, literature and the like provide a harmless outlet for rebellious impulses...." (I think Ellul somewhere says much the same thing.) But I've never said that art and literature were *nothing more* than that. In any case, I don't *advocate* "throwing away" art and literature. I do recognize that the loss of much art and literature would be a consequence of the downfall of the technoindustrial system, but getting rid of art and literature is not a *goal*.

I. B. It could be argued that the arts actually are in poor health in modern society and have been in much better health in many primitive societies. You claim that in our society the arts "are considered by most people to be true and important achievements of humanity." But how often do most people visit an art museum, listen to classical music, or read serious literature? Very seldom, I think. Furthermore, even if we include commercial graphic art, television, light novels, and the like among the arts, only a

[151] *Encyclopædia Britannica*, 15th ed., 2003, Vol. 16, article "Climate and Weather," has a good section on the Greenhouse Effect, pp. 508-511.

small minority of people today participate *actively* in the arts, whether as professionals or as amateurs. Most people participate only as spectators or consumers of art.

Primitives too may have specialists in certain arts, but active participation tends to be much more widespread among them than it is in the modern world. For instance, among the African pygmies, *everyone* participated in song and dance. After describing the dances of the Mbuti pygmies, their "angeborene Schauspielkunst" (inborn dramatic art), and their music, Schebesta writes: "Here I will go into no further detail about Mbuti art, of whatever kind, for I only wanted to show what significance all of this has for their daily life. Here opens a source that feeds the life-energies of the primitives, that brightens and pleasantly adorns their forest life, which is otherwise so hard. That is probably why the Mbuti are so devoted to these pleasures."[152]

Compare industrial society, in which most people participate in the arts only to the extent of watching Hollywood movies, reading popular magazines or light novels, and having a radio blaring in their ears without actually listening to it.

Admittedly, much primitive art is crude, but this is by no means true of all of it. You must have seen reproductions of the magnificent paintings found on the walls of caves in Western Europe, and the polyphony of the

African pygmies is much admired by serious students of music.[153] Of course, no premodern society had a body of art that matched in range and elaborate development the arts of present-day industrial society, and much of the latter would undoubtedly be lost with the collapse of the system. But the argument I would use here is that of...

I. C. The monkey and the peanut. When I was a little kid, my father told me of a trick for catching monkeys that he had read about somewhere. You take a glass bottle the neck of which is narrow enough so that a monkey's clenched fist will not pass through it, but wide enough so that a monkey can squeeze his open hand into the bottle. You put a piece of bait—say, a peanut—into the bottle. A monkey reaches into the bottle, clutches the peanut in his little fist, and then finds that he can't pull his hand out of the bottle. He's too greedy to let go of the peanut, so you can just walk over and pick him up. Thus, because the monkey refuses to accept the loss of the peanut, he loses everything.

If we continue on our present course, we'll probably be replaced by computers sooner or later. What use do you think the machines will have for art, literature, and music? If we aren't replaced by computers, we'll certainly be changed profoundly. See ISAIF §178. What reason do you have to believe that people of the future will still be responsive to the art, music, and literature of the past? Already the arts of the past have been largely superseded by the popular entertainment media, which offer intense kicks that make the old-time stuff seem boring. Shakespeare and Cervantes wrote, Vermeer and Frans Hals painted[154] for ordinary people, not for an elite minority of intellectuals. But

[152] Paul Schebesta, *Die Bambuti-Pygmäen vom Ituri*, Institut Royal Colonial Belge, Brussels, II. Band, I. Teil, 1941, p. 261.

[153] See Louis Sarno, *The Song from the Forest.*

[154] *Encyclopœdia Britannica*, Vol. 24, article "The Netherlands," p. 891.

how many people still read Shakespeare and Cervantes when they're not required to do so as part of a college course? How many hang reproductions of the Old Masters' paintings on their walls? Even if the human race still exists 200 years from now, will *anyone* still appreciate the classics of art, music, and literature? I seriously doubt it. So if we continue on our present course we'll probably lose the Western artistic tradition anyway, and we'll certainly lose a great deal more besides.

So maybe it's better to let go of the peanut than to lose everything by trying to hang onto it. Especially since we don't have to give up the whole peanut. If the system collapses before it's too late, we'll retain our humanity and our capacity to appreciate art, literature and music. It's safe to assume then that people will continue to create art, literature, and music as they always have in the past, and that works of high quality will occasionally appear.

I. D. Along with art, literature, and music you mention religion. I'm rather surprised that you regard religion as something that would be lost with the collapse of modern civilization, since modern civilization is notorious for its secularity. The explorer and ethnographer Vilhjalmur

Stefansson wrote: "One frequently hears the remark that no people in the world have yet been found who are so low that they do not have a religion. This is absolutely true, but the inference one is likely to draw is misleading. It is not only true that no people are so low that they do not have a religion, but it is equally true that the lower you go in the scale of human culture the more religion you find...."[155]

Actually Stefansson's observation is not strictly accurate, but it is true that in most primitive societies religion played a more important role than it does in modern society. Colin Turnbull makes clear how much religious feeling was integrated into the daily lives of the Mbuti pygmies,[156] and the North American Indians had a similarly rich religious life, which was intimately interwoven with their day-to-day existence.[157] Compare this with the religious life of most modern people: Their theological sophistication is virtually zero; they may go to church on Sundays, but the rest of the week they govern their behavior almost exclusively according to secular mores.

However, a reservation is called for: It's possible that a resurgence of religion may occur in the modern world. See the article by Bill Moyers[158] that I enclosed with my last letter. But I certainly *hope* that the kind of kook religion described by Moyers is not the kind of religion of which your colleague would regret the loss if the system collapsed. Among other things, that brand of religion is irrational, intolerant, and even hate-filled. It's worth noting that a similar current has developed within Hinduism (see

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[155] Vilhjalmur Stefansson, *My Life with the Eskimo*, Macmillan, 1951, p. 38.

[156] Colin Turnbull, *The Forest People*, Simon and Schuster, 1962, pp. 92-93, 145.
Wayward Servants, The Natural History Press, 1965, pp. 19, 234, 252-53, 271,

[157] E.g., Clark Wissler, *Indians of the United States*, Revised Edition, Anchor Books, 1989, pp. 179-182, 304-09.

[158] Bill Moyers, "Welcome to Doomsday," *New York Review*, 3/24/05, pp. 8, 10. [162. William Dalrymple, "India: The War Over History," *New York Review*, April 7, 2005, pp. 62-65.

enclosed article);[162] and of course we all know what's going on in Islam. None of this should surprise us. Each of the great world religions claims to have exclusive possession of the truth, and ever since their advent religion has been a source and/or instrument of conflict, often very deadly conflict. Primitive religions, in contrast, are generally tolerant, syncretistic, or both.[159] I know of no religious wars among primitives.

So if your colleague believes that modern religions would be lost with the collapse of the system (a proposition which unfortunately I think is very doubtful), it's not clear to me why he should regret it.

II. You read me as holding that "we have now passed...the point at which reform was a viable option." But that is not my view. I don't think that reform was ever a viable option. The Industrial Revolution and succeeding developments have resulted from the operation of "objective" historical forces (see my letter of 10/12/04), and neither reform nor (counter)revolution could have prevented them. However, we may now be approaching a window of opportunity during which it may be possible to "kill" the technoindustrial system.

A simple, *decentralized* organism like an earthworm is hard to kill. You can cut it up into pieces and each piece will grow into a whole new worm. A complex and *centralized* organism like a mammal is easy to kill. A blow or a stab to a vital organ, a sufficient lowering of body temperature, or any one of many other factors can kill a mammal.

Northwestern Europe in the 18th century was poised for the Industrial Revolution. However, its economy was still relatively simple and decentralized, like an earthworm. Even in the unlikely event that war or revolution had wiped out half the population and destroyed half the infrastructure, the survivors would have been able to pick up the pieces and get their economy functioning again. So the Industrial Revolution probably would have been delayed only by a few decades.

Today, on the other hand, the technoindustrial system is growing more and more to resemble a single, centralized, worldwide organism in which every part is dependent on the functioning of the whole. In other words, the system increasingly resembles a complex, easy-to-kill organism like a mammal. If the system once broke down badly enough it would "die," and its reconstruction would be extraordinarily difficult. See ISAIF §§207-212. Some believe that its reconstruction would even be impossible. This was the opinion of (for example) the distinguished astronomer Fred Hoyle.[160]

So only now, in my opinion, is there a realistic possibility of altering the course of technoindustrial development.

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[159] If I remember correctly, James Axtell, *The Invasion Within: The Contest of Cultures in Colonial North America*, Oxford University Press, 1985, discusses the tolerant and syncretistic character of American Indian religion in the eastern U.S.

[160] Fred Hoyle was quoted to this effect by Richard C. Duncan in an Internet article. The quote is probably from Hoyle's book *Of Men and Galaxies*, University of Washington Press, Seattle, 1964.

From Ted to Skrbina — July 10, 2005

Regarding the material about monkey genes—yes, it's not uncommon to read reports of new ways of monkeying with the brain (no pun intended), and there is plenty of reason to worry about this stuff, not so much because employers might force their employees to take gene treatments to turn them into workaholics (which I think is unlikely), as because increased understanding of the brain leads to solutions that are, at the least, insulting to human dignity.See ISAIF §§143-45, 149-156.

Regarding Ray Kurzweil's "Promise and Peril," you write, "I'm not sure which disturb me more, his 'promises' or his 'perils'." I feel the same way.

To me they are all just perils. I'm skeptical about Kurzweil's predictions, though. I'll bet that a lot of them will turn out to be just pie in the sky. In the past there have been too many confident predictions about the future of technology that have not been fulfilled. It's certainly not that I would want to downplay the power or the danger of technology. However, I do question Kurzweil's ability to predict the future. I'll be very surprised if everything that he predicts actually materializes, but I won't be a bit surprised if a lot of scary stuff happens that neither Kurzweil nor anyone else can now anticipate.

To address a few specific points from Kurzweil's article:

He asks: "Should we tell the millions of people afflicted with cancer and other devastating conditions that we are canceling the development of all bioengineered treatments because there is a risk that these same technologies may someday be used for malevolent purposes?" Kurzweil fails to note that cancer results largely from the modern way of life (see my letter of 3/17/05), and the same is true of many other "devastating conditions," e.g., AIDS, which, assuming that it occurred at all, would probably have remained localized if it had not been for modern transportation facilities, which spread the disease everywhere. In any case, what is at stake now are the most fundamental aspects of the fate of the whole world. It would be senseless to risk a disastrous outcome in order to prolong artificially the lives of people suffering from "devastating conditions."

Throughout his essay Kurzweil romanticizes the technological way of life, while he paints a misleading and grim picture of preindustrial life. In my letter of 11/23/04, I pointed out some reasons for considering primitive life better than modern life. To address specifically Kurzweil's point about life-expectancy— he mentions an expectancy of 35 years for preindustrial Swedish females and 33 for males. Let's split the difference and make it

34 years overall. Assuming this figure is correct, it is misleading because it gives the impression that few people lived beyond their mid-30s. I've more than once read statements by demographers to the effect that the low life-expectancies of preindustrial times largely reflected the high rate of infant and early-childhood mortality. Once the vulnerable first few years were past, people's lives were not so very much shorter than they are today. I'm depending on memory here and can't cite my sources. But

information for which I *can* cite sources is consistent with what I've just said. According to

Rousseau, in mid-18th-century France 50% of children died before reaching the age of eight.[161] Since mortality must have been highest in the earliest years, let's suppose that the average age of these children at death was 3 years. Assuming that this is applicable to Sweden, accepting the above figure of

34 years for average age at death, and setting A = average age at death of all people who survived beyond the age of eight, we have 0.5 x 3 + 0.5 x A =

34. Solving for A gives an average age at death of 65 for those who survived beyond the age of eight. This of course is only a crude estimate, and I'm not suggesting that the high child mortality rate should be discounted as a triviality, but we do see here how misleading it is to cite the 34-year life- expectancy without further explanation. It's worth noting that about 8% of a population of Kalahari Bushmen (hunter-gatherers) was said to consist of persons from 60 to more than 80 years old.[162] My recollection is that according to the 1970 census, 10% of the American population was then aged 65 or older. This figure has stuck in my mind because I read it not long after reading the foregoing figure for the Bushmen.

Kurzweil states not only that technological progress proceeds exponentially but that biological evolution has always done so. This statement is almost meaningless. To say that something grows exponentially means that it follows a curve of the form: y equals e to the ax power, where "a" is a constant. So, before you can meaningfully say that a thing grows exponentially, you have to have a quantitative measure of that thing. Where is Kurzweil's quantitative measure of evolutionary progress? How would he assign numerical values to fishes, amphibians, reptiles, mammals, etc., that would show the rate of evolution in quantitative terms?

It's easy to establish quantitative measures of progress in specific aspects of technology. E.g., one can speak of the number of operations that a computer performs in one second. But on what quantitative measure does Kurzweil rely in stating that *overall* technological progress is and always has been exponential? I don't doubt that technological progress has been "exponential" in some vague subjective sense, at least for the last few centuries. A responsible commentator might say just that, or he might say that as measured by some specified numerical index progress has been exponential. But Kurzweil just says flatly and without qualification: "Exponential growth is a feature of any evolutionary process...." This kind of overconfidence is apparent also in other parts of the article, and it reinforces my suspicion (which I mentioned in an earlier letter) that Kurzweil is more of a showman than a serious thinker.

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[161] Jean-Jacques Rousseau, *Emile or On Education*, trans. by Allan Bloom, Basic Books, HarperCollins, 1979, p. 47.

[162] John E. Pfeiffer, *The Emergence of Man*, Harper & Row, 1969, p. 344. I question whether Pfeiffer is reliable, but it should be possible to check this information by consulting Pfeiffer's sources.

Again, I myself believe that technology is carrying us forward at an accelerating and extremely dangerous rate; on that point I fully agree with Kurzweil. But I question whether he is a responsible, balanced, and reliable commentator.

Kurzweil admits that we can't "absolutely ensure" the survival of human ethics and values, but he does seem to believe we can do a lot to promote their survival. And throughout his article generally he shows his belief that humans can to a significant degree control the path that technological progress will take. I maintain that he is dead wrong. History shows the futility of human efforts to guide the development of societies, and, given that the pace of change—as Kurzweil himself says—will keep accelerating indefinitely, the futility of such efforts in the future will be even more certain. So Kurzweil's ideas for limiting the dangerous aspects of technological progress are completely unrealistic. Relevant here are my remarks about "natural selection" (see my letter of 10/12/04). For example, "human values" in the long run will survive only if they are the "fittest" values in terms of natural selection. And it is highly unlikely that they will continue to be the fittest values in the world of the future, which will be utterly unlike the world that has existed heretofore.

What Kurzweil says about "distributed technologies" makes me uneasy. He may be right in claiming that the system will tend toward the development of decentralized facilities, thus decreasing its dependence on centralized facilities such as power-plants, oil refineries, and so forth. The more decentralized the system becomes, the more difficult it will be to eliminate it. This is one reason why I oppose decentralization.

A question has to be raised about the people who are promoting all this mad technological growth—those who do the research and those who provide the funds for research. Are they criminals? Should they be punished?

# # #

Concerning the recent terrorist action in Britain: Quite apart from any humanitarian considerations, the radical Islamics' approach seems senseless. They take a hostile stance toward whole nations, such as the U.S. or Britain, and they indisciminately kill ordinary citizens of those countries. In doing so they only strengthen the countries in question, because they provide the politicians with what they most need: a feared external enemy to unite the people behind their leaders. The Islamics seem to have forgotten the principle of "divide and conquer": Their best policy would have been to profess friendship for the American, British, etc. *people* and limit their expressed hostility to the elite groups of those countries, while portraying the ordinary people as victims or dupes of their leaders. (Notice that this is the position that the U.S. usually adopts toward hostile countries.)

So the terrorists' acts of mass slaughter seem stupid. But there may be an explanation other than stupidity for their actions: The radical Islamic leaders may be less interested in the effect that the bombings have on the U.S. or the

U.K. than in their effect within the Islamic world. The leaders' main goal may be to build a strong and fanatical Islamic movement, and for this purpose they may

feel that spectacular acts of mass destruction are more effective than assassinations of single individuals, however important the latter may be. I've found some support for this hypothesis:

"[A] radical remake of the faith is indeed the underlying intention of bin Laden and his followers. Attacking America and its allies is merely a tactic, intended to provoke a backlash strong enough to alert Muslims to the supposed truth of their predicament, and so rally them to purge their faith of all that is alien to its essence. Promoting a clash of civilizations is merely stage one. The more difficult part, as the radicals see it, is convincing fellow Muslims to reject the modern world absolutely (including such aberrations as democracy), topple their own insidiously secularizing quisling governments, and return to the pure path."[163]

[163] Max Rodenbeck, "Islam Confronts its Demons," *New York Review*, April 29, 2004, p. 16.

Ted Kaczynski, David Skrbina
Ted Kaczynski's Letter Correspondence With David Skrbina
2003—2005

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