

World in the year 2000

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Introduction

When current socioeconomic trends are extrapolated, the curves do not reach to the year 2050, because long before the mines will be exhausted, the air and water will be polluted and the human population will become too large for the planet. Without doubt, between now and then a radical change must happen. The question is: What will be the nature of this change?

I respond by describing a vision, not of the world in 2050 but of the world today. I chose to speak about the present because while the future is uncertain, what will happen in the next half century will certainly depend on how we perceive and handle our own situation.

In a nutshell, I point out that a radical change has already begun. It is the change of epistemology or of the way of thinking from "naive" to "symbolic." That change, which has been the common theme in the transformation of a number of academic fields during the 20th century, is now gradually permeating the whole culture. When symbolic thinking is applied to basic issues: values, culture, politics, information and our situation at large, we understand them in a completely new way. The effect is similar to waking up or switching on the light, we instantly see where we are and what is going on. A way to handle our seemingly hopeless problems naturally follows.

Way of thinking

The insight which, I believe, will bring about the next revolutionary culture change is as basic and simple as the discovery of ourselves.

Prior to having that insight we think "naively." We believe that what we perceive through our senses is objective reality, that the words of our language correspond to things in reality, that our logic corresponds to the structure of reality and that our world view mirrors reality.

The "discovery of ourselves" is a lot more than a discovery of a new continent or a new chemical element. It is a discovery of one side of reality. This may seem like an exaggeration, considering how small we are in comparison with the vast universe. But is it not within ourselves, in our mind, that our idea of reality resides, shaped by both external and internal factors? And are not the internal factors alone which prevent us from seeing reality as it really is?

We think symbolically when we take ourselves into account – our sensory organs, our brains, our language, our culture – and realize that what we call "reality" is largely our own and our culture's construction. When we think symbolically we no longer consider our words and ideas as reality but as a man-made system of symbols which can be consciously understood and worked with. By the symbolic view, our world view is not considered as a mirror-image of reality, but as something like eyeglasses, through which we look at experience and which colors, shapes and limits our views.

The naivete of the naive view and the superiority of symbolic thinking have by now been so solidly established that the change is immanent. Already two centuries ago Goethe saw that science which pretended to objectivity by excluding the human observer was ill-founded. Later developments proved him right. From the relativity theory we learned that even the most basic concepts of classical science do not correspond to reality. Quantum physics taught us a similar lesson about our common sense. Experiments in gestalt and cognitive psychology showed that our minds construct our idea of reality. Cognitive neuroscience found a physiological basis for such construction. Modern linguistics and semiotics have developed from De Saussure's view of language as imposing a structure on experience, rather than reflecting an objectively existing structure. Thomas Kuhn changed our understanding of science from naive to symbolic. Murray Edelman showed us how different our socio-political reality is when looked at symbolically. Marshall McLuhan warned us that developing a technological civilization while thinking in old ways is like driving a car while looking at the rear-view mirror.

Our world has been created by people looking through certain "cultural eyeglasses". The dangers that could be seen in that way have already been avoided, the opportunities that could be seen in that way have already been exploited. When we now look through those same eyeglasses, we see nothing special about the time we live in, neither great dangers, nor great opportunities. Everything seems just *normal*. It is only when we think symbolically that we are able to take off our cultural eyeglasses, examine them and see how they bias and limit our views. We then understand that we not only *can* consciously create new ways of looking, but that we in fact have to do that in order to see properly.

As we shall see, our situation at the turn of the millennium is uniquely dramatic and uncommon. We need, however, to look in an uncommon way in order to see that. In the sections that follow I sketch uncommon ways of looking at some of the most basic questions. I begin with a question which is so basic that it must be considered first.

Value judgement

How can we know whether something, such as a new technology or an element of lifestyle, is truly beneficial?

When we think naively, the answer seems obvious: We can, of course, simply *feel* whether something is pleasant or unpleasant, desirable or unattractive. However, a moment of symbolic thinking will suffice to see the limitations of such judgement: When we make choices based on convenience (how something feels at the moment), we fail to take into account how our choices influence our own condition in the long run, and how our condition influences how we feel. When we judge by convenience we not only fail to take into account one side of reality – ourselves; we in fact become oblivious of one whole dimension of reality – time.

The reader might object that our senses do tell us what is good for us also in the long run. That is, after all, their biological function. I reply that there is a reason for doubting whether our senses are still able to perform that function. They are made to work under completely different conditions. Through natural evolution, in which the period of civilization was too brief for significant genetic changes to take effect, we have been adapted to living in the natural environment. Our sensory organs have been adapted so that they can guide us to prudent choices *among those options that exist in nature*. The options created by science and technology are so different from the natural ones that we have to admit that our senses can be deceived by them.

To see the subtle, yet pervasive nature of that deception, imagine two glasses on a table, one filled with water, the other one with Fancy Cola. Imagine that you taste both and decide that Fancy Cola definitely tastes better. The conclusion seems inevitable: Fancy Cola brings pleasure. If you drink Fancy Cola instead of water, you will have more drinking pleasure and, all other things being equal, you will have a bit more pleasure on the whole. However, it may well be that drinking water over an extended time period makes one's taste buds more sensitive so that *everything* tastes better, including water. Fancy Cola may have the opposite effect. As a result, water may taste better to a person who habitually drinks water than Fancy Cola to one who habitually drinks Fancy Cola. That is, however, impossible to test. (If asked to taste the two drinks, both persons may say that they prefer Fancy Cola to water. But such a test is irrelevant.) Furthermore, drinking water instead of Fancy Cola may subtly improve one's over-all condition so that *everything* is more enjoyable: The jokes are a bit more funny, jogging a bit more pleasant, sex a bit more exciting. If all those subtle effects could be added up and compared to the pleasure gained from drinking Fancy Cola, perhaps they would turn out to be one thousand times larger. But such a calculation is, of course, practically impossible.

While it may be difficult to determine whether something is truly beneficial or not, something else can very easily be determined: The inadequacy of judgement based on how things feel. To see that, one only needs to think about addictions. Addictions usually feel pleasant, but their long-term consequences are detrimental. When we judge whether something is beneficial based on how pleasant it feels then we cannot distinguish addictions from the things that truly *are* good for us.

"But we *know* what addictions are!" the reader might protest. "Our culture tells us that. Are we not warned to stay away from such things as drugs, gambling and prostitution?" I reply that such traditional usage of the word "addiction" reflects the problem that McLuhan was pointing at: While our ethical and legal sensibilities are focused on traditional addictions, our technology may be producing thousands of new

ones! We may be habitually using technology in ways which, like traditional addictions, feel pleasant but which have unpleasant long-term effects.

It is difficult to make peace with the possibility that a scientifically and technologically advanced culture as ours may be habitually choosing the purpose for which its science and technology are used based on an obviously flawed criterion. The reader must surely suspect that somewhere out there some clever and qualified people would have noticed and studied such a basic flaw. And indeed they have. Already in the first half of the last century Weston Price collected a wealth of field data showing negative effects of civilized lifestyle on well-being. Francis Pottenger showed through long-term experiments on cats that modern nutrition may have detrimental consequences on health, and that it may take several generations for those consequences to fully develop. Werner Kollath explained theoretically and showed experimentally that our health and well-being may have deteriorated even though our average life span has been increasing. Recent statistics on epidemic increase of depression and degenerative diseases point to a continuing downward trend in psychological and physical well-being which affects us all.

"Is not all this talking about value judgement taking us away from our subject, the environmental crisis?" the reader might ask. I answer that our value judgement determines also how we see the environmental crisis. When we look naively, progress seems to require some strange compromise. It may even seem that we need to destroy the environment in order to have increasing well-being. But when we look symbolically, we see the possibility of an error of grotesque, even tragic proportions: The progress of our civilization is directed and evaluated by faulty judgement. Because of that, we may be destroying *both* our well-being and our environment, without being aware of that.

The good news also follows: True progress may be more easily accessible than we think. We may be able to rescue *both* our well-being and our environment.

Culture

Our aim is, of course, not to return to nature, but to use science and technology to live far better than our pre-civilized ancestors.

Culture allows us to *cultivate* our well-being, to elevate it well beyond what was possible in nature. As a seed planted in fertile soil becomes a tree when watered and cared for, so does our well-being gradually develop to its full potential when properly cultivated.

The example of growing a tree allows us to see also in what way culture performs its crucial task: Nothing in the seed suggests that it should be planted and watered. If we were to judge by convenience (instant gratification), we would surely eat the fruit and throw away the tasteless seeds. Culture enables us to cultivate plants by substituting its own instructions for our naive judgement. In the same manner culture enables us to cultivate ourselves. Our culture's instructions make up the "cultural

program" which determines what our time and energy will be spent on and what our lives will be like and *feel* like.

We are again confronted with a basic question: Why do we believe that our cultural program is as it should be? What makes us trust it so much that we do not hesitate to entrust our lives to it?

When we think naively, we can only run our cultural program but we cannot question it. Naive cultures have an unreserved trust in their programs. It is only when we think symbolically that we are able to look at our cultural program and see not only that it has fatal errors (ones that make it dysfunctional) but also that our unreserved trust in culture is one of them.

Culture can be understood as a continuation of our genetic evolution. Its customs, beliefs, values, thinking styles, language, script, habits, rituals, arts, designs, institutions etc. may be thought of as comprising "cultural genes" or *memes*. It is well known that evolution through the survival of the fittest can produce complex systems or "organisms" spontaneously, without conscious intervention. Traditional cultures were equipped with all that was necessary for such evolution: The memes of a tradition were transmitted from one generation to the next and tested repeatedly in competition with other traditional memes and with harsh nature. Better memes survived.

Unreserved trust in culture, the "trusting meme," was one of the essential memes of the traditional culture. The obligation to copy the ways and beliefs of the ancestors, the "copying meme," was another one. The copying meme secured the inheritance of culture. It enabled the traditional culture to evolve. The trusting meme secured that people follow the ways of their culture even when they did not feel like doing that. That meme enabled the traditional culture to function (to substitute its instructions for naive judgement).

We too have inherited the trusting meme. We have, however, not inherited the copying meme. It is easy to see why we no longer copy the ways and beliefs of our ancestors: Science has brought us new beliefs; technology has brought us new ways. As an obstacle to Scientific and Industrial Revolution, the copying gene had to be eliminated from the modern cultural genotype.

That cultural gene modification has given us unreserved trust in the culture which does not merit such trust. Our ways and beliefs have not been tested and improved by many generations before us. They are new creations which need to be consciously examined and verified. Since our trusting meme keeps us from doing that, we continue to accept them unconditionally. The trusting meme now prevents us from taking conscious responsibility for our culture and its evolution, as indeed we should.

The reader may wonder what does all this have to do with our subject, the environmental crisis? The cultural crisis, which has been the subject of this section, is one entire side of the environmental crisis, no less important as the other, more familiar side. Due to the familiar bias of our culture, we have been focusing on the crisis of our *outer*, bio-physical environment and ignoring the crisis of our cultural environment. But the crisis of the bio-physical environment cannot be resolved

without resolving its cultural counterpart. Our culture is the faulty program we have been using to manage our affairs. It is by acting according to that program's instructions that we have been damaging our bio-physical environment.

Politics

We must ask: Now that our culture is no longer a tradition, in what way is it evolving? How is our cultural program being created? We introduce a concept, "power structure," in order to answer that question.

A power structure is a straight-forward generalization of the traditional notion of a power monger. Kings, monopolies and political parties were the traditional power mongers. A power structure can be *anything* that has power. It can be any structure consisting of people, things, institutions, and even values and ideas. One person's manner of doing business and another person's value judgement may be a power structure if, when combined together, they have political power or make money.

The power structure concept allows us to understand politics in a completely new way. As before, the power mongers are the suspected political "bad guys": They can use their power to make the human, natural and cultural resources serve *themselves* rather than the well-being of people (the reader may imagine the culture as an organism and the power structure as a parasite colony or a cancer). Controlling the power mongers remains an essential functions of culture – the *political* function (it is analogous to the immunity of an organism). But now the power mongers are no longer only recognizable entities such as people and institutions. They can be arbitrary structures. Each of us may unknowingly belong to many power structures, and at the same time be their unsuspecting victim.

While we can no longer assume that our culture is spontaneously evolving in a manner which increases our well-being, we *must* assume that the power structures are spontaneously evolving in the manner which increases their power. The competitive global market provides all that is needed for such evolution: both the inheritance of memes (profitable business strategies are preserved and copied) and the competitive environment (whoever makes profit survives). In artificial life and artificial intelligence it has been demonstrated that spontaneous genetic evolution can produce complex structures capable of goal-oriented and intelligent behavior. That means that a power structure can develop subtle strategies that maximize its growth and profit completely spontaneously, without anyone's awareness of the existence and the purpose of those strategies. But the power structures are not only *artificially* intelligent. They also have real intelligence, namely our own.

It follows that our memes can now evolve within power structures, as it suits the power structures, our political enemy, not as our well-being requires. The power structures can modify our cultural instructions in ways which increase their power and reduce ours. We can now recognize as real the scenario which would otherwise seem

to belong to some science fiction horror movie, namely that our political enemy can influence our evolution. By modifying our cultural genes, the power structures are able to genetically engineer our values, our way of thinking, our lifestyle, our character traits and our physical well-being, in a word, us.

When we realize that power structures are able to modify our values, we can understand why convenience is our culture's value even though it makes us favor addictions and shun cultivation: Addiction sales bring power and money. Addiction consumption brings dependence and loss of power.

It is easy to see that our traditional-political checks and balances and free choice no longer work in the presence of power structures. Traditional politics presupposes agents that are aware of their interests. But power structures can influence our awareness and make us consider *their* interests as our own.

Turning back to our original question, the environmental crisis, we can now understand how it could have happened that we act destructively towards both our environment and ourselves. While from the point of view of traditional political thinking such behavior may seem absurd and impossible, it can easily be explained when we admit that we may be acting as it suits the power structures and *against* ourselves.

Information and informing

We call our historical era the "Information Age," and for a good reason: It is the explosive development of informing media that is now most visibly changing our culture. Information has never been nearly as abundant and as available as now. There is, however, a basic question related to information: How do we know that all that information serves *us*, that it is not used against us? The existence of power structures makes the latter possibility real: What could be a better way to control people's minds than to take control over the powerful new informing media?

From the naive point of view such concern may seem unwarranted. We have laws that guarantee the freedom of press. Nobody can take control over the informing media and get away with it! It is only when we think symbolically that we can look at our present understanding of information and see that it fails to take one side of information into account. A concept, "implicit information," will help us do that. What we have been calling "information" is only the *explicit*, factual or verbal aspect of information. We have been ignoring the *implicit* or *tacit* information which is conveyed by objects, rituals, visual images and sounds, embodied by living people and artifacts, suggested by the intonation of voice or implied in printed text without being explicitly stated.

Calling the implicit information "one side of information" may seem vastly exaggerated, considering the abundance and the importance of explicit information in

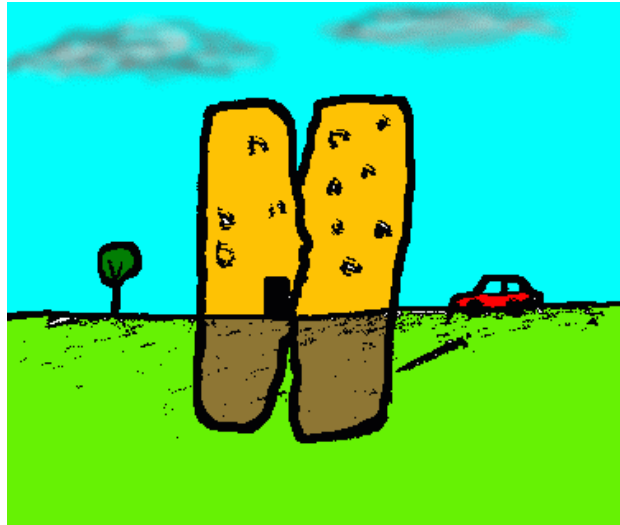
our culture. A familiar example, cigarette advertising, will help us see why that is not the case. On cigarette advertising the two kinds of information meet and challenge one another in direct competition: The explicit information in the black-and-white square by which Surgeon General is warning us not to smoke; the implicit information in the colorful picture which invites us to smoke by using only symbolic images, without making any explicit statement. Of the two competing messages the implicit message is the clear winner. We are able to claim that because we have a solid proof, namely, the cigarette advertising itself. If the Surgeon General's explicit message were stronger than the implicit one, cigarette advertising would not be cigarette advertising. It would be an instrument of the anti-smoking campaign, created and paid for by tobacco manufacturers.

While explicit information has been the exclusive focus of our legislation and ethics, we have abandoned the implicit information to neglect and abuse, with unknown consequences for culture. Already advertising, the most visible form of implicit information, has an enormous impact on culture, which can easily be seen by considering the enormous amounts of money that are spent on it. Advertising is everywhere. We can have no doubt that the money spent on advertising yields an equivalent or greater sales increase. Obviously, advertising works. Imagine if all the advertising in the world were promoting one single thing. Would that thing sell? I am about to claim that this indeed is the case, that there is a single thing that is promoted by practically all advertising. That thing is – convenience as a value! The reader will have no difficulty noticing that while advertising is used to promote just about anything that can be sold, practically all advertising appeals to convenience as an implied value.

In media informing implicit information is interwoven within explicit information and it needs to be read "between the lines." There the implied values (money, success, American interests abroad) visibly differ from both the natural and the cultural values (happiness, love, virtue). Those implied values clearly reflect the interests of the power structures.

It is not difficult to imagine completely different media information in which the truly relevant issues of environment and culture would be placed into the center of our attention. With such informing we would spontaneously give the important issues the attention they deserve. As it is, those issues are far less visible in media informing than the black and white square with Surgeon General's warning on cigarette advertising. The values that are reinforced by advertising and media information subtly guide us to ignore the truly relevant issues even when we have been informed about them.

What is going on



Modern culture depicted as a house with failing foundations. The message of this ideogram is that the condition of our culture reflects the condition of its hidden foundations.

With the satellite news, the world wide web and the internet, immense volumes of information have become available at the touch of a finger. We know what goes on in all parts of the world. It might seem that we are impeccably informed. But even that can be questioned: Is the information we have truly the information we need? Perhaps we have too much information of a wrong kind? Perhaps the very quantity of available information *obscures* what we most urgently need to know?

A concept, "gestalt," will allow us to look into that possibility. A gestalt is a grasp of a situation and a way to characterize it. "The house is on fire!" is a familiar example of a gestalt. "The foundations of the house are failing" is another. A gestalt is a tiny piece of information with large import: It allows us to interpret correctly all other pieces of information; it allows us to choose an appropriate course of action. All the rest can remain the same: The cracks in the walls, the uneven floors, the doors that no longer fit their frames. But it is the gestalt which gives those details meaning and which allows us to handle them correctly. Patching the cracks, painting the walls and fixing the doors will not do. The people and their belongings need to be moved to a safe place. The foundations of the house need to be reconstructed. The walls need to be rebuilt upon new foundations.

Knowing the gestalt is tantamount to knowing what goes on. The gestalt is, however, an example of a kind of information that is invisible in our informing. Even the importance of the gestalt is ignored. We equate knowing what goes on with knowing about catastrophes, wars, elections, mass murders, presidential campaigns and other unrelated events that are taking place around the world. Those events typically have no bearing on our daily lives and actions.

We now complete our view of the world in the year 2000 by organizing what has been said so far into a gestalt. We adapt the traditional gestalt "the foundations of the house are failing" to create the required new one: *The foundations of modern culture*

are failing. The meaning of that gestalt is that our cultural condition is such that we are in effect living in a house with failing foundations. Our situation is problem laden and dangerous. But our problems have a common hidden cause which can be remedied.

The "foundations of culture" are the styles of judgement in which the cultural ways and beliefs are founded. By allowing us to distinguish what is beneficial and solid from what is not, those styles of judgement serve as a foundation for building a culture which is a good and safe environment for us to live in.

We have seen that unreserved trust in the ways and beliefs of the culture, which served as the foundation for the traditional culture, no longer serves us. The ways and beliefs of our culture have not been tested by many generations before us. They may even have been implanted by the power structures. We can no longer simply trust them, we must verify them consciously. Convenience, the more modern value, makes us favor addiction and ignore cultivation. Convenience cannot serve as a foundation of culture. Our culture now has no solid foundation on which it could function and evolve.

If we think naively, our tailored gestalt may appear as rather contrived: "The culture is not a house; how can it have failing foundations?" It is only when we look symbolically that we can see the need for such *conscious* creation of gestalts. The culture has always governed people's actions through gestalts. For example, the gestalt: "Grandfather is having a heart attack." has "Call an ambulance!" as the corresponding action. Our culture has equipped us with a large collection of gestalt-action pairs. If "The foundations of culture are failing" is not one of them, that is because that gestalt has earlier not been needed. While our culture was traditional, the trust in the cultural ways and beliefs served well as the foundations of culture and those foundations never failed.

It may seem incredible that in spite of all our information we may be living with a wrong gestalt (be misinformed). To see why this is possible notice that the gestalt is, in fact, present in media information, but in an *implicit* way. That implied gestalt depicts our world as in principle functional and normal.

The reader may also feel uncomfortable with the course of action which follows from our gestalt: "Can we, indeed, create new foundations of culture?" I answer that we not only *can* create new foundations of culture, but that the new foundations have in fact already been created. Those new foundations are the symbolic thinking.

"Symbolic thinking" means simply *conscious founding of information*. When we think naively we do not know why our ways and beliefs are as they are. We may uphold some of them because they feel good, others because everyone around us does the same. Such information founding is not any better than building a house on whatever terrain one happens to be standing and living in that house without ever looking at its foundations. With the help of modern technology it may be possible to build a fairly large house in that way. But how long can such a house last? And how long can such building continue? Symbolic thinking is to culture as architecture is to house construction. It allows us to ground the cultural ways and beliefs solidly. It allows us to distinguish the truly meaningful ways and beliefs from the ones that were

implanted by the power structures. It is clear that symbolic thinking is exactly the foundation our culture now requires.

It is also easy to see that the new cultural foundations are superior to the old, traditional ones. In the traditional culture any issue, from diet to religion, was founded in the habits and commands of the tradition. The cultural instructions were substituted for naive judgement simply by making them a rule, often contrary to both reason and feeling. While turning its own rules into law, the tradition outlawed the rules of all other traditions. The authoritarian traditional rules were easily modified by historical power structures and turned into instruments of oppression. There can be little doubt that the narrow traditional foundations severely restricted what culture was able to accomplish.

Conscious founding of information leads to a re-birth of culture, to a whole new beginning. The culture which can grow on such foundations is entirely different from the historical and present cultures. That can be seen by looking at how the new culture might handle any cultural issue, new or old. Consider, for example, war. When we think naively, if we feel hatred towards the people on the other side of the border we have no choice but to believe that they really *are* hateful. But when we think symbolically we are also able to look at our hatred and ask: "Where is my hatred coming from?" Hatred may be induced by power structures. It may also be a reflection of our own anxiety.

"What does this have to do with our issue, the environment?" the reader may ask. Our gestalt points to the appropriate way of handling *any* cultural issue, including the environment. Trying to deal with the environmental issue in isolation is like patching the cracks in the wall of a house with failing foundations. Our gestalt suggests that our problems *do* have a natural solution. But that solution involves a conscious, fundamental change, not fixing.

Conclusion

The ongoing *cultural foundations change* is a huge cultural event, comparable to the Renaissance and probably larger in depth and scope. The change during the Renaissance was before all a change of language and preoccupations, which made all other changes possible: Latin, a dead language, was replaced by local spoken languages. The scholastic discussions were replaced by more down-to-earth questions concerning natural life, commerce and human condition. The present culture change also includes a change of language and preoccupations. The emerging issues cannot be understood by using old forms of expression and the thinking style they embody.

Already this rough sketch points out that a radically changed understanding of values, culture, politics, information and our situation at large follows from symbolic thinking. Symbolic thinking can change our language and our preoccupations and guide us to a new consciousness and a new culture. Such a change is needed in order to bring us into synchrony with the reality we have been creating. It is in the context

of the new thinking that the solution to the environmental and other problems will be found.

What has been said allows us to give a concise answer to the question raised by the competition, namely "What changes will happen during the next half century?" I believe that the future will be somewhere between the following two extreme scenarios.

The pessimistic scenario is that the global culture continues to grow on its failing foundations until it collapses. The collapse can be envisioned as a chain reaction triggered by omission of any of the known or unknown critical factors. To get an idea of what that may mean, imagine that there is no electricity, no gas, no tap water, no... Imagine your neighborhood police officer walking into your neighborhood grocery store with a gun in his hand because *his* children are also hungry.

The optimistic scenario is that we succeed in producing a viable alternative, a nucleus of a new culture. As people and institutions become aware of the advantages of that alternative, they naturally make the change. The transition – the cultural foundations change – is smooth and painless. This alternative is as exquisite as the other one is somber. We leave its details to future work and to the reader's imagination.

It seems probable that the future will be a combination of those two extreme scenarios. Some disasters may need to happen. The human population may need to be reduced in order to be accommodated on the planet. We may need to learn from our mistakes. I believe, however, that the way we act now, while the conditions are still stable, will determine what the world in the year 2050 will be like. Now is the time when the embryo of the new culture can and needs to be created. If the disasters begin to happen it will be obvious that our culture cannot last in its present form. Then, however, it will be too late to begin creating an alternative.

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