

Creating the Future
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Chapter 4: Where are we going?

4. Where are we going?

Where do we go from here?

Chicago

You'd better make up your mind.

Big Wooden Radio

Our story so far

What have we learned so far? The story of our species, like the story of other species surviving today, is one of gradual change interrupted by sudden leaps. Somewhere around six million years ago *Australopithecus Afarensis* moved from the trees to the savanna suddenly departing from the chimpanzees and apes. Four million years later *Homo Habilis* and *Homo Erectus* learned to create tools and cook in pots. They represented the turning point from an ape-like past to a human-like future. Two hundred thousand years ago the Archaic Sapiens learned to prepare raw materials from which other products could be made, and the Neanderthal found shelter in the caves of Europe and Asia. Then somewhere around 50,000-40,000 years ago, the first generation of modern human beings emerged with the remarkable intellectual, social, and technological development of Cro-Magnon. The agricultural revolution of the second generation followed just 10-12,000 years ago. Then the scientific-industrial revolution established the third generation in just the last 500 years.

In this story there are many lessons for us. First, changes happened in cycles. A new species suddenly appeared; it developed and matured; its patterns became stable and resistant to change, causing it to lose its ability to adapt; and it declined and disappeared. This is true not only of distinct species, but of the generations of modern human. Second, change appears to be rapidly accelerating. It took four million years to get from *Australopithecus Afarensis* to *Homo Habilis*; only 165,000 years to get from Archaic Sapiens to modern human; and the third generation of modern humans appeared less than 10,000 years after the second. Third, change processes were co-evolutionary. In each of the leaps we can find changes in how our ancestors related to one another, the patterns of their lives, how they acquired and used resources, their technology and means of communication, their relationships with nature, and so on. All these things

changed in relation to one another—they co-evolved—and a harmonious interaction among them was required for the species to take hold. Fourth, evolution is now primarily cultural.

Consciousness

A fifth lesson we can draw from the story is that the leap in consciousness as each of our ancestors emerged was key to our becoming human. By consciousness we mean the ability to see ourselves as separate from the world—to observe ourselves in relation to others and our environment.

Archaic Sapiens like the Neanderthal did not have what we consider human consciousness. In essentially the “dream-like” state of many animals, they were unable to see themselves as individuals separate from others and the world. Their connection was to nature, that is, they were entirely embedded in nature and made no distinction of self from it.

It was the Cro-Magnon who made the leap of separation of self from others and nature. They likely saw how and why things happened as magical, rather than in terms of some rational cause and effect, but evidence such as paintings clearly demonstrates the ability to see themselves as distinct.

The three generations of modern humans took a series of leaps in consciousness, deepening our sense of self and community, our intellectual capacities, and our emotional lives. The first generation’s self-reflective consciousness was sensory and magical, the second, emotional and mythical, and the third, mental/logical. Across these generations we developed complex languages to represent our thoughts, showing how the development of our nervous systems and brain, the creation of languages, and consciousness co-evolve. We developed the ability to wonder, to introspect, and to consider not just what is but what might be. From the early explanations of gods in the earth and sky, we developed scientific understandings of how the world works. And we developed a multi-dimensional perspective, allowing us to see ourselves separate in space and time.

Taking perhaps the most profound step, here at the end of the third generation we have developed an understanding of the processes by which we came to be the way we are—we have developed evolutionary consciousness. Evolutionary consciousness is likely to be the key as we shift the view from where we came from to where we are going.

The end of Generation 3

So where is humanity going? We really don't know. We know how we came to be as we are today, and our knowledge of this process tells us that what we do now will make a difference in the future. But the future remains unpredictable. How all of our actions will combine, how our environment will change on its own and in response to our actions, how and when a new generation of humans will emerge, and how they will think and act are unclear.

Below are some possibilities, some directions that humanity might take in the near term. These certainly don't represent all possibilities. Nor do they imply specific actions that would take us in particular directions. We just intend to suggest where humanity might go given some of the forces that exist today.

One thing seems very clear, however. We have reached a turning point. Generation 3 of modern human is in decline. Its patterns have stabilized and have become rigid. It is growing further and further out of sync with its environment, and its inability to adapt to change is pushing it rapidly toward collapse. You may think that is an awfully drastic statement to make about humanity. Consider the evidence.

- Technological development in the 20th century was truly remarkable, so remarkable and so rapid that the social and ethical systems necessary to guide it never caught up. We are closing in on the ability to create human life with whatever characteristics we choose, but with barely any collective consideration of what those characteristics should be.
- We have moved from an industrial age requiring masses of laborers to an information age requiring continuous learning. Rather than people who are physically skilled to work in particular occupations for a lifetime, we need workers who are able to adapt as the skills required in their jobs change by the year, if not the month. Yet at the same time, our educational systems maintain the structures and processes, in some cases even the content, of the industrial age.
- We have found the means to extract and produce vast amounts of energy to fuel our industries and ways of life. Yet the extraction, production, and use are destroying our natural environment. Our farming practices have dramatically increased the productivity of our farms, yet have contributed to washing the topsoil we rely on for growing food down our rivers. We've developed useful chemicals but have sent them into the atmosphere, threatening our protection from harmful rays. We've found the means to exploit the power within the atom, yet have used this to create weapons that could destroy our planets' surface, taking

us with it, and waste products that will remain harmful to us for the next six million years. We've learned that diversity is key to survival, yet our actions have created the conditions for mass extinction of species. In fact, many scientists agree that we are now experiencing a mass extinction, on the order of 30,000 species lost per year. To put this in perspective, the last mass extinction was 65 million years ago!

- A small percentage of the earth's peoples now enjoy an unprecedented degree of personal freedom. We can live where we choose, work in the areas we wish, and form social bonds if and when we want. But with the gain of independence we've lost our sense of family and community. Personal, material gain has become more important than social connection, and this shifts our attitudes away from social benefit and service. We increasingly depend on laws and police to maintain order, and lawyers and lawsuits to settle disputes. We think something is wrong not because it caused harm but because we got caught.
- Medical advances and our knowledge of nutrition have allowed the Earth's human population to grow rapidly, so rapidly that it is unclear if food resources can be developed to keep us alive in the coming century.
- Scientists have found that the simple cause-and-effect reasoning of the industrial age does not explain the behavior of complex systems, and that complex systems include things like the earth itself, the weather, and human beings. Yet our institutions, our governmental policies, our laws, and so on, still rely on simple cause-and-effect logic.
- Communication technologies have spurred the development of a global economy. This has allowed the quality of life of some people to improve dramatically in a very short period of time. At the same time, it has created an enormous and continually widening gap between rich and poor, and it threatens to destroy the individual identity of cultures and countries. Most people don't yet recognize that global economic forces already far exceed the power of national governments, including that of the United States.

We could offer other examples. The point is that our social systems no longer reflect the reality in which they are embedded. They were designed for a bygone era and have not co-evolved with their environment. We see in their resistance to change, the end of an evolutionary cycle and the decline of Generation 3 modern human. We humans face the challenge of transformation, not just transition.

Future possibilities

So where might we go? Here are some scenarios of what might be ahead.

- Suppose we focus on technological development. We might find human relations maintained largely via attached or implanted electronic devices. We would be connected “24-7,” in touch with one another instantly and continuously worldwide. We wouldn’t need to be in a particular place to work or learn, we could just “connect” from wherever. Computing would be an embedded capability in everything, including us, making the boundaries between human and machine blur then disappear. Another blurred boundary would be between what is real and what is artificial. For example, we may develop dust-particle sized computers, so small that by filling the space around us, their simple action of reflecting light back to us in different colors would create a scene that we could not distinguish from reality. Our encounters with objects and each other in these virtual realities might be commonplace. In a sense, we would lead multiple lives.
- Another future scenario emphasizing technology development would have us creating who we wish to be via genetic engineering. Each generation would be a product of the previous generation’s desires and the manipulations that were available. If one of our body parts had a problem, we could replace it. If we wished to delay aging, we could rejuvenate our bodies and live for hundreds of years. When the Earth’s population density became too great, we would move offworld, to space stations and other planets.
- In contrast, suppose our future was dominated by economic forces, a free market economy in particular. We might have a global government, subject to no national rule, Nation-states would grow powerless in the face of global economic forces and would be superceded. A single worldwide language—based on proportion of internet use, Chinese—would be instituted so that everyone could speak freely with everyone else. This government might be able to keep local conflicts from escalating into large-scale wars. Reasonable work conditions could be insured because a single institution oversaw them worldwide, and the free market would mean great freedom for individual initiative and choice.
- Another possibility is a future in which human relations are given priority. We might create a civil society in which everyone had the right to know about issues that affected them and the ability and responsibility to participate in making decisions. Rather than debate by the few in power and control by authorities removed from the situation, individual communities would engage in new forms of participative self-governance.

It's up to us

There are several important things to notice about these sorts of scenarios. First, these are not wild futuristic visions. Every single possibility mentioned above is based on an effort that is already underway!

Second, the scenarios are not mutually exclusive. For example, a certain attitude toward technology development doesn't make it impossible to have different systems of governance or economy. However, the areas emphasized by the scenarios do interdepend. Worldwide "24-7" communication technologies enable a global economy. Local self-governance works against a strong global government. And embracing virtual realities challenges the notion of community based on physical location. In fact, the various areas are so connected that we might apply the systems term *tightly coupled*.

Third, each scenario has potentially positive and negative consequences. We've focused more on the positives above. Here are some negatives. Allowing technology development to proceed unrestrained would lead us to view resource depletion as an acceptable tradeoff for our style of life. We would simply trust science to find alternatives as they became needed. For example, when farmlands could no longer sustain agriculture, we would eat what bioengineering or nanotechnology could create (e.g., other resources turned into food by biological nanobots). Of course, those who couldn't afford the nanobots would starve.

Similarly, heavy focus on a free market economy would create wider and wider gaps between rich and poor—winners and losers, with their lives as the stake. It would lead to a loss of local control and local culture. Money would go where individual global investors saw potential profits at the moment, so local economies would succeed or fail based on global forces and the short-term decisions of global investors. And with the same goods and services available worldwide, at lower cost than small businesses could match, local businesses would be pushed out of the market.

Even the humanistic or civil society described above has potential problems. We could lose much of our personal freedom having to make all our decisions as a community. We could become so trapped in thinking things over that we could not effectively respond to immediate threats. Decisions based on local concerns could backfire in the face of global forces. Decentralized governance could even open the door to groups with extreme, selfish goals to proceed without strong opposition.

The point here is that there is no utopia, only better or worse circumstances. Any decisions we

make have potentially positive and negative consequences. But understanding that everything relates to everything tells us that these consequences cut across areas like technology and economy, and go beyond local situations. Our decisions need to be based on local AND global perspectives, and to be grounded in the complexity of our world rather than the simple views of individual disciplines or areas that we humans invent. It seems wise to apply *systemic evaluation* to past and proposed actions, to look at the whole system rather than just parts.

Fourth, it is important to notice that it is natural for us, or any system, to resist change. The scenarios above involve major changes in our style of life, the ways we communicate and learn, how our society is organized, how we obtain and utilize resources, the nature of our technologies, our relationship with the natural world, and so on. We perceive that these changes complicate our lives, so we resist them. We may try to preserve the status quo or advocate a return to the “good old days.” But this focuses our energies on what to avoid rather than what to embrace. As a result we never really get what we want.

Maybe the distinction mentioned earlier will help. *Complicated* means many things, while *complexity* means many things that are integrated. Rather than seeking simplicity or reducing complication, we need to seek integration and complexity. In fact, evolution is a movement toward greater complexity, so seeking simplicity works against evolution.

Lastly and most importantly, every aspect of the scenarios above is at least partly the result of purposeful human action. We may not be able to predict the future with a great deal of precision, but we surely will affect it, and how we do so is up to us. Generation 3 modern human is in decline. What Generation 4 will become is up to us. For the first time in history, we face the challenge of becoming a new generation with knowledge of evolutionary processes. We have attained evolutionary consciousness, and now have the opportunity to consciously evolve.

Core Ideas

4.1. Generation 3 modern human is in decline. Its characteristics are no longer in sync with its environment. It must either adapt or face extinction.

4.2. The emergence of each generation of modern human was marked by a leap in consciousness.

- 4.3. Evolutionary consciousness is a promising marker of Generation 4.
- 4.4. There are many possible futures. They will bring us better or worse circumstances, not a utopia.
- 4.5. Such areas as politics, economics, technology, and culture interdepend, so our chances of creating better circumstances for the future are improved by taking a systemic perspective.
- 4.6. The transformation to Generation 4 will not be easy. It requires that we embrace rather than resist change and seek complexity rather than simplicity.
- 4.7. We cannot predict exactly how our actions will affect the future, but they certainly will do so.

Activities

- A. Look around the space surrounding you at this moment. Ask yourself why it is the way it is. For example, if you are indoors ask why the room is a certain size and shape, why the ceilings are a certain height, why the floors are a certain material, the lights and furniture arranged in a particular way. Who caused these to be this way? Imagine what human surroundings will look like in 100 years. Create both positive and negative images. What human actions today would lead toward the more positive or more negative images?
- B. Read a science fiction story or think about one you've read in the past. What actions and events in the next few years might make the story come true? Did we experience Orwell's vision of 1984? Clark or Kubrick's vision of 2001? Why/why not?
- C. Think about your great great grandchildren. What do you wish for them? What could we do today to ensure this future for them?
- D. The three generations of humans appear to have been organized around three levels of consciousness: a sensory/magical consciousness, an emotional/mythical consciousness, and a mental/rational context. What new consciousness should we seek to develop to guide the emergence of generation four? A spiritual/ethical consciousness? How could we do so?