World Modeling

Some simple lifeforms exhibit only a narrow, fixed set of responses to environmental stimuli. They persist or fail solely on the adequacy of these.

More complex lifeforms are capable of learning. We sense environmental conditions, alter internal structure to model these, and respond in new ways as a result.

Humans carry a complex and ever-changing world model. We generate much of our lives from this framework. Our world models are different from our worldviews. They're more extensive and detailed. We change them more often and more easily. And we're more aware of them. With both worldview and world model methods and principles of ecology can be means and framework to achieve greater accuracy.

World models are a basis for anticipating outcomes and making choices about myriad aspects of living. When we make them more accurate we increase capacity for predicting with better-than-random results, and with it, our ability to realize purpose effectively.

In the distant past, humans modeled a relatively slow-changing world. Out of our desires that things be different, we learned to manipulate the environment in increasingly complex ways. With each of our endeavors we generated outcomes other than those we intended.

We've consistently responded to these by redoubling our manipulations. As we've learned to operate more rapidly and on larger scale, we've devoted more and more of our lives to addressing changes that we, ourselves, set in motion. A growing number of thoughtful people are questioning whether we now reap benefits from accumulated impacts greater than their costs.

One especially severe cost is that we're rendering our world models less accurate by our own hand. This is a central issue of our era, one which goes to the heart of how we learn and adapt.

In addition to rearranging the abiotic environment and the other species with which we share it, we also have learned to influence each other’s behavior much more deeply than ever before, and have concentrated power to do so in unprecedented ways. Most of us perceive obedience to certain people to be adaptive. Cowed into believing or pretending, we become accomplices in corrupting the world modeling enterprise. To the extent that our world models are thereby flawed, we undermine their usefulness and threaten our and others' satisfaction.

With the advent of high-speed electronic devices, humans increasingly have modeled extrasomatically. By undertaking computational feats beyond even large numbers of extraordinarily talented people, today’s researchers and mass media personnel who hype them have drawn attention to aspects of the modeling enterprise in which they excel, and given many of us reason to doubt what we may accomplish with our own modeling.

Yet a brilliant model of an irrelevant phenomenon may be useless. By refusing to apply science to questions of value, those who lay claim to the mantle “scientist,” have perhaps misallocated investigative resource to relatively unimportant topics, and rendered much of today’s research all-but-irrelevant. Patient and skilled, they may resemble people in a luxury stateroom of the *Titanic*, painstakingly crafting a model of that ship—including a little brass plaque proclaiming it “unsinkable”—even as seawater pours through the hull two decks below.

Both within and without the scientific establishment, challenges to those who express alarm about phenomena like loss of biodiversity or increasing global climate volatility are often taken at face value as claims about adequacy of data or soundness of logic. Responding as we so often do by calling for collection of more data we perhaps leave too small a place in our models for psychopathology. Perhaps we've more than adequate data, and what we lack is willingness or ability to shed illusion.

To model adaptively in our era, we may decide to look beyond claim and counterclaim about certain data, and consider more closely the unspoken assumptions about why so many direct scientific inquiry to topics now addressed. With humans an increasingly significant factor in geomorphology, and with the web of cause and effect in global ecology so tangled, the risks of erring on the side of incaution as we collect subtle data about some phenomena—while ruling something so central as questions of value outside the domain of discourse—are mounting.

Almost any of us can, with a moment of consideration, ferret out elements of our own world models which are less pertinent or less accurate than those we might develop with a thoroughgoing scientific approach to both what and how we model. Like billions of other humans, we sometimes prefer belief, however ephemeral its supports, to ignorance. Similarly, we hoard and process mountains of unimportant data—ignoring or skipping lightly across that which may be crucial to our well-being—in order to meet everyday demands by people around us. Finally we may misperceive the shifting adaptive balance between conforming our models to natural law and fitting them to accommodate the ideologies of those more powerful than we.

Many of us readily acknowledge that we live in a world of change without precedent in quality and velocity. Applying fundamental principles of ecology we may conclude that successful adaptation entails corresponding change in us. To effect this type of transformation we shake the very foundations of our world models and our modeling processes. We question that of which we have been most certain. We engage in an ongoing search for unfamiliar behaviors by which to generate experience which can be a basis for wholesale remodeling.