








CHAPTER 28

THE NINTH THREAT TO THE BIOSPHERE: HUMAN THOUGHT PROCESSES

 **“PEOPLE TEND TO ASSESS THE RELATIVE IMPORTANCE OF ISSUES BY THE EASE WITH WHICH THEY ARE RETRIEVED FROM MEMORY — AND THIS IS LARGELY DETERMINED BY THE EXTENT OF COVERAGE IN THE [NEWS] MEDIA. FREQUENTLY MENTIONED TOPICS POPULATE THE MIND EVEN AS OTHERS SLIP AWAY FROM AWARENESS.”¹**

-  When did the news media last print or broadcast a threat to the Biosphere?
-  Human thought processes strongly influence the perception of risk from biospheric collapse; consequently, they will determine the probability of future civilizations and the survival of *Homo sapiens*. This possibility constitutes the ninth interactive global crisis (eight crises are listed by Cairns²).
-  Clearly, the news media will bear a heavy responsibility for communicating the level of scientific confidence that can be placed on climate change statements as well as statements on all global crises.


POLICY MAKERS, THE GENERAL PUBLIC, AND THE NEWS MEDIA MUST BECOME MUCH MORE LITERATE ABOUT THE PROBABILITY OF MAJOR THREATS TO THE BIOSPHERE.





-  For example, huge releases of stored methane in oceanic sediment possibly will produce a powerful positive feedback loop that could accelerate the rate of global warming.
-  Release of stored methane is not congruent with either sustainability (which implies use for an indefinite period of time) or the precautionary principle (which states that precautionary action is appropriate, even if scientific evidence is not robust, if the consequences of inaction might be catastrophic).
-  Humanity must take a long-term view of each crisis if it wishes to leave a habitable planet for posterity.



SINCE THE AGRICULTURAL REVOLUTION ABOUT 12,000 YEARS AGO, EARTH'S CLIMATE HAS BEEN RELATIVELY STABLE COMPARED TO ABRUPT CHANGES IN THE DISTANT PAST.

- 🌍 One trigger of abrupt climate change is “. . . shutdowns of the Great Ocean Conveyor — the vast network of ocean currents that circulate water, heat, and nutrients . . .” over about 71 percent of Earth's surface.³
- 🌍 One of the important issues of the 21st century is whether global warming could cause the conveyor to shut down, resulting in rapid change from one global state to another.
- 🌍 Humanity's governance systems and personal mind sets are unprepared for such rapid transitions.
- 🌍 “The climate models are bigger and more sophisticated than ever, . . . but they are yielding the same wide range of possible warming and precipitation changes as they did 5 years ago.”⁴
- 🌍 Can human thought processes cope with these challenges?


 **“... WE ALSO TEND TO EXAGGERATE OUR ABILITY TO FORECAST THE FUTURE, WHICH FOSTERS OPTIMISTIC OVERCONFIDENCE. IN TERMS OF ITS CONSEQUENCES FOR DECISIONS, THE OPTIMISTIC BIAS MAY WELL BE THE MOST SIGNIFICANT COGNITIVE BIAS.”⁵**




-  In 2011, *“the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling . . . recommended sweeping changes in the way industry and government manage offshore drilling.”⁶*
-  *“But few of the recommendations have been implemented. [The US] Congress has taken no action at all.”⁶*
-  The US administration has approved plans for exploratory drilling in the Arctic Ocean, but *“. . . the drilling plan ignores the urgent need to transition to a sustainable energy economy that would stabilize climate and provide economic and environmental security.”⁶*
-  This situation appears to be due to excessive optimism as a substitute for robust scientific information or it results from appalling ignorance.



“THE EVIDENCE SUGGESTS THAT AN OPTIMISTIC BIAS PLAYS A ROLE — SOMETIMES THE DOMINANT ROLE — WHENEVER INDIVIDUALS TAKE ON SIGNIFICANT RISKS.”⁷

- ① *“The most detailed data yet on heat-trapping gases show that U.S. power plants are responsible for the bulk [72%] of the pollution blamed for global warming.”⁸*
- ① However, new power plants are still being built, although regulations on pollution could be released as early as January 2012.⁸
- ① *“Eventually the EPA will have to tackle facilities already in operation.”⁸*
- ① At present, the transition to alternative energy sources is dangerously slow.

 **“OUR SOCIETAL INFRASTRUCTURE WAS BUILT WITH AND EXPECTED TO CONTINUE ON CHEAP LIQUID FUELS AND FEW EXTERNALITIES. THIS FIXED INFRASTRUCTURE COUPLED WITH A PRETTY MUCH INSATIABLE HUMAN DEMAND DRIVE FOR ENERGY SERVICES MAY RESULT IN A ONCE-IN-A-SPECIES CRISIS IF OUR PLANETARY RESOURCES AND ECOSYSTEMS CAN NO LONGER KEEP PACE.”⁹**

-  *“It’s not that I don’t believe that oil will peak someday — it’s just that the doom and gloom people are always wrong — somehow something will come along and in 5 years you’ll say ‘well, how could I have about XXX?’”⁹*
-  The “deniers” do not feel a responsibility to provide contrary scientific evidence, but merely state that someone (a deity?) or something (new technology?) will save humanity.
-  This attitude is a superb example of the mindless dismissal of scientific evidence when environment concerns are expressed, even when the quality of the evidence is very high.



THE MONKEY TRAP STORY IS A SUPERB METAPHOR FOR THE HUMAN TENDENCY TO HANG ON TO RISKY, INAPPROPRIATE THOUGHT PROCESSES.

- 🌐 *“Monkey-hunters use a box with an opening at the top, big enough for the monkey to slide its hand in. Inside the box are bananas. The monkey grabs the banana and now its hand becomes a fist. The monkey tries to get its hand out but the opening is big enough for the hand to slide in, but too small for the fist to come out. Now the monkey has a choice, either to let go of the banana and be free forever or hang on to the banana and get caught”* (<http://mylifemantras.blogspot.com/2009/11/monkey-trap-story-how-to-catch-monkeys.html>).
- 🌐 *The moral of the story: “We [humans] are no different from monkeys. We all hang on to some bananas that keep us from going forward in life. We keep rationalizing by saying, ‘I cannot do this because . . . ‘ and whatever comes after ‘because’ are the bananas that we are hanging on to which are holding us back”* (<http://mylifemantras.blogspot.com/2009/11/monkey-trap-story-how-to-catch-monkeys.html>).
- 🌐 **Humanity is facing nine threats to the Biosphere, but instead of drawing people together, they have polarized humankind into ideological groups that emphasize differences rather than common values.**



HOMO SAPIENS HAS BEEN A SMALL GROUP SPECIES FOR ALMOST ALL OF ITS 200,000 YEARS ON EARTH, AND HUMANITY'S THOUGHT PROCESSES HAVE PRIMARILY REMAINED AT THE LOCAL/REGIONAL LEVEL.

- 🌍 *“And as our nation [the United States] becomes more polarized at the national political level, it becomes all the more important to nurture the commonality we have at the local level, where people care about what they’ve always cared about: their children, their families, their schools, their communities. And it’s our mayors who are best positioned to take advantage of these bonds — especially given that many of our national leaders have given up even trying.”¹⁰*
- 🌍 **Of course, global crises would require attention, but the present political system has not had any notable success with them.**
- 🌍 **If economies were regionalized, they would almost certainly be less harmful than financial and corporate globalization have been.**



“THE MIND IS GOOD WITH STORIES, BUT IT DOES NOT APPEAR TO BE WELL DESIGNED FOR THE PROCESSING OF TIME.”¹¹

- 🌍 **Global crises involve exponential growth — in population, economic expectations, resource consumption, greenhouse gas emissions, and expectations for improved standards of living.**
- 🌍 ***“The belief that bigness is best that dominated the 1950s and 1960s has faded.”¹²***
- 🌍 **Time perspective is lacking when considering lifting a moratorium on uranium mining in Virginia despite the risk from radiation from tailings disposal sites for thousands of years.¹³**
- 🌍 **To make sustainability a reality, humanity must acknowledge that its survival is closely linked with the health and integrity of the present Biosphere.**



QUOTES FROM CARL SAGAN

(http://en.wikiquote.org/wiki/Carl_Sagan) ESTABLISH A
CONTEXT FOR DEALING WITH GLOBAL CRISES.

- 🌍 *“We find that we live on an insignificant planet of a hum-drum star lost in a galaxy tucked away in some forgotten corner of a universe in which there are far more galaxies than people.”*
- 🌍 *“If we long for our planet to be important, there is something we can do about it. We make our world significant by the courage of our questions and by the depth of our answers.”*
- 🌍 *“The suppression of uncomfortable ideas may be common in religion or in politics, but it is not the path to knowledge and there is no place for it in the endeavor of science.”*
- 🌍 *“If we are to survive our loyalties must be broadened further to include the whole human community, the entire planet Earth.”*

Acknowledgments. I am indebted to Darla Donald for transcribing the handwritten draft and for editorial assistance in preparation for publication.

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