


CHAPTER 33

REASON AWAKE:¹ CATASTROPHES MAY FAIL TO CHANGE PUBLIC INDIFFERENCE TO BIOSPHERIC DAMAGE




¹Rene Jules Dubos wrote *Reason Awake* in 1970, and I think that echoing his call is appropriate in 2012.

- ✚ **REASON – SENSIBLE OR LOGICAL THOUGHT OR VIEW**
- ✚ **WISDOM – THE QUALITY OF BEING WISE; KNOWLEDGE, AND THE CAPACITY TO MAKE DUE USE OF IT**
- ✚ **KNOWLEDGE – THE FACT OR CONDITION OF KNOWING SOMETHING WITH FAMILIARITY GAINED THROUGH EXPERIENCE OR ASSOCIATION**
- ✚ **JUDGMENT – THE PROCESS OF FORMING AN OPINION OR EVALUATION BY DISCERNING AND COMPARING**
- ✚ ***“A NATION’S TREASURE IS IN ITS SCHOLARS.”*** Chinese Proverb




 ***“OURS IS ALLEGEDLY A SCIENCE-BASED CULTURE. FOR DECADES, OUR BEST SCIENCE HAS SUGGESTED THAT STAYING ON OUR PRESENT GROWTH-BASED PATH TO GLOBAL DEVELOPMENT IMPLIES CATSTROPHE FOR BILLIONS OF PEOPLE AND UNDERMINES THE POSSIBILITY OF MAINTAINING A COMPLEX GLOBAL CIVILIZATION. YET THERE IS SCANT EVIDENCE THAT NATIONAL GOVERNMENTS, THE UNITED NATIONS, OR OTHER OFFICIAL INTERNATIONAL ORGANIZATIONS HAVE BEGUN SERIOUSLY TO CONTEMPLATE THE IMPLICATIONS FOR HUMANITY OF THE SCIENTISTS’ WARNINGS, LET ALONE ARTICULATE THE KIND OF POLICY RESPONSES THE SCIENCE EVOKES.”¹***



“THE CURRENT COEVOLUTIONARY PATHWAY OF THE HUMAN ENTERPRISE THEREFORE PUTS CIVILIZATION AT RISK – BOTH DEFECTIVE GENES AND MALICIOUS ‘MEMES’ CAN BE ‘SELECTED OUT’ BY A CHANGING PHYSICAL ENVIRONMENT. TO ACHIEVE SUSTAINABILITY, THE WORLD COMMUNITY MUST WRITE A NEW CULTURAL NARRATIVE THAT IS SPECIFICALLY DESIGNED FOR LIVING ON A FINITE PLANET, A NARRATIVE THAT OVERRIDES HUMANITY’S OUTDATED EXPANSIONIST TENDENCIES.”¹

-  **Coevolving with the Biosphere requires an understanding of and willingness to abide by the universal laws of biology, chemistry, and physics.**
-  **Only science can reveal the workings of these universal laws.**
-  **The war on science will impede investigation of the universal laws.**


THE NINE INTERACTIVE GLOBAL CRISES THAT THREATEN THE BIOSPHERE HAVE ALL WORSENERD, SO THE PROBABILITY OF CATASTROPHES HAS INCREASED.^{2,3}



-  I am assuming that human thought processes have worsened because, in the United States, polls show increased skepticism about global climate change science.
-  Since the crises are interactive, the probability is that the catastrophes will not happen one at a time but rather will occur as multiple crises.
-  Recent catastrophes have not changed “business as usual” enough to diminish any of the global interactive crises.






HUMANKIND HAS NOT DEVELOPED ABILITIES OR MENTAL PROCESSES TO RESPOND TO OR EVEN IDENTIFY LONG-TERM PROBLEMS UNTIL RECENTLY. HUMANITY IS NOT PREPARED FOR PROBLEMS THAT ARE DISTANT IN TIME AND SPACE (E.G., FUKUSHIMA NUCLEAR CATASTROPHE FOR MOST OF THE WORLD). SOCIAL EVOLUTION COULD PREPARE HUMANKIND TO RESPOND EFFECTIVELY TO GLOBAL CRISES BUT HAS NOT YET DONE SO.


- 🌍 For example, “*Humanity is now the dominant force driving changes of Earth’s atmospheric composition and thus future climate.*”⁴
- 🌍 Rene Jules Dubos⁵ evaluated the consequences of the application of scientific evidence to all aspects of the human condition. The use of reason and scientific evidence has come under attack in the 21st century and the latter part of the 20th century.


 **HUMANITY'S ABILITY TO COPE WITH LONG-RANGE PROBLEMS IS UNDERMINED BY THE INCREASING PERVASIVENESS OF INDIVIDUALISM.**

-  ***“ . . . the ethic of individualism elevates self-fulfillment over social obligations.”⁶***
-  **Excessive individualism not only undermines relationship stability, but also weakens the social contract upon which civilization is based.⁷**

EVEN PEOPLE WHO ACCEPT THE SCIENTIFIC EVIDENCE FOR CLIMATE CHANGE HAVE RESISTED MAKING PERSONAL LIFESYTYLE CHANGES.


-  One of the possible explanations for this resistance is the “When on the *Titanic*, you might as well go first class” viewpoint.
-  Another possible explanation is the failure to grasp how rapidly irreversible change can occur.
-  Denying scientific evidence in the absence of contrary evidence is an outright rejection of reason.


 ***“BIOLOGIST RACHEL CARSON FIRST CALLED OUR ATTENTION TO THESE MANIFOLD DANGERS [HAZARDOUS CHEMICALS] A HALF CENTURY AGO IN HER 1962 BOOK, SILENT SPRING. IN IT, SHE POSITED THAT ‘FUTURE GENERATIONS ARE UNLIKELY TO CONDONE OUR LACK OF PRUDENT CONCERN FOR THE INTEGRITY OF THE NATURAL WORLD THAT SUPPORTS ALL LIFE.’”⁸***


 ***“Recent studies indicate the U.S. and world could rely 100 percent on green sources within 20 years if we dedicate ourselves to that course.”⁹***


THE TWO PRIMARY BATTLES IN THE WAR ON SCIENCE ARE CLIMATE CHANGE AND EVOLUTION. WHY IS THIS CONFLICT HAPPENING?


- 🌍 All living species in the present Biosphere, including *Homo sapiens*, are products of the same evolutionary selective forces.
- 🌍 Humanity's technological progress, a result of scientific research, has resulted in the illusion that the universal laws do not apply to *Homo sapiens*.
- 🌍 The consequence is an unsustainable lifestyle that, if continued, will result in catastrophes caused by resource scarcity as a result of exceeding the Biosphere's regenerative capacity.
- 🌍 The cultural meme responsible for this crisis is economic growth exacerbated by population growth.


 ***“ANY SCIENTIST VENTURING INTO THE PUBLIC REALM, NO MATTER HOW RESPECTED BY HIS OR HER PEERS, IS TREATED LIKE AN INTELLECTUAL VARMINT BY POLITICIANS, SPECIAL INTERESTS, AND ARM-CHAIR CRITICS, WHO IMMEDIATELY OPEN UP WITH A VOLLEY OF PREFABRICATED REBUTTALS AND PERSONAL ATTACKS.”¹⁰***

 This period in history is not a good era for reason, reasonableness, or scientific evidence.

 ***“We live in an Era of Willful Ignorance. It is not only acceptable; it is fashionable to throw scientific caution to the wind.”¹⁰***

 **“CLIMATE CHANGE DENIERS SERIOUSLY IMPEDED THE DEVELOPMENT OF RATIONAL POLICIES TO DEAL WITH WHAT THE BEST SCIENCE TELLS US IS HAPPENING WITH OUR CLIMATE, A DISTORTION THAT MAY PROVE TO HAVE FATAL CONSEQUENCES.”¹¹**





 *“This antiqueness is a sure sign that denier arguments are based on attitude, not data. Deniers all display what can only be called willful ignorance.”¹¹*

 *“Nobel Laureate economist Paul Krugman has described the denier’s behavior in the debate leading up to the passage by the U.S. Congress of the Waxman-Markey climate-change bill. . . .”¹¹ “If you watched the debate . . . you didn’t see people who’ve thought hard about a crucial issue, and are trying to do the right thing. What you saw, instead, were people who show no sign of being interested in the truth. They don’t like the political and policy implications of climate change, so they’ve decided not to believe in it – and they’ll grab any argument, no matter how disreputable, that feeds their denial.”¹²*

HOW CAN HUMANITY COPE WITH NINE INTERACTIVE GLOBAL CRISES WITHOUT SCIENCE, REASON, AND WISDOM?

- ① **As the human population grows and resources per capita decline, how can the “common good” be determined without the evidence and knowledge generated by science?**
- ① **The development of new antibiotics to control “superbugs” that are evolving in developing countries, such as India, is necessary but not a fix where “Poor hygiene has spread resistant germs into India’s drains, sewers and drinking water, putting millions at risk of drug-defying infections.”¹³ Science and reason are essential to reduce risks in such circumstances.**
- ① **How can humanity cope with long-term nuclear catastrophes, such as the Fukushima Daiichi power plant,¹⁴ without science, reason, and wisdom?**

IN THE ERA OF RAPID CLIMATE CHANGE JUST BEGINNING, HOW WILL HUMANKIND FARE WITHOUT THE EVIDENCE AND INFORMATION PROVIDED BY MODERN SCIENCE?

-  For example, *“If climate change continues on its course, the number of heat-related deaths will rise . . .”*¹⁵
-  *“In a stark call for renewable energy . . . IEA boss Maria van der Hoeven wrote in The Guardian newspaper that the world is on track to warm by 6 degrees C by the end of the century, when it needs to rein in the increase to 2 degrees C.”*¹⁶
-  A 2 degree C increase is the line between dangerous and very dangerous.¹⁷
-  Even staying at or below a 2 degree increase leaves a population/resource problem.



EXPONENTIAL HUMAN POPULATION GROWTH IS SUICIDAL ON A FINITE PLANET WITH FINITE RESOURCES.

- 🌍 Population analyst Paul Ehrlich states: *“The optimum population on Earth — enough to guarantee the minimal physical ingredients of a decent life to everyone — was 1.5 to 2 billion people rather than the 7 billion who are alive today or the 9 billion expected in 2050. . . .”*¹⁸
- 🌍 It is difficult to impossible for most women living in misery to obtain Depo-Provera a birth control method that needs only be taken 4 times per year.¹⁹
- 🌍 *“ . . . 100,000 women annually die in childbirth after unintended pregnancies. Six hundred thousand babies born to women who didn’t want to be pregnant die in the first month of life.”*¹⁹
- 🌍 These tragedies are just a few that result from suppression of science and reason, and the number will increase as the planet becomes more crowded and unpredictable.
- 🌍 At the global level, *“World population needs to be stabilised quickly and high consumption in rich countries rapidly reduced to avoid ‘a downward spiral of economic and environmental ills’ . . .”*²⁰



“THERE GO THE PEOPLE, AND I MUST FOLLOW, FOR I AM THEIR LEADER.”

Benjamin Disraeli, England's Prime Minister¹⁰

- ④ **Humanity is united by a desire for a quality life for its children, grandchildren, and their descendants.**
- ④ **Beyond the basics of food, shelter, and clothing, a quality life (i.e., satisfaction with one's circumstances) is not determined by material goods but rather by leisure time, educations, social interactions, and the like.**
- ④ **On a finite planet with a finite Biosphere, limits exist to renewable resources regeneration upon which the human economy depends.**
- ④ **Learning to live within limits is the first requirement toward a quality life.**
- ④ **Nurturing the Biosphere for optimal regeneration of renewable resources is the second requirement.**
- ④ **An equitable sharing of resources to avoid civil unrest and resource wars is the third requirement.**

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