

Book Proposal

Title: Time's Up

Sub-title: Can Science Save Us?

Author: Denny Taylor, Ed. D., M. Sc., M.A.

Intended readers: Written for global decision makers and people in civil society, *Time's Up: Can Science Save Us?* is unique in scope and scale. There are many books on the impact of climate change, the loss of biodiversity, the breakdown of multilateralism, and increased authoritarianism, isolation, and nationalism, but there are no books that have achieved an all-encompassing transdisciplinary perspective incorporating evidence-based data from the physical and social sciences, and the humanities. In *Time's Up* Denny Taylor calls *for* ambitious social action, and she calls *out* the political and private sectors for lacking the will to act and encourages people in civil society to use the findings of science to achieve the transformative changes urgently needed to ensure life on earth is sustainable.

Denny Taylor's Qualifications to Write the Book

Biographic Note: Denny Taylor's research is the foundation of laws, policies, and programs on five continents in more than 140 UN Member States. Her research is the basis of initiatives by governments, UN Agencies, NGOs, academia, the private sector, and by teachers and parents worldwide. Her c.v., which is available on her website, is testimony to her lifelong commitment to engage with researchers across the physical and social sciences, and with scholars in the humanities, to work together to push down the risks and shore-up the future for humanity. Her mission is to participate with many others in the expansion of scientific thinking in human societies, and to deepen our understandings of the great transformations that must take place to ensure the survival of humanity.

Honors and Awards

Distinguished Alumni Award, Columbia University, 2019

Distinguished Scholar Award, NCRL, 2019

Nominated for the Nobel Peace Prize by 8 distinguished researchers in R1 universities on three continents, 2019. (For the origination of the concept of "family literacy," developed at Columbia University in her doctoral research -1977-1980 – which is now ubiquitous throughout the world in projects and initiatives to increase literacy, achieve the SDGs and enhance peacebuilding.)

Nominated for the Nobel Peace Prize by distinguished researchers, 2018

Invited Presenter, *Planet Under Pressure Global Conference on Earth System Science*, London, 2012

Four peer reviewed transdisciplinary research papers were accepted for presentation at the 2012 *Planet Under Pressure Global Conference on Earth System Science*:

1. Integrating The Social Sciences and Humanities in Earth System Science to Address the ICSU/ISSC Grand Challenges
2. Unpackaging Human Enterprise and Communicating With The Public;
3. The Great Acceleration: The Anthropocene, Kicks, Dead Zones and Bridging The Abyss;
4. When The Temperature Rises More Than 2 °C What Will We Do?"

Invited Participant at the Planet Under Pressure Conference in constructing the State of the Planet Declaration - IGBP

Invited Participant at the ICSU/ISSC Visioning Consultation Forum, UNESCO, Paris, 2012

ISSC, IUBS, SCOPE, UNESCO, UNU, WMO participated in the 2012 Visioning Consultation Forum that resulted in the publication of the *Grand Challenges Report*, which is a consensus list of the highest priorities for Earth system science that would remove critical barriers impeding progress toward sustainable development. More than 200 individuals and 46 institutions reviewed the draft of the *Grand Challenges*.

Invited Participant, ICSU/ISSC On-Line Global Visioning Consultation by World Renowned Scientists, 2009

Inducted Reading Hall of Fame, 2004.

Nominated, Pulitzer Prize, 1997

Nominated, National Book Award, 1997

Awarded Ninth Annual Mina P. Shaughnessy Prize, MLA, 1989

Doctoral Degree: Columbia University, 1981.

Scholarly Writing: 18 books (+100,000 sold); 25 peer-reviewed articles; 18 chapters; 8 reviews and forewords; 3 guest editorials: 10 theoretical models

International and National Conferences: 50 keynotes; and more than 100 presentations.

Academic Positions:

Professor of Literacy Studies: Hofstra University, 1998-2013 (Emerita, 2013 -)

Department Chair: 1998-2004; Doctoral Director: 1998-2010; Director

Director of the International Center for Everybody's Child: 2005 - 2013

Outline: Time's Up: Can Science Save Us?

THE PURPOSE OF THIS BOOK is to call out governments for their failure to act, and to encourage the world's people to take bold and transformative action to push down the life-threatening risks to all life forms on the planet.

Time's Up: Can Science Save Us? addresses this apathy - which in and of itself is a global catastrophe - and argues that when governments fail, we the people must shoulder the responsibility for transformative action to navigate our highly unstable and unsustainable world. The climate has changed, the temperature is rising, and none of us can go back. *Time's Up* provides the scientific knowledge we need to *step up* and prepare for future shocks and disasters.

We are in the midst of a global crisis the severity of which is being felt in every country in the world. And yet, many people are unaware of the severity of the threats and how challenging it will be to overcome them. We need to mobilize now to save the planet for our children and grandchildren, but first we must make sure we have done our homework. and learn as much as we can about the grand challenges that face humanity.

Time's Up: Can Science Save Us? provides a broad sweep of the root causes and systematic barriers to long-term ecological sustainability and human survival. It is based on 21-years of transdisciplinary research that draws on the physical and social sciences and the humanities in response to the overwhelming scientific evidence that people are changing the planet – from geology to climate. Governments must act. Reducing carbon dioxide (CO₂) alone will not be enough to reduce our transgression of planetary boundaries that places us all at grave risk.

At the 2021 United Nations High Level Political Forum (HLPF) there was wide recognition and much hand wringing about the failure of the UN Member States – both governments and the private sector - to reduce the existential threats that the Sustainable Development Goals (SDGs) address. Since the first UN HLPF in 2015 the forums have focused on the progress that individual countries are making in the achievement of the 17 SDGs. Member States present Voluntary National Reviews (VNRs) and give glowing reports of the SDG initiatives they are proposing to reduce the threats to the citizens of their countries and to people around the world. But by 2018 many participants at the HLPF were uncomfortably aware that the VNRs were aspirational and that no significant actions had been taken. As one participant stated at the 2019 HLPF “the voluntary reviews are more like travelogues” than serious accounts of initiatives being taken to reduce the existential risks to humanity.

This disillusionment was less evident at the 2020 HLPF when the global decision makers who attended handed off to young people and children the state of the planet and the responsibility for saving humanity. “Youth Rising” became the rallying cry of representatives of the UN and governments, and young people did step up. Youth were passionate and articulate, but their elders who encouraged them did not provide the support that was needed and there was a lack of follow-through. Then there was also COVID.

At the 2021 HLPF the idea that youth would save their elders had vanished. Participants argued that we must act smartly to leverage scientific knowledge and to build community resilience, while at the same time the Coordination Mechanism of the Major Groups and Other Stakeholders (MGoS) wrote that the 2021 HLPF had “failed to come up with bold and transformative recommendations for action ... during this world crisis”.

Put bluntly, governments have reneged on their collective responsibility for the transformative actions promised at the 2015-2020 HLPFs. Still worse, at the 2021 HLPF there was wide recognition that on each of the 17 SDG indicators, all UN Member States had regressed to 2013 levels when the SDGs were first proposed. COVID has certainly contributed to this backsliding, but so has the reprehensible global lack of political will to save the planet for our children and grandchildren.

In *Time’s Up* Taylor takes the reader back to the 2009 and 2010 global visionings and consultations on the state of the planet that were organized by the world’s most renowned scientists, and in which she participated. Writing in a genre that makes science as compelling as an engrossing novel, she follows the global visionings to the 2012 Planet Under Pressure Conference in which she had four scientific papers accepted for presentation.

Taylor then takes us to Rio+20 in which 150 Heads of State participated and produced an outcome document that activists in civil society called the longest suicide note in history. Filling in the social and economic gaps along the way, *Time’s Up* lands firmly at the United Nations High Level Political Forums and the efforts of UN Member States to take transformative action. *If we are to prepare for rapid and unpredictable change in the years ahead our participation is critical. Time’s Up* pushes aside the propaganda, dismisses the ideological, and presents to the public the scientific endeavors that have exposed the existential risks that politicians and corporations have kept hidden or ignored. The book documents:

1. The courageous and brilliant work of scientists who are creating frameworks to sustain all life on the planet and to overcome the existential risks that are making the planet uninhabitable;
2. The complex relationships between our physical and social worlds from the perspectives of the social and physical sciences, and from insights gained from the humanities, including the defining influences of language and consciousness;
3. The failed attempts by governments attending the UN High Level Political Forums on Sustainable Development to galvanize UN Member States to undertake transformative action to save humanity;
4. The vision and priorities of the Major Groups and other Stakeholders (MGoS) participating in the UN HLPFs who are critical of UN Member States for their “failure to respond to the call of the people in times of crisis” and are calling for “bold and transformative action” to fulfill the promise of the Sustainable Development Goals and protect the future of humanity;
5. The findings of the 2021 IPCC Report and spotlights *what* we the people *can do*, at home, in our communities, in our countries and around the world to ensure that the planet is habitable in sustainable ways so that our children and grandchildren survive and thrive.

SECTION ONE: Envisioning New Institutional Frameworks to Change the Global Impact of People on the Planet

1. A tremendous message from ICSU is received
2. We learn of risks too high to take
3. The global community of Earth systems scientists participate in an on-line visioning
4. ICSU presents the Grand Challenges for institutional reform
5. The great acceleration is supported by scientific evidence
6. The rapid increase of atmospheric carbon dioxide and the rise in the global mean temperature
7. The importance of social science and humanities participation

8. The revolutionary establishment of the first global environmental change research programs

SECTION TWO: Engaging Social Scientists in Navigating the Anthropocene

9. 559 experts from 130 countries served as authors, and more than 2,500 reviewers responded to the evidence
10. Society may be lulled into a false sense of security by smooth projections of global change
11. Systemic institutional change shakes up the academy
12. Unsettling debates about differences, diversity, and oddity
13. There are complaints of “plain vanilla” in the development of the Earth systems research for the Grand Challenges
14. Observation and models are essential to transdisciplinary research

SECTION THREE: Engaging Scholars in the Humanities with Earth System Scientists In Navigating the Anthropocene

15. The humanities are considered important to the development of models of non-linear dynamics and thresholds
16. The metaphoric imperative is introduced to Earth system science
17. The metaphoric imperative changes the question and we unpackage our lives
18. What will happen when the temperature increases by more than two degrees centigrade?

SECTION FOUR: Wittgenstein reminds us, “The whole planet can suffer no greater torment than a single soul”

19. The misery of the many and the wealth of the few
20. Climate change and the expropriation of people coincide and collide
21. What it is to inhabit the world?
22. The environmental and social cost of coal
23. The health impacts of burning coal

- 24. Coal ash pollution from coal-fired power plants contains significant amounts of cadmium, chromium, arsenic, mercury, lead, lithium, cobalt, selenium, radium, and beryllium
- 25. In the US alone there are 737 coal ash storage ponds, that are 95% unlined, containing 2.5 billion tons (07-29-2021) of coal ash located near or in aquifers, wetlands, and seismic fault areas
- 26. Kingston Fossil Fuel Plant, Tennessee, U.S.A.
- 27. The harsh deprivations in the mining of fossil fuels link our use of coal with the rapid increase of atmospheric carbon dioxide

SECTION FIVE: Fukushima: Gathering Car Batteries When the Temperature Rises

- 28. What happened at Fukushima?
- 29. If we cannot provide an adequate response to disasters now, what will happen when the temperature increases by more than two degrees centigrade?
- 30. Official reports from Japan made public in the aftermath of Fukushima
- 31. ORNL Simulations of Station Blackout (SBO) Result in Core Melt at Browns Ferry
- 32. Fukushima, Browns Ferry, and the NRC: An Allegory for the Profound Meaning of What Will Happen When the Temperature Rises on a Planetary Scale
- 33. It took a cataclysmic nuclear accident to uncover the documentation produced by the NRC which reveals that the official discourse of decision makers is highly *persuasive* and extremely effective at *obfuscating scientific knowledge*
- 34. Imperative for scientists, the public, and those who hold power to rethink and reimagine what will happen on a planetary scale when the temperature rises and human societies are left high and dry or lost beneath the sea

SECTION SIX: The Unearthing of Human Enterprise

- 35. Complexities *in situ* of our social, biological and physical worlds

36. Reductionism works against human survival – we need to shift to an understanding of ecological interdependencies with unique properties that cannot exist when taken apart
37. Growing international acknowledgment of the inseparability of the climate change crisis and mass biodiversity loss
38. Conceptual metaphors to re- vision and revise our understandings of human enterprise
39. Anthropogenic problems of different scale and intensity
40. The plight of bees, bats, birds, and frogs, and what is happening to these vulnerable populations
41. In 2021 the biodiversity on 75% of the surface of the planet is calculated to be significantly altered”; 50% live coral has been lost since 1870; there has been a 20% decline in native species; and 25% of all animal and plant species are threatened
42. All relationships are dialectical - Nature is dialectical.
43. Our own human bodies are sites of ecological interdependency and mutualities
44. The importance of cooperation in nature that is critical to ecological interaction is known as mutualism - all life is highly connected
45. The outcomes of climate change on plants depends on the stresses on these dialectical relationships.

SECTION SEVEN: Insights from the COVID Pandemic – Politics, Ideology and Propaganda Versus Science

46. The unprecedented COVID crisis reveals that many people are more influenced by politics, ideology and propaganda than science and the fact that millions of people have died and millions more are dying
47. COVID has taught us to follow the data to keep us safe
48. The COVID crisis provides many insights about how unprepared human societies are to respond to the multiplicity of existential risks confronting them

49. COVID reveals that all human societies have weak infrastructures and a serious lack of capacity to cope with internal and external shocks – future pandemics, regional and global conflicts and a step-change in the climate
50. COVID cannot be used as an excuse for the lack of political will for transformative action - a sincere game-changing response to the 17 SDGs is possible
51. COVID underscores the importance of universal social protection and equal access to vaccines
52. COVID underscores that in this and future pandemics human survival depends on funding financially challenged countries so they have the health tools and access to the mRNA technologies as well as the scientific knowledge and technological capacities and capabilities for vaccine production
53. An effective response to the COVID pandemic sets the path for us to move forward on other risks - if we can overcome COVID then we can overcome climate change and other existential risks

SECTION EIGHT: Risks can be Reduced if We Act Now to Prepare for Future Shocks and Disasters

54. AI disinformation and propaganda result in social and political failure and the possible extinction of the human species
55. New programs of action are urgently needed, and collective voices are critically important - we can play a significant role through stepped up participation
56. We must be more forthright, more candid and more direct about the trajectory of global threats to humanity – we are going backward, and we must recognize that
57. Misuse of information, fake news, conspiracy theories “post truth” can be exposed and debunked
58. Intensification of marginalization of groups can be reduced
59. The tangled webs of influence that are the roots of radicalization must be understood
60. Sustainable development depends on continuous local, regional and global efforts to maintain coherence and cooperation and ensure long-term coexistence
61. Armed conflict is the most devastating polluter of the planet

- 62. Peace building that lasts generations is essential for the SDGs to be achieved
- 63. Civil society can provide an early warning system – a crucial role in making sure that there is better engagement - creating more moments and opportunities to establish concrete transformative change

SECTION NINE: Four Lessons Learned on Human Survival from the Peculiar Case of Asteroids and Elephants

- 64. There is definitive proof that governments do act *if* the rapid response initiatives create financial opportunity and enhance global dominance
- 65. Governments are prepared to obfuscate the life-threatening catastrophes occurring that create the conditions for the demise of a million species including our own to protect their self-interests
- 66. The UN HLPF Declarations have proven to be aspirational, and few actions have been taken
- 67. Sustainable development is dependent on sustaining peace that lasts generations and on continuous local, regional and global efforts to maintain coherence and cooperation and ensure long-term coexistence
- 68. Three key elements are essential: 1) prevention, 2) development, and 3) sustainability - that are locally led, regionally supported and internationally funded

SECTION TEN: Finally, We are at a Profound Moment of Transformation and What We do Now will Determine the Future of Humanity

- 69. We the people, faith leaders, non-profits, voluntary networks, UN agencies, local, national and regional governments must work together
- 70. Our lives depend on our collective responsibility to sustain life on earth and to do so with generosity, recognizing our obligation
- 71. Responding to the life-threatening risk will take all of us working together - neither governments nor civil society can do it on their own

- 72. Together, all sectors must address global challenges, transforming boundaries, and embracing equity in global solutions**
- 73. Old structures and institutions that we grew up with are soon to be obsolete**
- 74. The UN Sustainable Development Goals provide the best evidence-based framework that is based on science for local, national, regional and global actions**
- 75. What we can do in response to these extreme times and how we can do it?**
- 76. What sacrifices and heroism will be asked of us?**
- 77. How does informal multilateralism hold the key?**