

Extreme Futures and Technology Forecasting **Report of the 22 October 2016 Workshop, San Francisco**

By Dr. Bob Krone and Salena Gregory-Krone

Introduction

David J. Kelley, a Microsoft Most Valuable Professional and futurist with experience as a team manager for engineering organizations dealing with cutting-edge technologies and corporate strategy, conducted this “Extreme Futures and Technology Forecasting Conference and Workshop” in San Francisco’s Microsoft Reactor Office on October 22, 2016. This conference is part of his two-year research program to gather data for the next *Extreme Futures Technology and Forecasting Manual* to be published in 2018. That book will describe trends that predict the future of technology in artificial intelligence (AI), artificial general intelligence (AGI), augmented reality, virtual reality, biotechnology, Space, and personal technologies. Readers will find details at efft.transhumanity.net/.

The overall goal of the program is to create forecasting technology trends across the board which decision makers, futurists, and technologists can use as bases for technology strategy position and research investments. This short report provides *Journal of Space Philosophy* readers a summary of the presenters and their subjects.

Alexander Rose, Long Now Foundation Executive Director and Clock Manager

Alexander Rose presented on projects of the Long Now Foundation, which was established in 1996, to foster long-term thinking and responsibility in the framework of the next 10,000 years. That is unprecedented breakthrough thinking that uses a time scale equivalent to the estimated time of human civilization. Alexander catapulted from his Carnegie Mellon Industrial Design degree into the world of futuristic ideas, concepts, and machines. He reviewed historical examples of long-term thinking throughout history, then described the current major project of the Long Now Foundation – the 10,000 Year Clock now under construction. That clock was designed by W. Daniel (Danny) Hillis, co-founder of the Long Now Foundation, who possess an unmatched career of invention, science, engineering, university teaching, and authoring. Danny Hillis created the principles for the design of things that last over centuries. They are longevity, maintainability, transparency, evolvability, and scalability. The clock will be constructed in 300 feet of rock in Western Texas and have a never-repeating melody generator that rings the clock’s chimes. Readers will want to access the website for details of the clock and other Long Now Foundation projects (longnow.org).

Dr. Stuart Mason Dambrot, AGI Society, Brain Machine Interface Consortium

Dr. Dambrot’s presentation was titled “Exocortical Cognition: A Transdisciplinary Framework for Augmenting Human High-Level Cognitive Processes.” His subject falls into the AGI and neuroscience disciplines. He defines Exocortex as a hypothetical synthetic organ or external computational system that augments high-level neurobiological cognitive processes. He summarized the neuroscience and quantum

physics factors of the functions of the human brain, futurology methods, and research updates – specifically cumulative resonance, which is one of his expertise areas of research.

Dr. Chris Hables Gray (chrishablesgray@stanfordalumni.org)

Dr. Gray's subject was "Essential Tech Threats (to Civilization and Humanity)." He made the point that there are more engineers and scientists active now than in all the rest of human history; that they have better technology, and as we master part of nature, our ability to do so increases, as do the unintended consequences. He tracked historical trends of weapons lethality, species extinctions, world populations, and computer power; he then reviewed the existential technological risks to civilization of nuclear technology, biological weapons, nanotechnology, chemical weapons, climate change, pandemics, future shock system collapses, and multiplier effects of those risks interacting, with very damaging and uncertain outcomes. He talked about the difficulty of collaboration to reduce the risks, and reviewed a Global Catastrophic Risks Survey. His summary conclusion was "that we must become involved in political and social change based on pragmatism, empiricism, and basic democratic values."

Keith Wiley, Fellow, Brain Preservation Foundation (www.brainpreservation.org)

His presentation title was: "Brain Preservation as a Medical Treatment for Life Extension: Current Status and Future Prospects." The purpose and goal of brain preservation is to postpone a terminal condition until medicine and technology can heal the affliction in question. At this time, cryonics is the only remotely viable option yet devised. He described cryonics challenges, serial section mind uploading, and whole brain emulation research. He stated that the ultimate goal of brain preservation is to offer it as an end-of-life procedure offered in hospitals for otherwise terminal cases.

Cameo Wood (www.cameowood.com)

Ms. Wood presented "AI Revolutions." She discussed both sides of the current debates on the future of AI: its benefits to humanity and the fears that it could replace or destroy humanity.

Dr. Natasha Vita-More, Chair of Humanity, Inc. and Professor at the University of Advancing Technology in Arizona (Natasha@natasha.cc)

Dr. Vita-More has an extensive career of research, teaching, and publications in the Transhuman Movement, ageless thinking, whole body prosthetics, the central nervous system, and brain research – specifically memory, which has brought her global recognition. The title of her presentation was "Opportunity." Her overall message was that we have the opportunity to pursue major human objectives in the social awareness area concentrating on radical life extension; open source knowledge for all; ageless thinking; regenerative generations; human rights to augment the body, brain, and mind; and continuing education and governance to facilitate those goals.

Steven A. Garan, Research Fellow, Department of Integrative Biology, University of California, Berkeley; Lawrence Berkeley National Laboratory, Center for Research and Education on Aging, Trans Time, Inc.

Steven traced the history of life expectancy for different societies, ranging from 45 years in 1840 to the mid-80s in 2010; he then answered the question of “Why Cryonics?”.

Robert P. Wasley, Transnationalism (Transitionalism@gmail.com; website: www.transition.com)

Robert P. Wasley is the author of the book, *Meaning, Being and Transition: Toward the Formation of a New Worldview* (2nd ed., 2016). His presentation was titled “Transitionalism: A Holistic Program for Positive Change.” A summary follows:

Our descendants first spread through, then out of, Africa to dominate all continents and oceans of the world. Humanity’s next phase of migration has already begun with the landing on the moon, robotic exploration of Mars, and, in time, travel to the stars.

The journey to this point has been and continues to be difficult. The sense of imminent crisis leads many to reflect on how humanity stands at a crossroads. Anxiety, anger, and cynicism express a lack of confidence in the current religious and ideological framework to meet the challenges facing us, leading to a widespread call for change. How do we tackle the challenges here on Earth and avoid taking them with us as we colonize the cosmos?

Transitionalism is a holistic worldview and practical path by which society and individuals strive to improve themselves and each other in order to create a better future for everyone, as well as for the environment. From this perspective, transitionalism identifies two primary sources for humanity’s current difficulties. First, the insistence in applying solutions used for past problems – broadly speaking religion and liberal ideology – to current and future challenges without recognizing that the conditions that made those solutions successful are dramatically different from what is needed now. The second is the always-present challenge of being endowed with a brain optimized for a hunter-gatherer way of life, meaning that our evolutionary animal legacy still retains a powerful influence on how we think, feel, and act; often in ways that are inapplicable to how we live now or will live in the future.

As a worldview, transitionalism is non-theistic, non-liberal, future-oriented, and rationalistic. In this way, transitionalism stands beyond the current dichotomies of individual vs. collective, religious vs. secular, artificial vs. natural, liberal vs. conservative – to being a synthesis; establishing the foundation for a new era of social, individual, and environmental integration.

“A better society makes better individuals; better individuals make for a better society” – embodies transitionalism’s agenda for positive social change by combining principles and practice to prepare individuals and society to build better lives while positively engaging present and future challenges.

Our success as a community depends on being able to change the reality of people's lives for the better, which is something we can do only if we work together. The transitionalist community is looking to work with other individuals and organizations by forming alliances to effect substantive positive social change by employing a holistic approach to solve, not simply manage, social ills. For individuals, there are recommended programs and practices to cultivate self-betterment, combined with community participation and activities.

It is within our control to answer the question: Where we go from here? Only by turning our focus towards the challenges of the present and the possibilities of the future with a holistic worldview can we free ourselves to hope, dream, and achieve what can be.

Adair Daniels, Futurist

His presentation was titled: "Space-Based Solar Power and Server Sky." He presented the extreme future of the global Space scientific community's long research into capturing the power of the Sun with orbital technology capable of wireless transmitting to every community and citizen on Earth, with it being just as easy to get it to Zimbabwe as the United States.

Dr. Bob Krone and Salena Gregory-Krone, Kepler Space Institute (KSI), (www.keplerspaceinstitute.com)

The Krones' presentation was titled "Future Technology via Moral Leadership for Humanity." They summarized the KSI education and research purposes, goals, and projects for the group and offered the services of the *Journal of Space Philosophy* to them. This article is the first tangible one. They described the KSI Research program started into Human Pathologies and Space. It is relevant to the interests of this group. Its hypothesis is that "Future technology will have the capability to solve humanity's needs, IF those capabilities are universally deployed by moral and ethical leadership." Historically humanity has evolved in both positive and negative directions, for progress or into catastrophe. Human extinction has been avoided, but will be increasingly probable if random evolution is the choice. Smarter people, smarter machines, and human-designed and supervised extreme technologies can deliver all the resources humans need on Earth, or in Space, in perpetuity, within the Law of Space Abundance. KSI's leaders believe that future technology can avoid the historic cycles of humanity's progress being reversed by pathological leadership.

David J. Kelley, Principal, AGI Inc., TNC Chair, Microsoft MVP

David Kelley, the organizer and chairman of this Extreme Futures and Technology Forecasting conference and workshop, summed up the day of presentations and the overall goals for this two-year research program to gather data for the next *Extreme Futures Technology and Forecasting Manual*, to be published in 2018.

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Editor's Notes: Space has forever been the laboratory for extreme future thinking. A large part of that thinking came to the world in fiction stories, films, and books. Over time, many fictional concepts and ideas have been converted into reality. We were privileged to attend this conference and workshop, which has already facilitated new interactions between Kepler Space Institute people, associates, and those working with David Kelley. Learning more about both the potentials and the threats of accelerating extreme technology movements reinforces our hopes that thinking and controls will focus on the need for the consequences to build universal reverence for human life within ethical civilization, which is the basic KSI Space philosophy. **Bob Krone.**