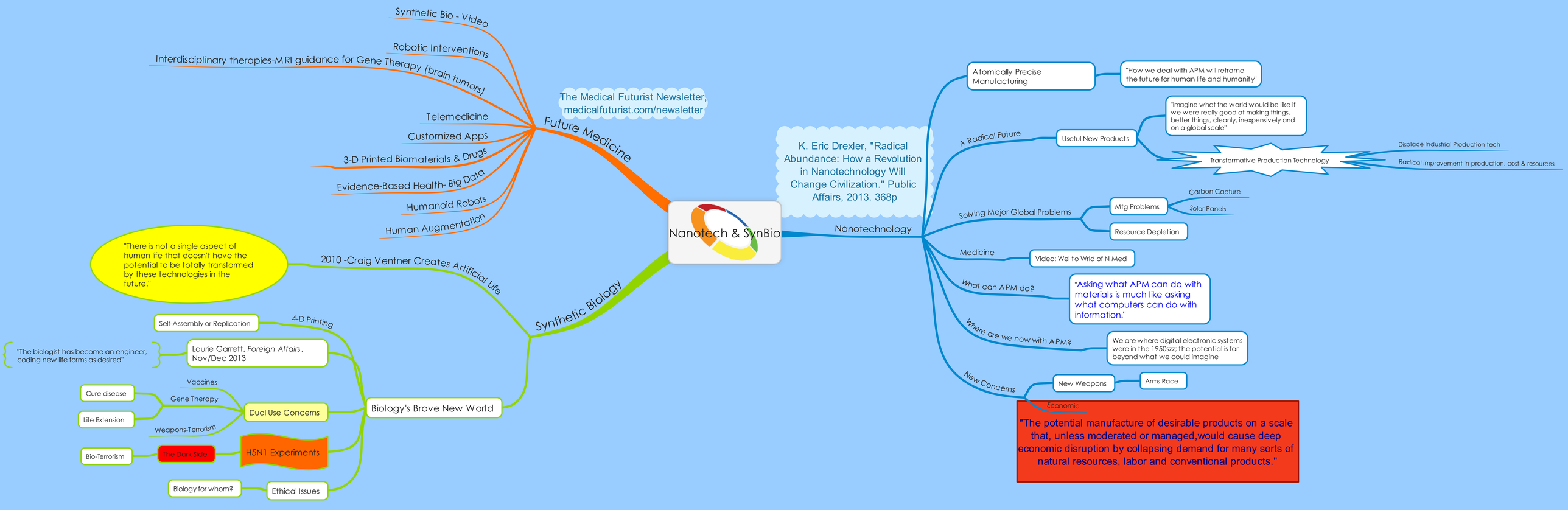
Nanotech & SynBio
Future Medicine
The Medical Futurist Newsletter, medicalfuturist.com/newsletter
Synthetic Bio - Video
Robotic Interventions
Interdisciplinary therapies-MRI guidance for Gene Therapy (brain tumors)
Telemedicine
Customized Apps
3-D Printed Biomaterials & Drugs
Evidence-Based Health- Big Data
Humanoid Robots
Human Augmentation
Synthetic Biology
"There is not a single aspect of human life that doesn't have the potential to be totally transformed by these technologies in the future."
2010 -Craig Ventner Creates Artificial Life
Biology's Brave New World
4-D Printing
Self-Assembly or Replication
Laurie Garrett, Foreign Affairs, Nov/Dec 2013
"The biologist has become an engineer, coding new life forms as desired"
Dual Use Concerns
Vaccines
Gene Therapy
Cure disease
Life Extension
Weapons-Terrorism
Bio-Terrorism
The Dark Side
H5N1 Experiments
Biology for whom?
Ethical Issues
Nanotechnology
K. Eric Drexler, "Radical Abundance: How a Revolution in Nanotechnology Will Change Civilization." Public Affairs, 2013. 368p
Atomically Precise Manufacturing
"How we deal with APM will reframe the future for human life and humanity"
A Radical Future
Useful New Products
"imagine what the world would be like if we were really good at making things, better things, cleanly, inexpensively and on a global scale"
Transformative Production Technology
Displace Industrial Production tech
Radical improvement in production, cost & resources
Solving Major Global Problems
Mfg Problems
Carbon Capture
Solar Panels
Resource Depletion
Medicine
Video: Wel to Wrld of N Med
What can APM do?
"Asking what APM can do with materials is much like asking what computers can do with information."
Where are we now with APM?
We are where digital electronic systems were in the 1950szz; the potential is far beyond what we could imagine
New Concerns
New Weapons
Arms Race
Economic
"The potential manufacture of desirable products on a scale that, unless moderated or managed,would cause deep economic disruption by collapsing demand for many sorts of natural resources, labor and conventional products."