

# ***Foresight, Morality, and Wisdom***

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# Foresight Studies

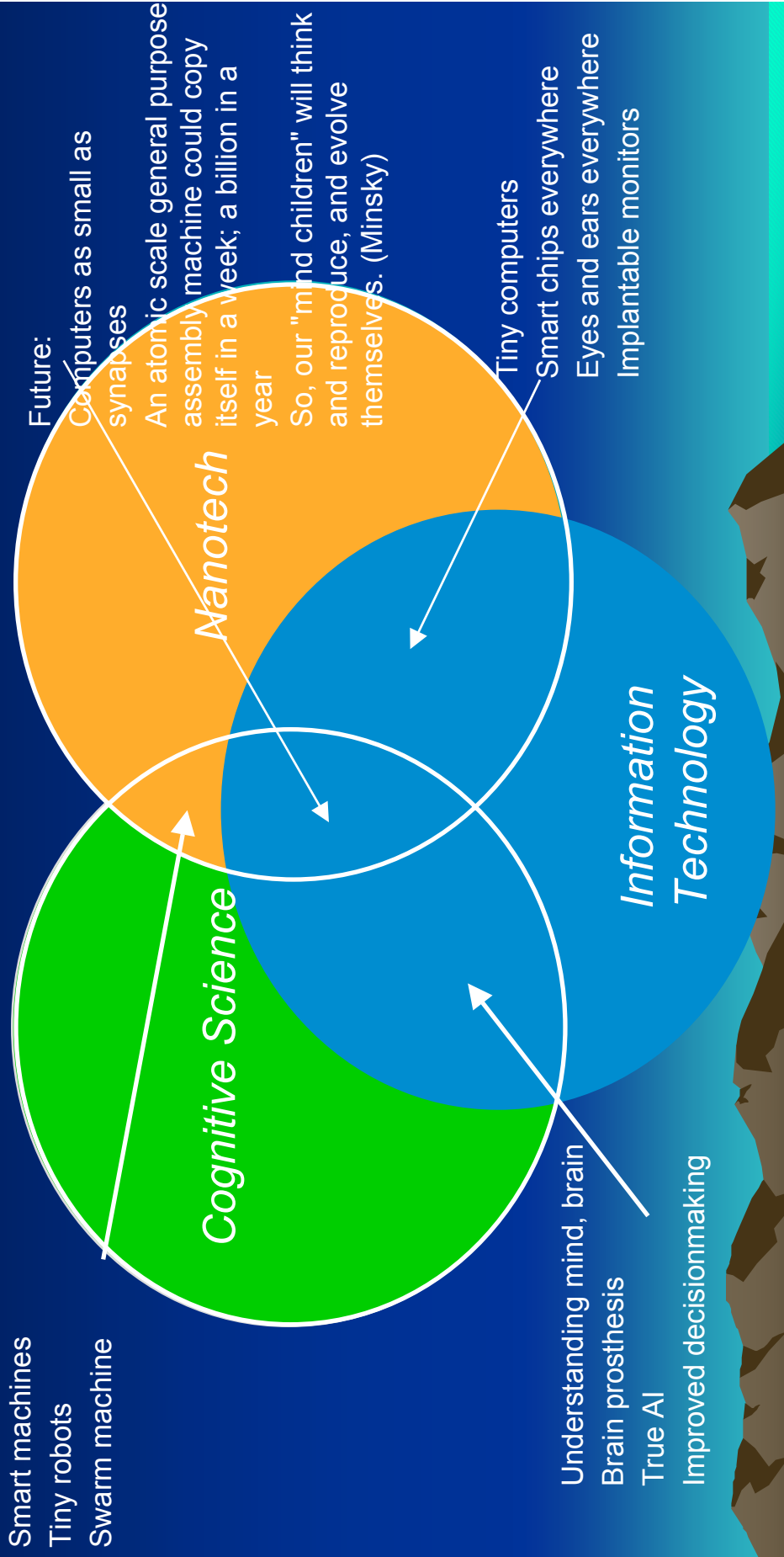
- *Accepted practice; nationally focused; designed to find competitive advantage*
- *Three limitations*
  - *The dimensions of the unknowable*
  - *The acceleration of science and technology*
  - *Conflicting and changing values*
- *Three proposals for improving decision making*
  - *Social epidemiology*
  - *A new science of decision making*
  - *An institution for global R&D*

# *Sources of Acceleration of Science and Technology*

- *Building on prior achievements*
- *Communications*
- *Synergy*
- *Instrumentation*
- *Globalization*



# Synergy: The Big One




# *Some Frontiers That Set the Stage*

- *Energy*
- *Computers*
- *Nano scale*
- *Genetics*
- *Information*
- *Medicine*
- *Pharmaceuticals*
- *Life extension*
- *Quantum processes*
  
- *Brain decoding*
- *Surveillance media*
- *Social epidemiology*

# Some S&T Dangers

- *SIMAD*
- *Privacy compromised: technology tracks everyone.*
- *Confusion over what is real*
- *Computers that evolve*
- *Super intelligent computer viruses*
- *Biological WMD*
- *Loss of biodiversity; altered varieties.*
- *Internet: drugs, dangerous tech*
- *More sophisticated military weaponry.*
- *Creation of new species (e.g. bacteria)*

# ***Ethical Conflicts***

- ***Conflicts of interest***
  - ***Conflicts of sovereignty***
  - ***Conflicts of responsibility***
  - ***Conflicts of timing***
  - ***Conflicts of culture***
  - ***Conflicts based on risk and uncertainty***
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# **Respondent Comments**

## **The Outlook Extremes**


- *The traditional nucleus of society- the family- will disappear; the concept of offspring will disappear, the human being will be seen as a couple of chemical reactions inside a bag. Birth and death will not be the basic points of life but singularities of machines.*
- *Humanity will be better every year. Will be more opened and compassionate, with great science and technology achievements in its favor and in favor of the planet. The difficult thing will be to detect and support populations that suffer religious and ideological oppressors,*



# Good Bet Science Policies

- *Consider SIMAD*
  - *Make unintended consequences explicit*
  - *Develop mitigation strategies in parallel*
  - *Each level of management should take responsibility*
  - *High level organizations should engage in risk analysis*
  - *Include public participation in priority setting*
  - *Explore alternative institutional forms to minimize the chances of impeding innovation, promote sharing the benefits globally, minimize risks*
  - *Teach science ethics*
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# Three New Initiatives

- *The creation of a new discipline: social epidemiology*
  - *The creation of a second new discipline: decision making and national academies like “West Point” and “Sandhurst” that graduate expert decision makers*
  - *An international organization for R&D that backs studies in areas by-passed market forces and serves as a clearing house for technology data and policy re impacts (global OSTP).*
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# **What “Moral Science” Will Mean**

- *Do no harm*
- *Enhance human survival*
- *Educate*
- *Serve society*
- *Mitigate suffering*
- *Care for future generations*
- *Be fair*
- *Show tolerance*
- *Treat associates and other organizations the way the you would like to be treated*
- *Serve as a standard for society*