

Moral Business in the Future

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Topics

- *A Study of Global Ethical Issues*
- *The March of Science*
- *What “Moral Business” Will Mean*



The Ethics Study

- *Millennium Project, 2004- 05*
- *Identify the key ethical issues of the next 50 years*
- *Identify the key solution principles.*
- *300 participants*
 - *Europe, Latin America, North America, Asia, Middle East, Africa*
 - *Academics, consultants, NGO's, government, corporate*



Ethical Norms: Fundamental to What is Right

-Protection of the family

-Protection of the future

-Protection of the planet

-Justice

-Responsibility

-Security

-Freedom

-Compassion



What Drives Value Change?

- ***Technology***
- ***Cyclicity: fathers and sons***
- ***The conflict between science and religion***
- ***The media***
- ***Education***
- ***Politics***
- ***Demographics***



Some Future Issues

- ***Is it right to allow organizations to pollute if they pay a fee ?***
- ***Is it right to intervene when a country is endangering people?***
- ***What are the ethical ways to develop artificial intelligence?***
- ***Should religions give up claims of superiority?***
- ***Should scientists be responsible for consequences of their work?***
- ***Should international intervention stop violence against women?***
- ***Should we clone ourselves, make “designer babies”, recreate extinct species, alter genetic lines?***
- ***Should a person be constrained for propensity to crime?***
- ***Is it ethical to extend lifespan, no matter what the cost?***
- ***Do demands of collective intelligence outweigh those of individual identity?***
- ***Is information pollution a crime?***



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. The machine society in which the human being is just another machine, that is the ethics of the future; no ethics at all as we see it today; no values at all as we see them today. Good and bad will have no meaning for the future generations.***



Respondent Comments

The Outlook Extremes

- ***I think that 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. ... That process is gradual; but the difficult thing will be to detect and support populations that suffer religious and ideological oppressors, whose tendency to grow is evident now in Latin-America and Africa, disguised very well in pseudo-democratic postulates.***



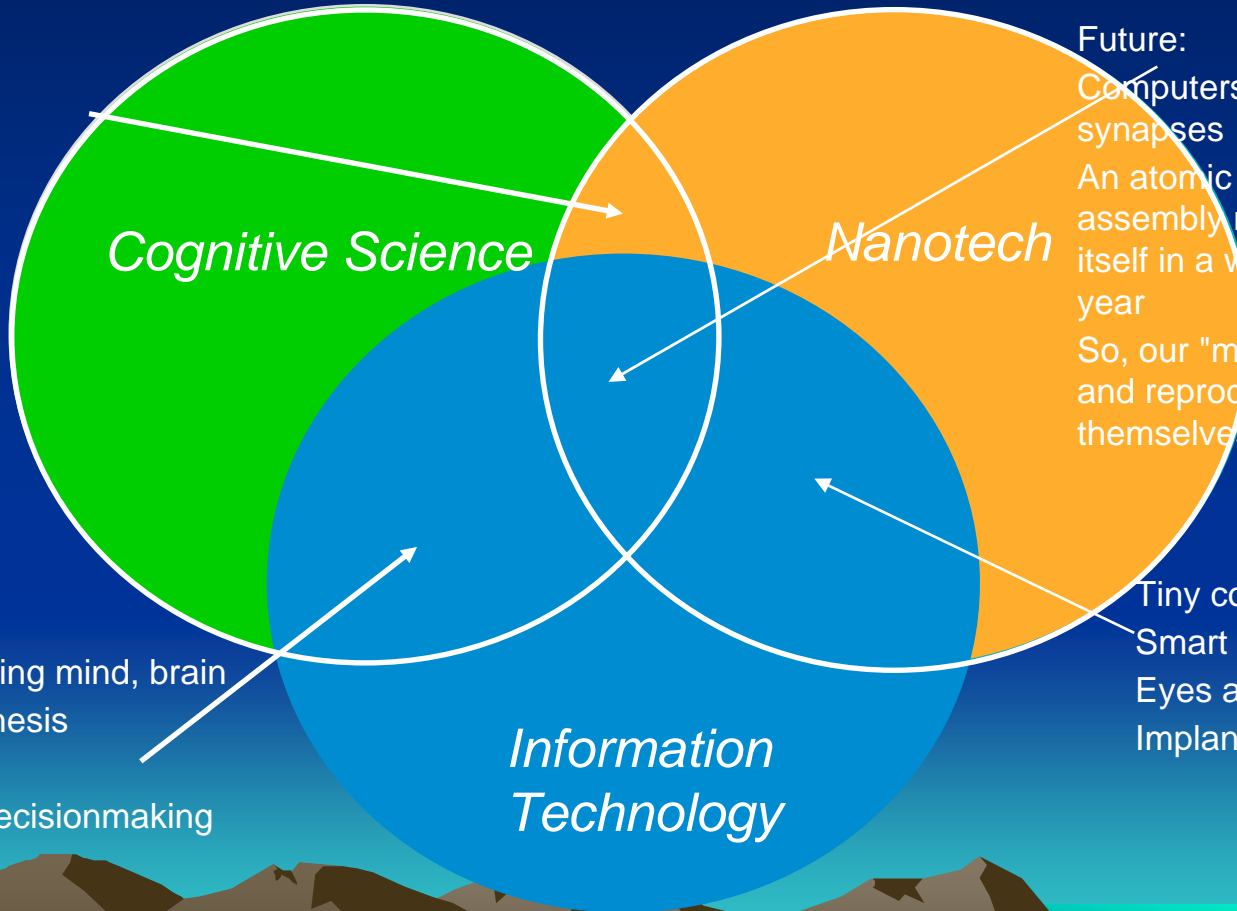
Sources of Acceleration of Science

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



Synergy: The Big One

Smart machines
Tiny robots
Swarm machine



Cognitive Science

Nanotech

*Information
Technology*

Future:
Computers as small as synapses
An atomic scale general purpose assembly machine could copy itself in a week; a billion in a year
So, our "mind children" will think and reproduce, and evolve themselves. (Minsky)

Tiny computers
Smart chips everywhere
Eyes and ears everywhere
Implantable monitors

Understanding mind, brain
Brain prosthesis
True AI
Improved decisionmaking

Some Dangers

- *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)*

Some Science Frontiers That Set the Stage for Future Business

Energy

A surveillance society

Brain decoding

Decision science

Social Epidemiology

The transhuman “singularity”



A Surveillance Society:

- ***Who is where***
 - *An artificial nose sniffing for traces of explosives*
 - *Telemetry sensors in reservoirs to detect a deadly microbes*
 - *Smart cameras ID people by gait or the shape of their ears.*
 - *A lab chip analyzing the human thermal plume (sweat, odor)*
 - *Tiny cameras, London now has 500,000 cameras*
 - *Future: Skin mapping, pores, wrinkles, DNA sensing*
- ***Who does what:***
 - *E-Z Pass scans*
 - *Credit card purchases*
 - *Logging PC keystrokes*

Brain Decoding

- ***Chimeras: laboratory mice with human brain cells***
- ***Mapping the synapses***
- ***Human- computer symbiosis, (neural caps)***
- ***Human to human transfer: synapse interconnect***
- ***Brain boosters***
- ***Computers as legal persons with emotions***
- ***Methods to improve collective intelligence***
- ***Tailored psychotropes (dream pills)***
- ***Intuition, spiritual, and para-psychological phenomena***
- ***Brain implants for improved memory, blindness, epilepsy, depression, Parkinson's, deafness***

Decision Science

- ***Elements***
 - ***Economics***
 - ***Logical anomalies***
 - ***Risk behavior***
 - ***Neuropsychology***
 - ***Intuition***
- ***Implications***
 - ***Training of politicians and executives***
 - ***Maybe grading of decision makers***
 - ***Increased sensitivity to the future***



Toward Immortality: A New Science of Aging

- ***Hayflick's Limit: 100 cell divisions***
- ***Modification of an aging gene***
- ***Telomeres: telomerase ends shortening***
- ***Free Radicals: oxidation destroys DNA***
- ***Carmelization: sugars bind with proteins***
- ***Cold and hungry: Slow metabolism***
- ***Clock genes: Mutants in aged animals***
- ***Cryonics: Freeze till a cure is found***

Social Epidemiology

- ***Develops from:***
 - ***Consumer and medical data bases***
 - ***Surveillance photos***
 - ***Tracking by individual characteristics***
- ***Gives social sciences new empirical rigor***
- ***Offers the “soft” equivalent of natural laws, forecasting***
 - ***Social behavior***
 - ***The effectiveness and spread of memes and propaganda***
 - ***The popularity of candidates***
 - ***The success of products***



Transhuman Singularity

- ***Acceleration of acceleration of change***
- ***When humans transcend biology***
- ***The merger of man and machine***
- ***Implants, nanobots***
- ***Artificial intelligence far exceeds human intelligence***



Four Future Social Rights

- ***The right to see or to be not seen***
- ***The right to influence***
- ***The right to constrain based on anticipation***
- ***The right to intervene based on behavior***



Ethics for Business: What “Moral Business” Will Mean

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

