



Health
and
Everything

Three Philosophical Ideas & Health

OACCAC

March 29, 2005



- No need to take notes
- This Presentation is available on our web site
 - www.healthandeverything.org
- For more information you can write to me at
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3 Philosophical Ideas Pendulum

- The underlying nature of the physical world
 - More chaotic to more orderly and back
 - Most time on this idea
- Our relation to nature
 - As a respectful part of it to being in control of it and back
- Self Identity and social contexts
 - As part of the social context to independent of it and back



1. Order and Chaos

- Creation Myths: Order out of chaos
- The Greeks: World of becoming, opinion, uncertainty
- Mediaevals: God's creation with His mystery.
- Francis Bacon: Unlock nature's secrets; control it
- Descartes and Newton: The clockwork universe
- Laplace's demon: One state lets him deduce all
- Poincaré: 3 Body Problem
- Jack Wisdom: Unstable Solar system



Laplace's Demon

We may regard the present state of the universe as the effect of its past and the cause of its future. An intellect which at any given moment knew all of the forces that animate nature and the mutual positions of the beings that compose it, if this intellect were vast enough to submit the data to analysis, could condense into a single formula the movement of the greatest bodies of the universe and that of the lightest atom; for such an intellect nothing could be uncertain and the future just like the past would be present before its eyes.

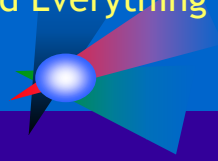
Pierre Simon Laplace



More information not more certainty

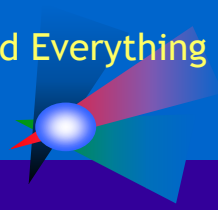
“.....although we may know the initial conditions to an infinite number of decimal points, the future remains impossible to forecast.”

Ilya Prigogine



The New Physics

- What we see and how we explain
 - There are lots non-forecastable phenomena
 - Stock market, weather, the next drip of the faucet
- Heisenberg's Uncertainty Principle
- Complexity Theory
 - Usefulness of uncertainty
 - Instability and stability go together












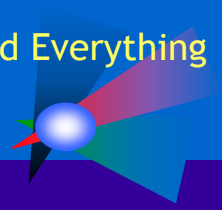
2. Humans & Natural Environment

- Paganism: humans as one element of nature
- Mediaeval notions of the world as creation
- Baconian ideas about “taming” nature for our own ends
- Scientific advance as a solution to problems
- Rachel Carson’s *Silent Spring* (1962)
- Renewed realization about humans as part of Nature
- We must live in sync with nature



The Great Chain of Being

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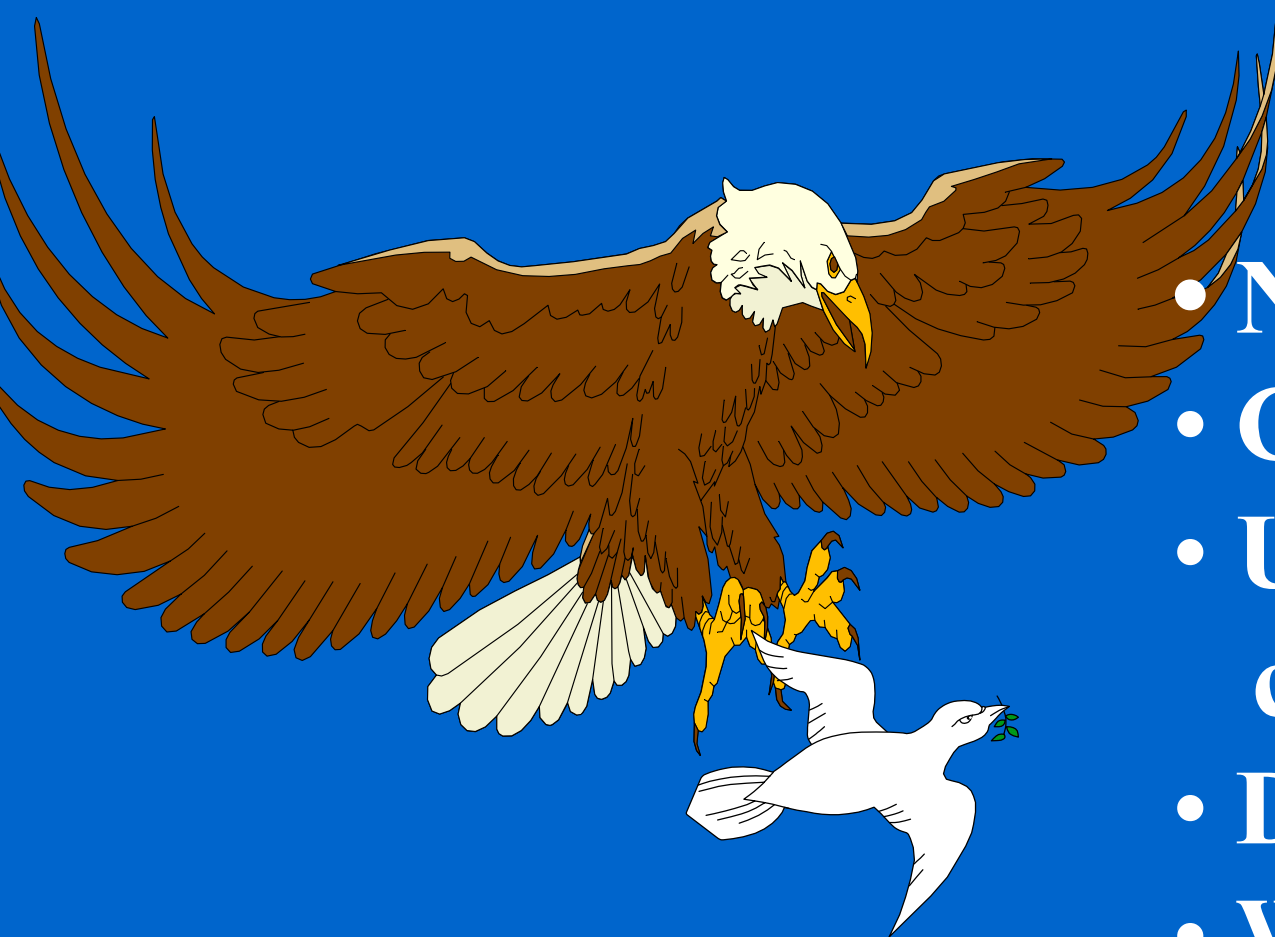


The Gold Sun Lion





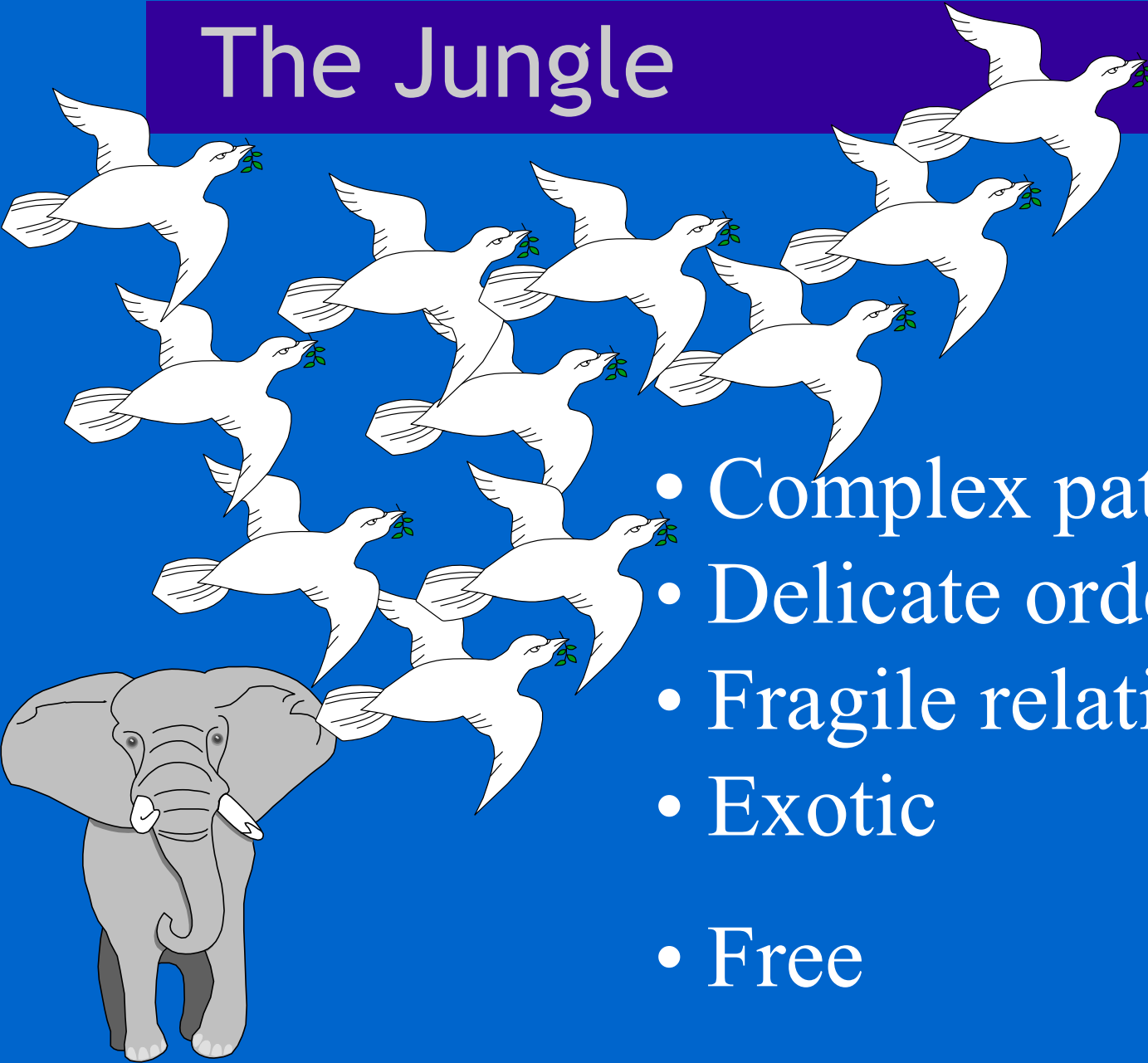
Hobbes: State of nature is a Jungle



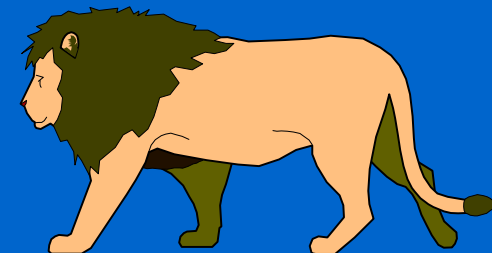
- **No rules**
- **Chaotic**
- **Uncontrolled competition**
- **Dangerous**
- **Wild**



The Jungle



- Complex patterns
- Delicate order
- Fragile relationships
- Exotic
- Free





The Pendulum Swings Back

- No rules
- Chaotic
- Uncontrolled
- Dangerous
- Wild
- Complex patterns
- Delicate order
- Fragile relationships
- Exotic
- Free





3. Self identity & social contexts

- Primitive societies:
 - Self understood by relationships
- Ancient Greek:
 - Self in Political context
- Mediaeval
 - Self and salvation
- Descartes:
 - Body Mind Distinction
- Recent:
 - Reintegration of individuals and their social (and physical) environment



Current Views

- Personhood is not isolated from environment
- Arguments against separation of body and mind.
 - G.E. Moore no need to prove external world
 - Gilbert Ryle “ghost in a machine.”
 - Ludwig Wittgenstein: self in “form of life.”
- Self = interaction with immediate & linguistic, social and political environments, & other aspects of the world
- Complex connections between inds and environments supported by psychoanalysis to neuropsychology.



Three Big Ideas Pendulum

| Idea | Primitive | Ancient | Mediaeval | Modern | Current |
|---------------|-----------------------------|-----------------------|-------------------------|----------------------|--|
| Chaos & Order | Order out of Chaos Myths | Real world is ordered | God knows order | We can know it too | Order & chaos Interact Uncertainty |
| Man & Nature | Part of nature | Man as animal + | Respect for creation | Regain mastery | Interact as Part of Nature |
| Self Identity | Kinship location | Role and state | Salvation of the person | Ghost in the machine | Interact as part of development |



Mesopotamian Ideas of Health

- Linked to the will of the various gods and spirits.
- Disease of an organ linked to chaos as well as action of gods
- *Ashipu* makes offering to a particular god to
 - help the sick person expel the evil spirits
 - regain an improved relationship with the gods of his or her organs
 - regain order
 - to achieve a cure.



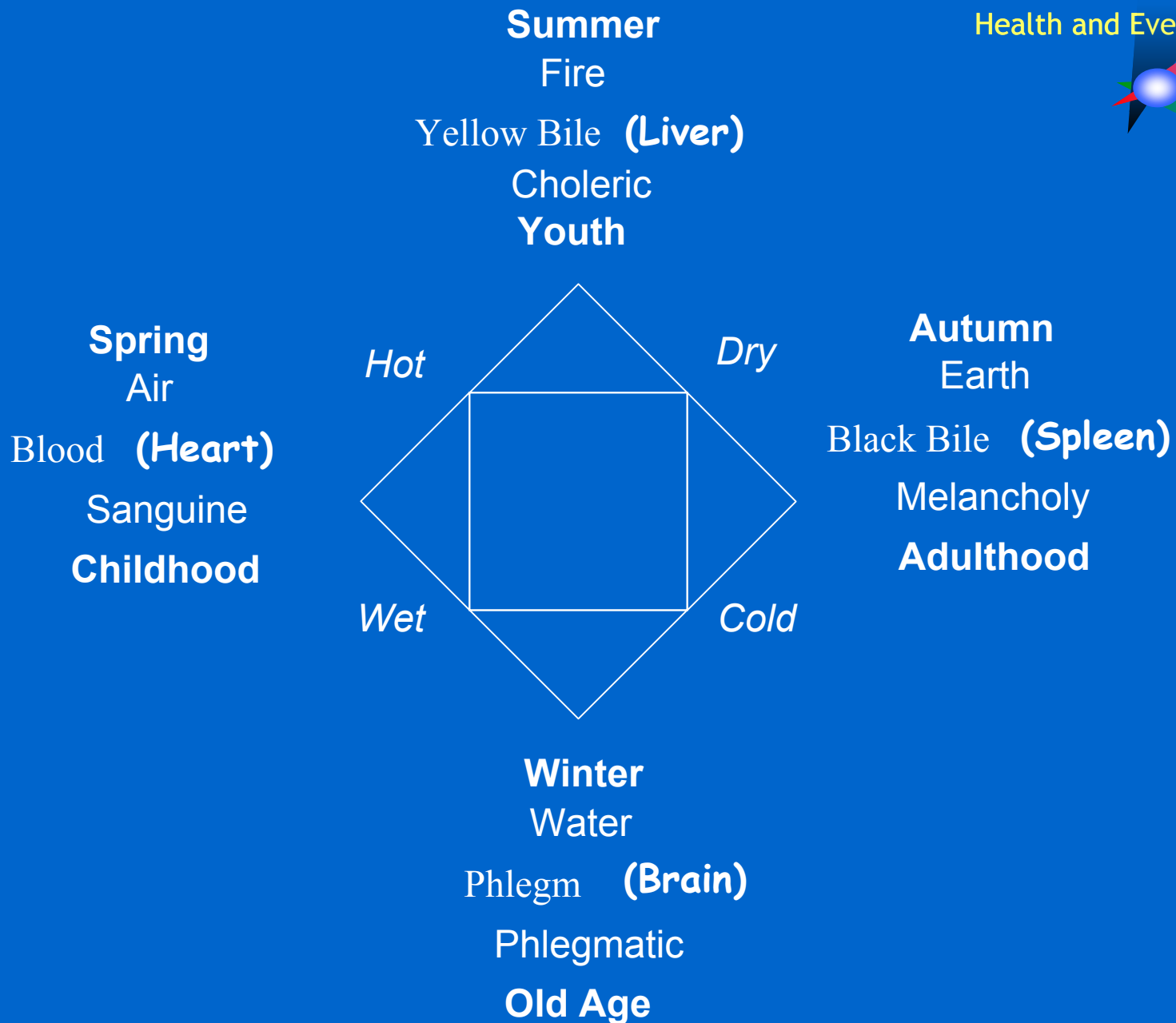
Aristotle

- Final cause
 - Final cause of an acorn is to become an oak tree
 - Final cause of exercise is health.
- Proportionality of elements
 - “if the disproportion of the hot and cold elements is the cause of ill health, their proportion is the cause of health” (Posterior Analytics Book I part 13).
- For Aristotle, medical interventions have health as their final cause, and the rebalancing of the elements as their means.



Galen

- Longest lasting medical framework (2000 Years)
- Still around: Hot soup for a cold
- Four humours





Galen's Humours

- Refer to character and sense of self
- Connected to social and physical environments
- Temperament and physiology interactive,
 - Being angry increases the flow of black bile.
 - More black bile can make someone angry.
- Illnesses were “distempers” (Disorders)
- Regimens tempered the humours
- Rebalancing interventions
 - changes in environment
 - adjustments of lifestyle
 - Galenic medications part of the naturopathic medicine cabinet.
 - cupping, purges and bleeds
 - Gwyneth Paltrow



Mediaeval Health

- Continued Galenic + God's lessons
- Garden of Eden Concept of Health
 - no illness, no aging and no pain. Significantly
- Fall
 - women would feel the pain of childbirth
- Similar to WHO definition
 - “a complete state of physical, mental and social well-being.”
- Only by regaining paradise will mankind recover this state.
- WHO account of health may expresses the wish to create a man-made paradise.



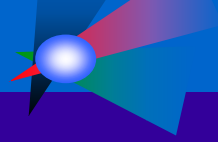
Paracelsus

- Theopharastus Bombastus von Hohenheim: (1493-1541)
- burned Galen's books in the town square;
- major influence on 17th century scientific practices
- body chemical retort
 - food, liquids and air
 - blood, muscle and various excreta.
- Health: appropriate chemical reactions
- Disease
 - chemical imbalances
 - Poisons
- Cures testable



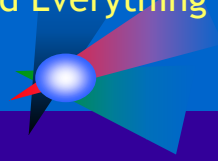
Descartes

- “[S]o also the human body may be considered as a machine so built and composed of bones, nerves, muscles, veins, blood and skin that even if there were no mind in it, it would not cease to move in all the ways it does at present when it is not moved under the direction of the will.
- “healthy” machine runs smoothly
- “The preservation of health has always been the principle end of my studies” he hoped to devise “a system of medicine which is founded on infallible demonstrations.”



Robert Boyle

- “Corpuscular mechanical” account of health
 - atomic and chemical constituents of the human body followed mechanical laws of nature
 - set the research agenda for medicine for the next 300 years.
 - ordered world in which diseases and their causes can be readily identified, and in which pharmaceutical and surgical cures can restore the smooth functioning to the body.



18th and 19th Centuries

- Sydenham
 - ID diseases as natural kinds
- Sanitarians
 - Large Scale Public Health
- Germ Theorists
 - Koch, Pasteur and disease causes and cures
- Enormous Success of the Model



Successes of Chem/Mech Model

- Conquering diseases such as Cholera, Small Pox, Typhus, Polio
- Successes will continue perhaps with HIV/AIDs, improvements in transplants and prosthetics.



20th Century

- Molecular Biology
 - Identification of the molecular processes of cell maintenance and division
 - A better understanding of enzymes, viruses and bacteria
 - A deeper understanding of cellular structures and the process of mutation
 - A general understanding of the nature of cellular diseases like cancer



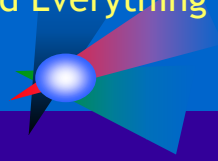
Metaphors for Health and Disease

| Metaphor | Health | Disease |
|--------------------|--------------------------------|---|
| Four Humours | Balance of humours | Distemper: Excess or deficiency of humours |
| Garden of Eden | No Pain, No Sickness, No Aging | Emerges at the Fall |
| Chemical Processor | Proper processing occurs | Presence of poison, bad processing, (absence of vital chemical) |
| Machine | Smooth Running | Breakdown or poor running |

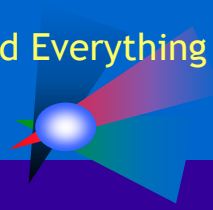


Cancer

- Cancer is a disease of the cells.
- Every second 100,000 cells in the human body divide and 100,000 die.
- Some cells reproduce but do not follow the same instructions as surrounding cells and form a small localized colony of abnormal cells.
- This is fairly common. As we age we get freckles on our skin, warts and other small defects
- Much more rarely an abnormal cell and its descendants gain the capacity to grow out of their local territory. This is cancer.



- “There is visible evidence that the development of human cancer is usually a long drawn out process, involving many steps”
 - John Cairns “Matters of Life and Death”



Complicated **Chem Mech Diseases**



Complex **Chronic Diseases**

- Abrupt onset
- Often all causes can be identified and measured
- Diagnosis and prognosis are often accurate
- Specific therapy or treatment is often available
- Technological intervention is usually effective: cure is likely with return to normal health
- Profession is knowledgeable while laity is inexperienced
- No Voluntary Sector Associations for these condition e.g. Small Pox, Knee Replacement,

- Gradual onset over time
- Multivariate cause, changing over time
- Diagnosis is uncertain and prognosis obscure
- Indecisive technologies & therapies with adversities
- No cure, pervasive uncertainty: management, coaching & self care over time is needed to improve health
- Profession & laity must be reciprocally knowledgeable to improve health
- Voluntary Sector Associations are widespread and help define the distinction: Heart and Stroke, Asthma, Diabetes etc.



If Cancer is a Chronic Disease

- The combinatorial factors are so enormous and the possibilities of impact are so great in cellular interaction that it becomes impossible to speak in more than probabilities.
- There is no Laplace's Demon of cellular interaction. Cancer prognosis is more like predicting the weather than the next step of a mechanical process. Good short term probabilistic predictions. Good overall general understanding, but clear limits on prognosis will emerge
- That may be the nature of the disease.



Cancer Prevention is Chem/Mech

- Attempts are made to reduce or eliminated contact with clear proven carcinogens
 - E.g. coal tar
 - Asbestos
 - Cigarettes
- Relation between cancer and social aspects of life less considered
 - E.g. cancers of poverty induced stress



Cancer Research is Chem/Mech

- 1970 Nixon declares war on cancer
- \$120 Billion spent on research
- Enormous Amount learned about the mechanisms of cell division and mutation
- Cancer is not conquered
- “It is as if researchers on death by shooting spent all their efforts learning about the mechanism of the gun’s trigger.”



Cancer Care is Chem/Mech

- A patient goes to see a Dr
- Dr says “You have cancer. Come back and see me in three weeks.”
- Treatment for chronic life threatening disease must be different than this.



Rethinking Cancer

- If cancer is a complex chronic condition
 - We must change how we think about its prevention
 - We must change how we think about research in this area
 - We must change how we think about caring for those who are at risk or who have it
- What is the role of CCACs?