

## Space Policy Seminar#1

What is space policy? Who makes it and Why is it important?

### Outline

- Definitions
- Technical statement and limits
- A simple model for space policy statements
- Concept of world view and exploration of the world view in the US national policy
- Space policy and space goals
- Policy as principles for the polis – the story of the cake
- US Army view of Space Policy
- Definition of 4 related words (Webster's 7<sup>th</sup> Intercollegiate Dictionary)

### Policy

“A definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future directions.”

### Strategy

“The science and art of employing the political, economic, psychological and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace and war.”

Thus policy → strategy

### Law

“A binding custom or practice of a community: a rule of conduct or action prescribed or formally recognized as binding or enforced by a controlling authority.”

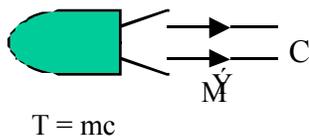
Thus policy ≠ law

### Doctrine

“A principle or position or a body of principles in a branch of knowledge or system of belief: A statement of fundamental government policy especially in international relations.”

Thus there is a relation between policy and doctrine.

- What is a technical statement?



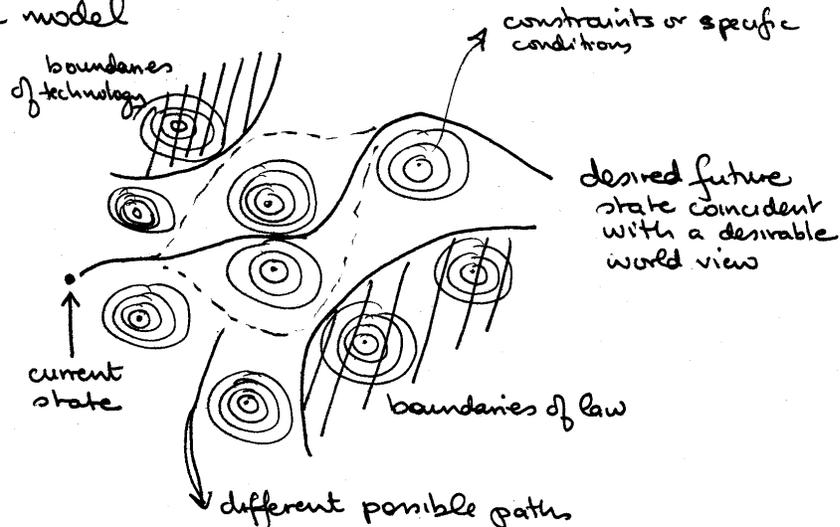
Follows directly from conservation of mass and conservation of momentum.

Thus if one accepts these two statements, both of which can be shown to be true (within known limits e.g. mass can be converted to energy and visa versa) via the scientific method then the technical statement follows inarguably.

- Is it the case that the human decision making plays no role in technical statements?
  - Kuhn “The structure of scientific revolution” shows that the acceptance of technical models depends on human acceptance of the technical paradigm which is often driven by dislike for the implications of the statements e.g. Planck’s quantum, Chandrasekhar’s model of stars, Big bang model and “continuous creation”.
  - Thus technical statements are true within the context of a technical paradigm which explains the data better than other paradigms.
- Policy statements have several features associated with them:

- definite course(s)
- selected from alternatives
- true in light of specific conditions → a model of the world
- to move one in specific (desired) directions → a model of the world

### A simple model



### A space policy statement

In the conduct of its research and development programs, NASA will use competition and peer review to select scientific investigations.

- contains a definite course (use of competition...)
- selected from among alternatives (patronage, congressional action...)
- future direction (scientifically rigorous work)

Implicit world view – best science comes from open competition among equals and the best people to do it are peers.

### Boundaries

Space policy statements cannot cross technical boundaries

e.g. NASA will develop perpetual motion machines or NASA will develop faster than light space travel by 2001.

- statements of technical nonsense are not valid statements of policy.
- Space policy statements cannot cross the boundaries of law (national, international, natural)  
e.g. In the conduct of its research and development program, NASA will indiscriminately kill as many civilians as possible.
- Violates national law and natural law
- US National Space Policy <http://www.c3i.osd.mil/org/c3is/spacepol/index.html>

Review of world view in US national space policy

- Leadership in the world is good
- Space contributes to national security, relationships with other countries, etc.
- We must have access to the critical medium
- Partnerships and cooperation is good

### Goals

- US explicitly in the business of scientific exploration (part of the history/culture of the US).

- Our national security is enhanced through space
- Space use will contribute to economic competitiveness which is good
- Parties other than the Federal government must be involved. This is good.
- International cooperation is good when it furthers our interest.
- Want peaceful use of space but will protect ourselves in a muscular way and will never put ourselves in a position where our sobering interests are threatened.
- Another view

A space policy is a statement of the ways in which to carry out a space project to achieve a desired goal.

### Goals

- A. National Security
  - give national leaders strategic and intelligence information & communications
  - give tactical forces war fighting advantage
- B. National Image/Foreign Policy
- C. Scientific Progress
- D. Tangible benefits to Society
  - e.g. weather warning satellites and the hurricane of 1938
- E. Stimulating Commercial Payoff
- F. Stimulating Technological Progress
- G. Space a tool for Economic and Social Development
- H. Exploration, Expansion and Eventual Settlement beyond Earth Orbit

### Another view of policy

- Policy is the set of principles that guides the “polis” to implement actions.
- The Polis has the following characteristics:
  - It is a community
  - It has a public interest
  - Most policy problems are commons problems (self interest & public interest)
  - Influence is pervasive and the boundaries between influence and coercion are contested.
  - Cooperation is as important as competition
  - Loyalty is important
  - Groups and organizations are the building blocks
  - Information is interpretive, incomplete and strategic
  - It is governed by passion as well as physical law
  - Power is derived from the elements above and coordinates individual intentions and actions into collective purposes and results.

An excellent example of alternatives is given by the story of the chocolate cake. How should we divide a wonderful chocolate cake? Obvious answer is equal sized pieces among people in class. This is subject to 8 challenges on policy grounds.

Challenge 1: who should get cake, where are the boundaries of the community?

Challenge 2: why not rank based distribution? (e.g. partnerships at law firms)

Challenge 3: why not group based distribution? (e.g. only US citizens)

Challenge 4: why not include cake as part of bigger meal and make meals equal?

Challenge 5: why not distribute on value to the recipient? (e.g. Medicare)

Challenge 6: why not allow everyone competitive access? (e.g. Affirmative action)

Challenge 7: why not equal statistical chances?

Challenge 8: why not vote and let one person have it? (e.g. elections)

They all illustrate different ways of looking at the same fundamental product. Where the policy choices are made depends on one's world view as well as the direction the polis wants to move.