

Comments of a Tyrolean Mountain Peasant on
the
Outer Space Treaty and Private Property

“Closed Space” vs. “Open Space”

Klaus P. Heiss
Executive Director
High Frontier Washington DC

IASL-IISL International Workshop
June 28th 2006



Moon Base 2015+

International Conference
**MOON
BASE**

a Challenge for Mankind



Science, Technology, System & Economics
Outlook - Assessment - Scenario

VENICE WORKSHOP
May 26th-27th 2005

IAES, S. Elena - Campo della Chiesa, 3
VENEZIA - ITALY

www.moonbase-italia.org

International Conference
**MOON
BASE**

a Challenge for Humanity



WASHINGTON WORKSHOP
October 11th-12th 2005




Washington Academy of Sciences
1200 New York Avenue (AAAS Building), Washington, DC 20005

Science, Technology, Systems & Economics
A Common Vision


www.moonbase-usa.org




Basic Points

- Create Laws to ENABLE economic/market activities – not prohibit them
 - Broaden the “Zero Sum” Mentality of Space Law to “Positive Sum” Doctrines
 - The Crucial Role of Private Property
 - The Jamestown Approach of 1607 as a useful precedent
- 

From Zero Sum Thinking to Positive Sum Thinking

- Pareto Optimality
 - Two Irreconcilable Concepts of Equity
 - Everybody according to their needs
 - Everybody according to their contribution
 - Theory of Games
 - Positive Sum vs. Zero Sum Thinking
 - Shapley Value(s)
 - Markets as determinants: Resources not used are “useless”
- 

Apparent Contradictions to be resolved

- “Contributions” vs. “Benefits”
 - US contributed \$500+ Billion and will contribute another \$500+ Billion in next decades
 - Liechtenstein has contributed \$100,000.-
 - Good Precedent: Intelsat, Inmarsat – based on contributions and uses!
 - To claim “Property” / Apply “Law” needed:
 - Delineated Territory
 - Settlement (Population)
 - Use / Control
- 

Property Fundamental to the Origin of Law

- The Code of Manu (allegedly 3,000 BC)
- The Code of Hammurabi (1780 BC)
- Roman Law (Cicero, 100's BC)
- Tyrolean Freedoms and Homestead Rights (1342 AD)
- The Company of Virginia and Jamestown (1606)
- Declaration of Rights of Virginia (1775)
- The Austrian School and Chicago (1920's to 1950's)



Property Rights and Homesteading Precede

“National Sovereignty”

- National Sovereignty is a rather **recent construct**: it was generated in the fog of the French Revolution.
- Before then **all property was private** (by persons) or Companies (groups of persons) or since the institution of celibacy the Church.
- Homesteading is at the very root of property rights, the rise of agriculture, law and civilization
- Conflicts do arise in the transition from Nomadic societies to agricultural ones – see Darfur today.

OST, Property and Homesteading: Article I

- **Article I**

- The **exploration and use** of outer space, including the moon and other celestial bodies, shall be carried out for **the benefit and in the interests of all countries**, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.
- Outer space, including the moon and other celestial bodies, **shall be free for exploration and use** by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and **there shall be free access to all areas of celestial bodies.**

- **Comments:**

- Exploration and Use for all countries **REQUIRES** private property as proven by history;
- Private property shall be assured to **citizens of all countries** under Article I
- “shall be free for exploration and use” **warrants exactly such private access and property**
- “there shall be free access to all areas of celestial bodies” seems to imply an obligation by one and all Space faring nations **to provide such free access to private enterprise and property**

OST, Property and Homesteading: Article II

Article II

- Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.

Comment

- **National appropriations are excluded**
- **Yet Article I demands the beneficial exploration and uses of celestial resources**
- **Since nations are prohibited hereunder to do so, clearly private persons are the only possible actors/proprietors: who else – the Martians?**

Well established historical Principles for Claims of Property

“FIXED ASSETS”

- **Physical Control**
- **Active Use**
- **In case of Land Resources:**
Human presence and use
- **With Homesteads:**
minimum/maximum land
claims
- **Squatting Rights**

“MOBILE ASSETS”

- **Physical capture & control (fish, prey, nodules)**
- **Ability to move to market (use)**

Claims “in the abstract” are null and void

“Outer Space Treaty” & “Rules of the Road”

- **Outer Space Treaty**

- **Basic Flaw: “Zero Sum Thinking”**
- Outlaws ‘National Sovereignty’ to all celestial bodies – including other Galaxies ...
- But not Private Property or Homesteading
- “Free Access for one and all”
- Outlaws Weapons of Mass Destruction (Nuclear)
- “Benefit of Mankind”: My Profit is Mankind’s Benefit?!

- **Rules of the Road**

- Private Property
- Homesteading
- Based on Use (IntelSat Model)
- Condominium Rules
- Freedom of Navigation
- Sea/Air Travel Legal/ Litigation Regime

- **Historical Precedent:**

- Private Property precedes National Sovereignty (a “1789” concept)
- No Damage Caused – No Say
- **“Positive Sum Thinking”**

Warranted: A “Declaration of Space Rights” Williamsburg 1775

A Comsat/Intelsat Approach toward an ISS-Lunar Condominium?

- **Pro Forma Private Placement Memoranda**
 - technologies, potential applications in Space
 - pro forma financial commitments
 - exclusive rights by PPM Groups
 - additive cost access rights

“Declaration of Space Rights”

- Homesteading
- Property Rights
- “Fishing Rights” (Asteroids)

In all cases **physical control, active use** and , for land ownership, **human presence** required.

“Rules of the Road”



Prohibition of Private Property: calamity of the 20th century

- **Soviet Land Expropriation** in the 20's and 30' killed tens of millions
- Pol Pot Land Communization killed millions more
- **Mao's "Collectivization"** in the 1960's killed possibly up to 100 million
- In **Darfur Nomads** are likely causing genocide: applying the OST there would seem to take the side of the Janjaweed.

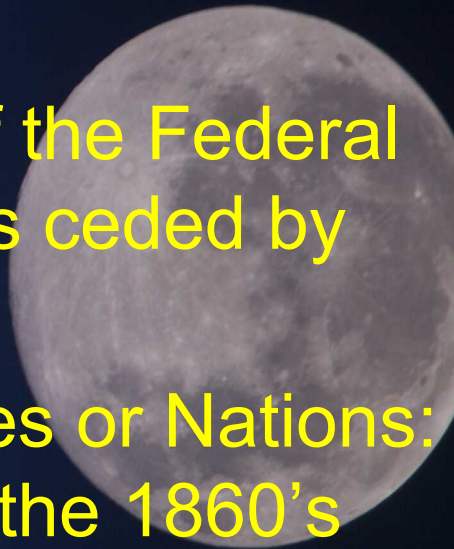
No Property – No Use: When will we ever learn?

Prohibition of Private Property in Space: 1984

- NOT by the Outer Space Treaty but the US
- US ONLY country – to my knowledge – to actually OUTLAW private rights in Space:
 - The 1984 “Landsat Commercialization Act” – Title IV
 - To prevent European (German) / US (COMSAT) and Private Group to provide world-wide Remote Sensing Data
 - ABC brought Constitutional challenge to this Law
 - Since revoked/modified



ITAR: A “State Property” Technology Apartheid in Space?

- Private Property Rights contradict “National Ownership”
 - Under US Constitution: all Rights of the Federal Government are derivative of Rights ceded by the People (States)
 - People are not the Property of States or Nations: Slavery in the US was abolished in the 1860’s
 - Private Property: the basis of Academic Freedom
- 

Conclusion

Nothing in the Outer Space Treaty states or implies, directly or indirectly, the prohibition of private property.

Quite to the contrary: Article IV explicitly states that the rights of peaceful use even for military personnel shall NOT be prohibited.

OPEN SPACE: Private Property is FUNDAMENTAL to the economic exploration and uses of Space – starting with the Moon

CLOSED SPACE: Without Private Property Space will remain unused and be left to the MONOPOLY of one or a few “Space Monopolies”

Q.E.D.



OST, Property and Homesteading: Article IV

- ...The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the moon and other celestial bodies shall also not be prohibited.
- Not only does this article **EXPLICITLY** allow the use of any equipment or facility for peaceful purposes, but allows even military personnel to do so!

OST, Property and Homesteading: Article VI

- States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies ...for assuring that national activities are carried out **in conformity with the provisions set forth in the present Treaty**
- Article I implores **the exploration and uses of the Moon and Celestial bodies** and assures **free access** to one and all for the exploration and use of these bodies;
- Article II **disallows National Sovereignty** – but NOT private property;
- Article IV **assures private AND military persons any and all peaceful uses of facilities and equipment!**
- Thus Article VI applies **STRICTLY** only to the provisions **“AS STATED”**

The “Virginia Company” 1606

- In June of 1606, King James I granted a charter to a group of London entrepreneurs, the Virginia Company, to establish a satellite English settlement in the Chesapeake region of North America.
- By December, 108 settlers sailed from London instructed to settle Virginia, find gold and a water route to the Orient.

Jamestown - 1607

First Representative Assembly - 1619

- **On May 14, 1607**, the Virginia Company explorers landed on Jamestown Island, to establish the Virginia English colony on the banks of the James River 60 miles from the mouth of the Chesapeake Bay
- **The first representative assembly** in the New World convened in the Jamestown church on July 30, 1619. The General Assembly met in response to orders from the Virginia Company "to establish one equal and uniform government over all Virginia" which would provide "just laws for the happy guiding and governing of the people there inhabiting".

Jamestown on the Moon: Gate to Self-sustaining Space Enterprise

- **US Government:**

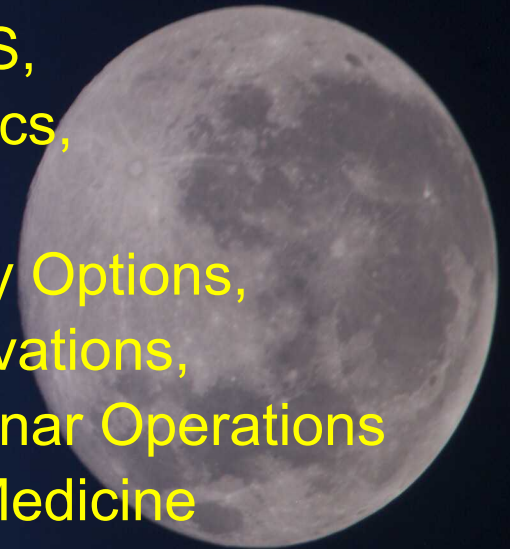
- **Current NASA Budget**

- Projections through 2020
- Strong 2020 – 2030 Lunar Program as outlined
- Space Transportation and Ports Infrastructure for:
 - **CELSS, Robotics, ISRU, Energy Options, Observations, Cis-Lunar Operations**

- **Private&International Investments:**

- CELSS,
- Robotics,
- ISRU,
- Energy Options,
- Observations,
- Cis-Lunar Operations
- Tele-Medicine
- Tele-Operations

- **Space Port to Destinations beyond**



Jamestown on the Moon 2015-2030

- **Put the Money where the opportunities are**
 - for US taxpayers
 - strategic interests
 - **Maximize Industry and International Participation from Start (\$10 B+)**
 - **Create New Organizations and Market Mechanisms to Implement Space Exploration Program**
 - **Private Sector Participation ESSENTIAL for Space Exploration**
- 

Jamestown Group Prospective PPMs

- Looking at Earth
 - Earth's Resources and Environs
 - Sun-Earth Weather Interactions & Predictions
- Cis-Lunar Communications Infrastructure
 - Communications Gateway “Moon”
 - Secure Data Bases and Archives
- 1GWe+ Energy: Nuclear, Solar
- Fuel-less Space Transportation Systems
- Habitats and CELSS



Precedent(s)

- ComSat – IntelSat
- InmarSat
- GPS
- Iridium/Brilliant Pebbles
- “on-board” Commercial Routers
- SpaceTran (Green Orbiter, Titans)
- SPARX Remote Sensing Venture (1983/4)



US History

- The Virginia Declaration of Rights 1775/6
 - That all men are by nature equally free and independent, and have certain inherent rights ... namely, the enjoyment of life and liberty, *with the means of acquiring and possessing property*, and pursuing and obtaining happiness and safety

US HISTORY

(cont.)

- **The Homestead Act - Creating Prosperity in America - 1862**
 - The free **homestead law** has been called the most important act for the welfare of the people ever passed in the United States

The Homestead Act (1862)

- In 1852 a political group, called the Free Soil party, demanded free homesteads for the people. In 1854 the first free homestead bill was introduced in Congress by Congressman Galusha A. Grow of Pennsylvania. The people of the West and poor people everywhere were in favor of the bill; however, there was strong opposition to the bill.



Jamestown on the Moon – 2030: Trullis, Alpine Huts and Igloos



It was not until May 20, 1862, that the free Homestead Act was finally passed and signed by President Abraham Lincoln. The law took effect on January 1, 1863.

Under this law any man or woman twenty-one years old or the head of a family could have 160 acres of undeveloped land by living on it five years and paying eighteen dollars in fees.

They were also required to live on the land, build a home, make improvements and farm the land before they could own it outright.

Alternatively, the homesteader could purchase the land for \$1.25 per acre after having lived on the land for six months.



Establishing Property Rules in Space within OST

- By Sovereigns (Signatory Nations)
- By Groups of Signatory Nations such as the ISS Group of Nations
- By Precedent following successful models of past exploration and economic development – see e.g. the **Virginia Declaration of Rights of 1775 and US Homesteading Acts**