The Vienna Vision On Humans In Outer Space

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- First Odyssey - Humans in Earth orbits: What effect does it have?
- Second Odyssey - Humans exploring Space: What effects will it have?
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Humans in Outer Space: Interdisciplinary Odysseys

- The European Science Foundation (ESF) has initiated the first comprehensive trans-disciplinary dialogue on humans in outer space during the Genoa Workshop in March 2007.
  - Scientific/academic process aiming to bridge the gap between Social sciences and Humanities and space sciences

- The inherent human curiosity for exploring the unknown is at the heart of this dialogue, and is addressed through collaboration between the ESF, European Space Agency (ESA) and the European Space Policy Institute (ESPI) in Vienna.

- The **Vienna Vision on Humans in Outer Space** was developed at the "Humans in Outer Space - Interdisciplinary Odysseys" conference, held in Vienna on 11 – 12 October 2007 locally organized by ESPI. The conference featured 6 successive sessions and 21 international speakers.
  - This vision provides a unique European perspective in identifying the relevant needs and interests of Humanities and Social sciences linked with space exploration
  - Merge views to influence position building processes

European Space Policy Institute

Vienna Vision - Preliminary Findings

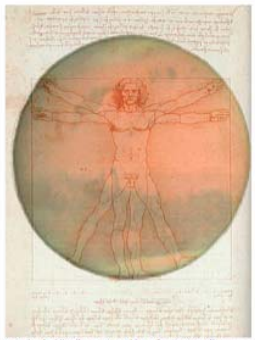
Humans in Outer Space: Interdisciplinary Odysseys

The European Science Foundation (ESF) has organized the first comprehensive trans-disciplinary dialogue on humans in outer space. This dialogue goes further than regarding humans as better-than-robot tools for exploration. It investigates the human quest for odysseys beyond Earth's atmosphere and reflects on the implications of the findings of extraterrestrial life.

The inherent human curiosity for exploring the unknown is at the heart of this dialogue, and is addressed through collaboration between the ESF Standing Committee for the Humanities (SCH) and the ESF European Space Sciences Committee (ESSC), in cooperation with the European Space Agency (ESA) and the European Space Policy Institute (ESPI) in Vienna.

The **Vienna Vision on Humans in Outer Space** was developed at the "Humans in Outer Space" conference, held in Vienna on 11 – 12 October 2007 locally organized by ESPI with the support of the Austrian Ministry for Transport, Innovation and Technology (BMVIT). This vision provides a unique European perspective in identifying the relevant needs and interests linked with space exploration. It is presented to several European and international fora, in order to make it a useful element for the position-finding and decision-making process.

Vienna Vision on Humans in Outer Space



Leonardo da Vinci's man on Mars Image credits:

Humans in Outer Space: The way forward for the next 50 years

Space Age has reached its 50th anniversary. Development of robotic exploration to distant planets and bodies across the solar system, as well as pioneering human space exploration in Earth orbits and the Moon, paved the way for ambitious long-term space exploration. Europe has always played a significant role in the endeavours of humankind to explore other worlds and to understand the Universe in which we live.

Today, Space Exploration goes far beyond a merely technological endeavour, as its further development will have a tremendous social, cultural and economic impact. Space activities are now entering an era where the contribution of the Humanities - history, philosophy, anthropology, the arts as well as the Social Sciences political science, economics and law - will become crucial for the future of Space Exploration. Now that the awareness for the societal complexity of activities in space is growing internationally, it is vital that Europe, with its identity firmly rooted in the Humanities and the Social Sciences, grasps the opportunity to involve their specific knowledge(s) in the long-term planning of exploration undertakings.

The next generation will be given the opportunity to explore new places and discover new worlds. Those adventures will be driven by the human desire of quest for knowledge and human curiosity. They will provide a main opportunity for equitable international cooperation. Humans divided on Earth will hopefully unite in space as citizens of one planet.

First Odyssey

Humans in Earth orbit: What effect does it have?

Home - Earth is a fragile oasis in the vastness of the solar system and it needs to be protected from natural and man-made threats. Once in space, humans are no longer just citizens of individual countries, but also of the planet Earth carrying for its overall global sustainability.

Progress – Human space flight is a major source of breakthroughs and innovation. It can benefit societies around the world with variety of technological spin-offs and scientific research possibilities, and it may help to overcome the limits for growth on many levels. Through endeavours such as the International Space Station new partnerships are built, which can cultivate international cooperation in a spirit of friendship and mutual understanding.

Technology – Humans increasingly rely on technological advancements in their everyday lives. Relationship between humans and machines will reach new dimensions, in the process making it necessary to readjust our notion of 'humanity'. Space applications can have a positive impact on quality of life on Earth and eventually beyond. Everyone will have an access to space and space tourism will no longer be a dream but a possibility to those interested.

Law – The legal framework for space activities needs to be further developed in a way, which cultivates peaceful uses of outer space and equal rights for all humankind. Not only rights will be of importance, human rights will also have to be considered, as new moral challenges will face humanity.

Second Odyssey

Humans in space exploration: What effects will it have?

Humanity – In the new era of technological advancements, the human factor is essential. Without human presence in space, it will be difficult to understand the full potential of spaceflight. Global cooperative endeavour will allow fostering the further development of fraternity and collaboration among peoples, societies and cultures.

Discovery – Space exploration allows for discovery in two ways: it makes it possible to search for specific things, i.e. new energy resources; but it also opens up the opportunity to follow the thrust of scientific and cultural curiosity. This latter one is one of the most inspiring traits of humankind since the beginning of its history and has led and will lead again to incredible discoveries.

Culture – Space exploration is a challenging, cooperative endeavour that offers opportunities to further strengthen European ties and define European values and priorities. The identity of Europe is constituted by its specific cultural approach towards both scientific and moral issues, and it will be this angle which will influence societal development as well as serve as inspiration for the younger generation.

Rights – Through space exploration, new partnerships will form. This will call for a proper legal framework serving to peacefully regulate issues like, for example, Space Traffic Management and specifically planetary protection.

Third Odyssey

Humans migrating the Earth: How will it affect human thought?

Habitat – Driven by curiosity and in order to extend freedom of opportunities, humans will eventually search for settlements outside of our planet. What might be unimaginable today may become necessary in the future. The first child to be born in space will mark the beginning of a true space generation.

Encounters – Humans should be open to the idea of possible encounters with other forms of life in outer space. A new era will begin when humans realize that they are not alone in the universe. Such discovery may likely cause the development of a new collective identity for humanity.

Belief systems – What people believe in, and how such beliefs are structured, has a strong binding force on societies, on Earth and eventually beyond. Human belief systems, whether religious or secular, change in the context of new living environments, and in contact with other forms of life and societies. As the merely technological or political approach will no longer be sufficient in dealing with such contacts, the Humanities and the Social Sciences will gain in importance.

Adapting – Past encounters that took place on Earth show that human beings were always able to adjust and to adapt to unforeseeable realities and unexpected forms of life, albeit often at great costs. While the first effects of an encounter between humans and extraterrestrial life are unpredictable, later adjustments may be taken for granted. However, humans will not only have to adapt to new realities but need to be aware that they are morally, economically and politically accountable for their choices.

EUROPEAN SCIENCE FOUNDATION
SETTING SCIENCE AGENDAS FOR EUROPE

European Space Policy Institute

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Outreach

- The Vienna Vision will be distributed to all interested stakeholders in the academic world, space agencies, intergovernmental bodies, media, as well as politicians involved in space research-related initiatives.
  - Input to the upcoming "European Objectives and Interests to Space Exploration" to be presented at the "International Space Exploration Conference" 8-9 November 2007
  - Forthcoming presentation at the Scientific and Technical Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space in February 2008