WOMEN IN SCIENCE: CHALLENGES & OUTLOOK

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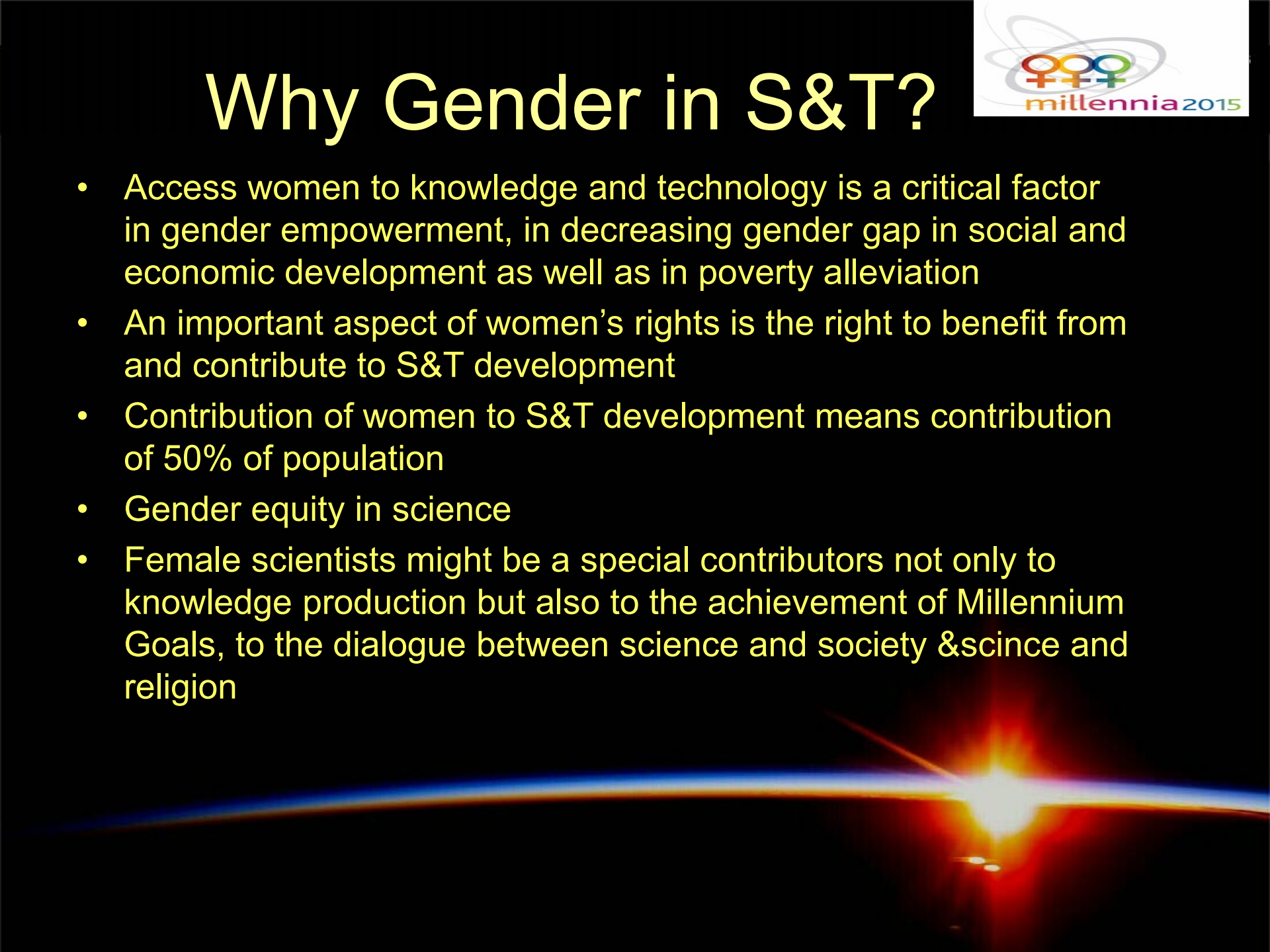
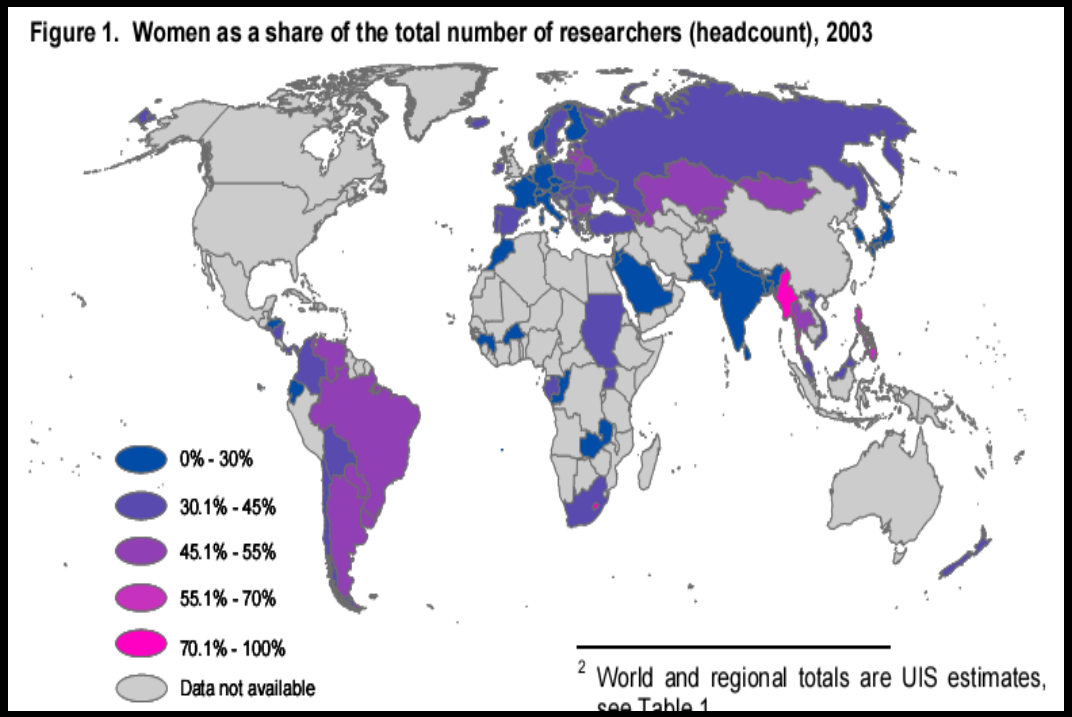
Why Gender in S&T?

- Access women to knowledge and technology is a critical factor in gender empowerment, in decreasing gender gap in social and economic development as well as in poverty alleviation
- An important aspect of women's rights is the right to benefit from and contribute to S&T development
- Contribution of women to S&T development means contribution of 50% of population
- Gender equity in science
- Female scientists might be a special contributors not only to knowledge production but also to the achievement of Millennium Goals, to the dialogue between science and society &scince and religion



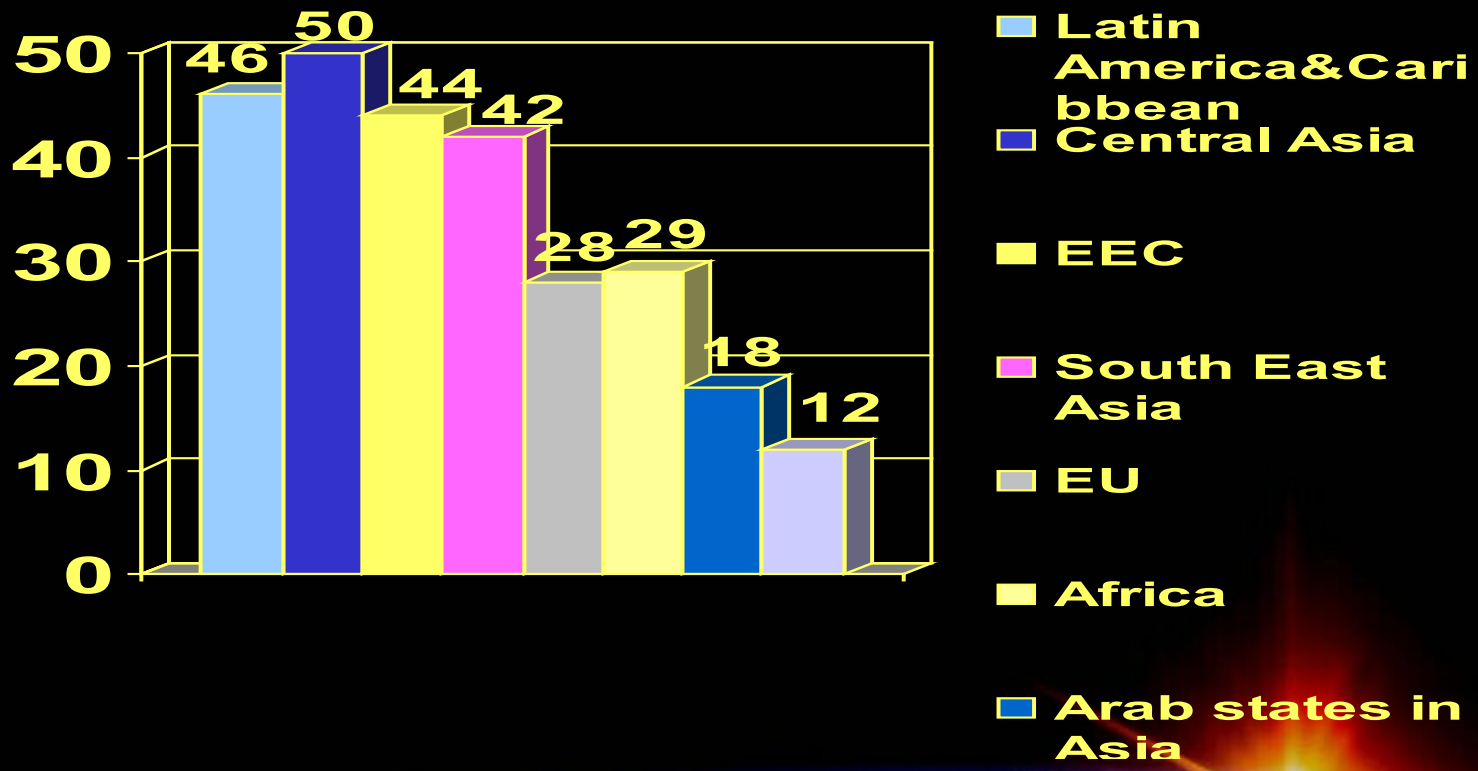
State of the Art
Trends & Problems Formed in the Past

Women as a share of total number of researches

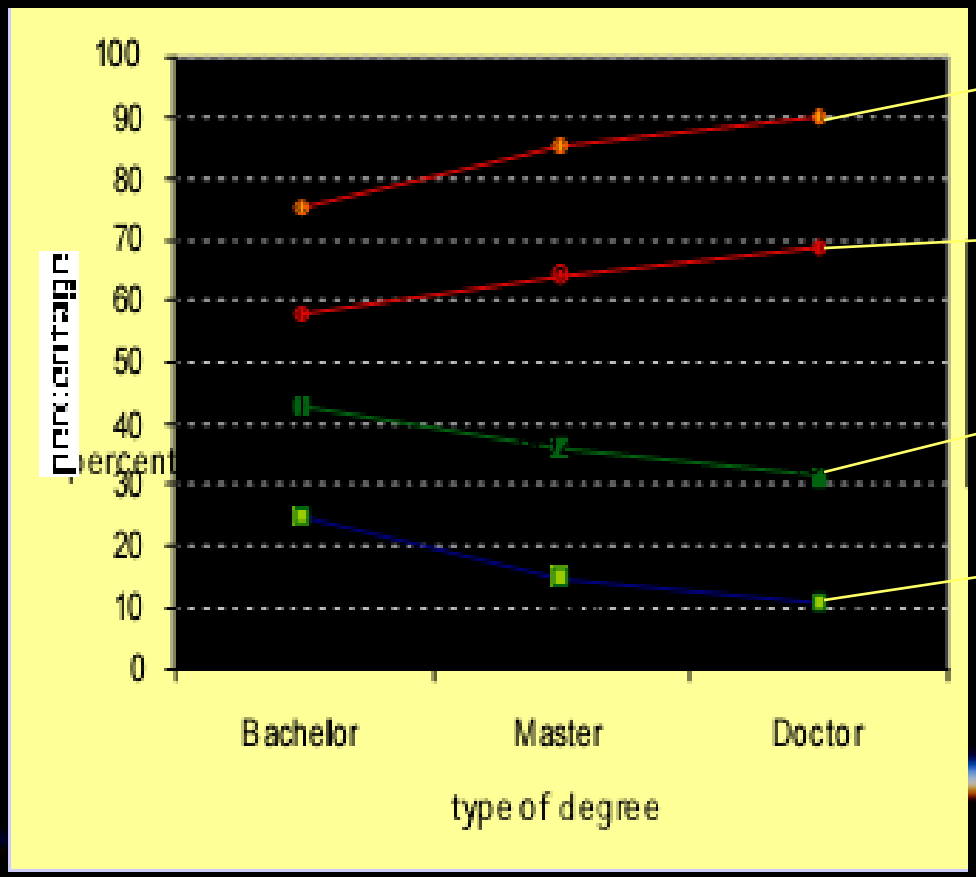


- Women constitute only slightly more than one-quarter of the world researchers
- Only in 17 countries gender parity in achieved
- In 69 countries women parity is almost achieved (about 45%)
- In more than 40% of the World' countries women represent less than 30% of researches
- In more that 80% of the World's countries women represent less that 45% of researches
- In 43 countries – only 9% of researchers

Women's share in the total number of researches: regional averages



Statistics from USA : percentage of women with S&E degrees in USA



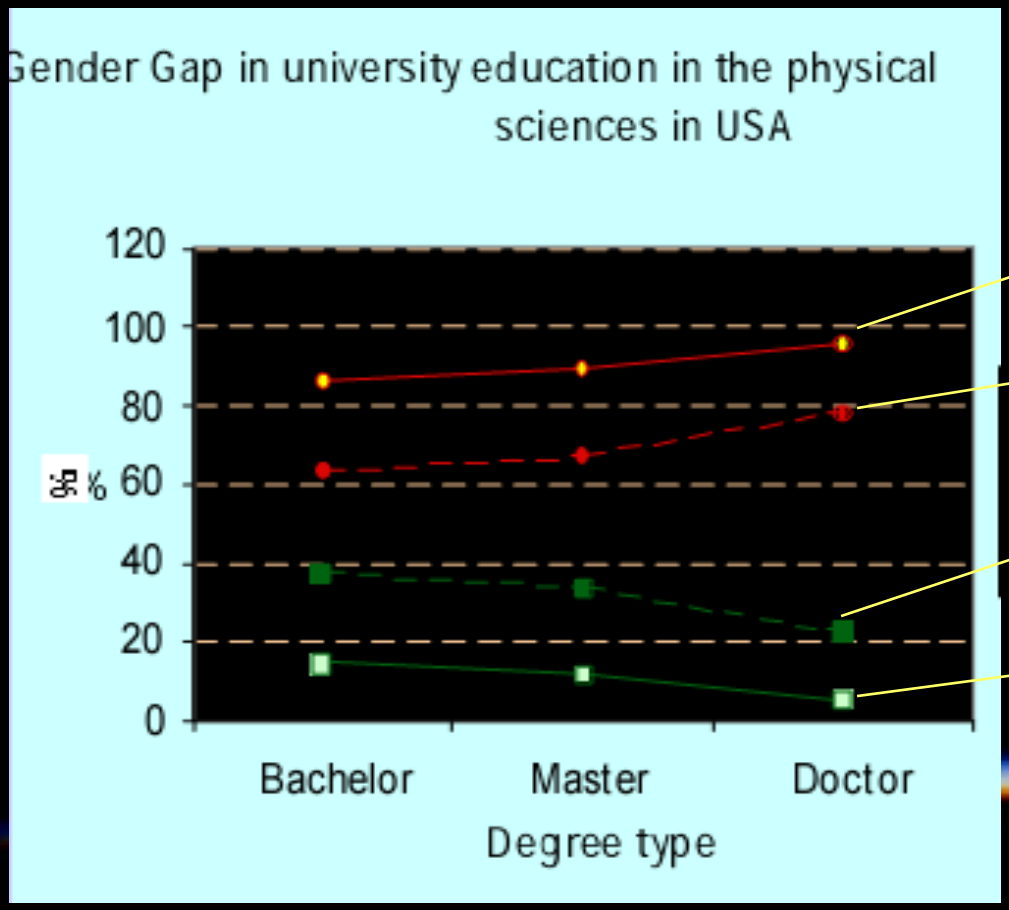
Men -1966

Men 1990

Women 1990

Women 1996

Statistics from USA: gender gap in physical sciences in USA



Men 1966

Men 1996

Women 1996

Women 1966

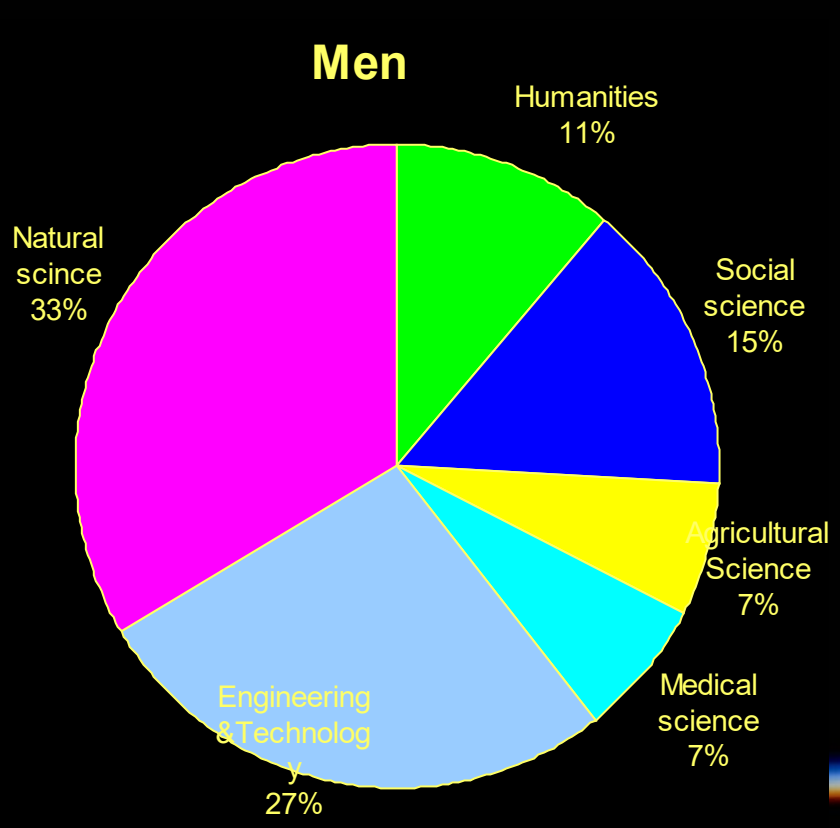
Trends in USA

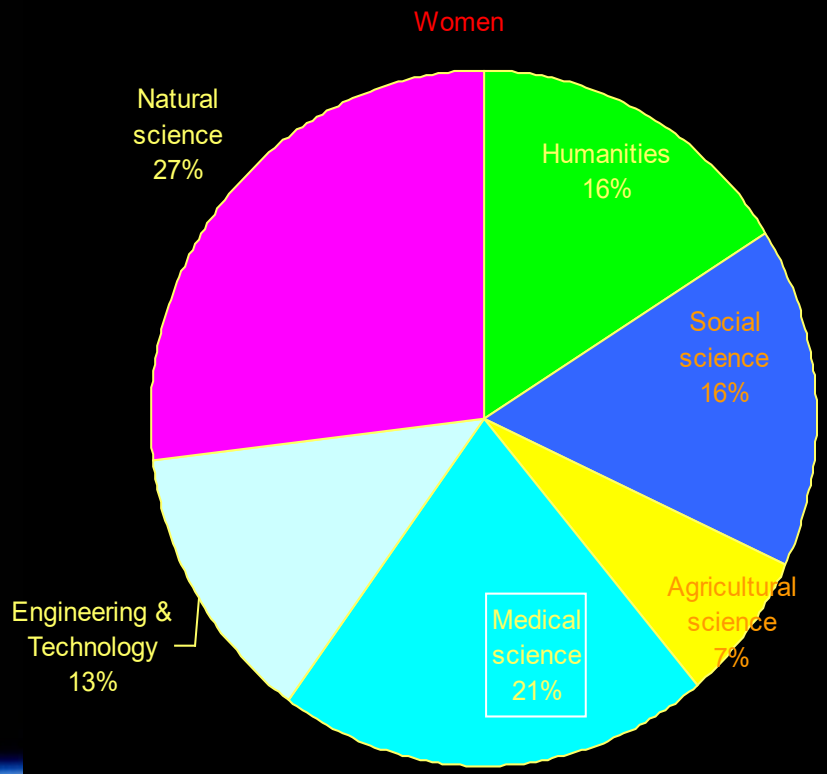
- Gender gap is decreasing with time even in physical science
- Gender gap increases with increasing level of education
- Women percentages is less in physical science if compare to S&E

Statistic from EU: relative share of women & men in a typical academic career, 1999-2003

- Trends in EU
- Gender gap at the highest stages of academic career is beginning to close, but at very slow pace

Researches in EU-25 by main scientific fields and sex

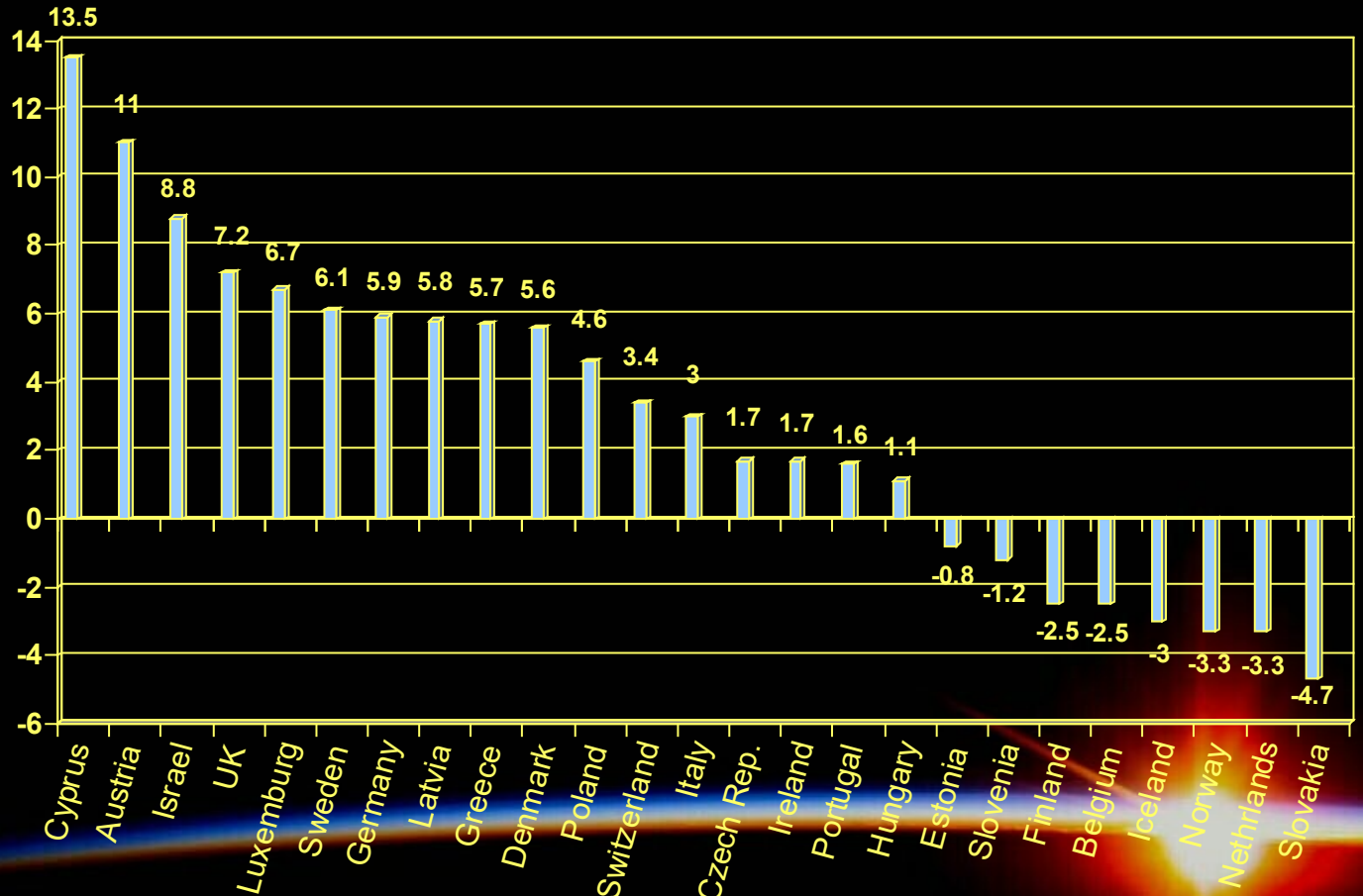




Women in some fields of knowledge

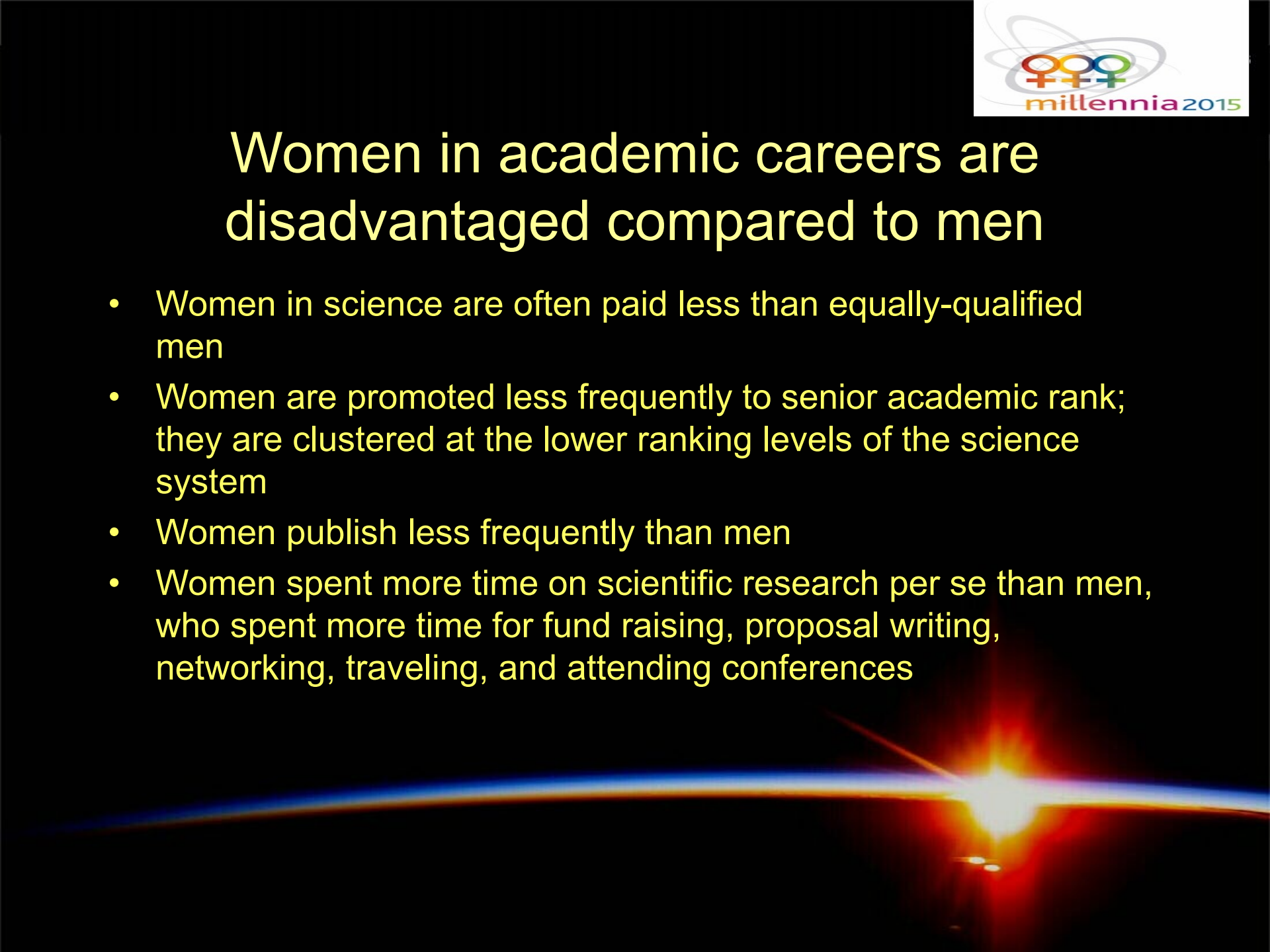
- In many regions the participation of women in bio and life sciences has increased and continues to increase
  - Feminization of biosciences in Europe; women make up over 50%
  - 43% of UK university post-doctoral researchers were women
- Women's level of representation in "harder" sciences (physics & engineering) is low around the world
  - in US, for every 5-6 men who graduated from an engineering program there is one women
  - in EU, women earn 21% undergraduate in physics

Research funding success rate differences between women and men, 2004



Women in academic careers are disadvantaged compared to men

- Women in science are often paid less than equally-qualified men
- Women are promoted less frequently to senior academic rank; they are clustered at the lower ranking levels of the science system
- Women publish less frequently than men
- Women spent more time on scientific research per se than men, who spent more time for fund raising, proposal writing, networking, traveling, and attending conferences



Women pay a lot for the scientific career

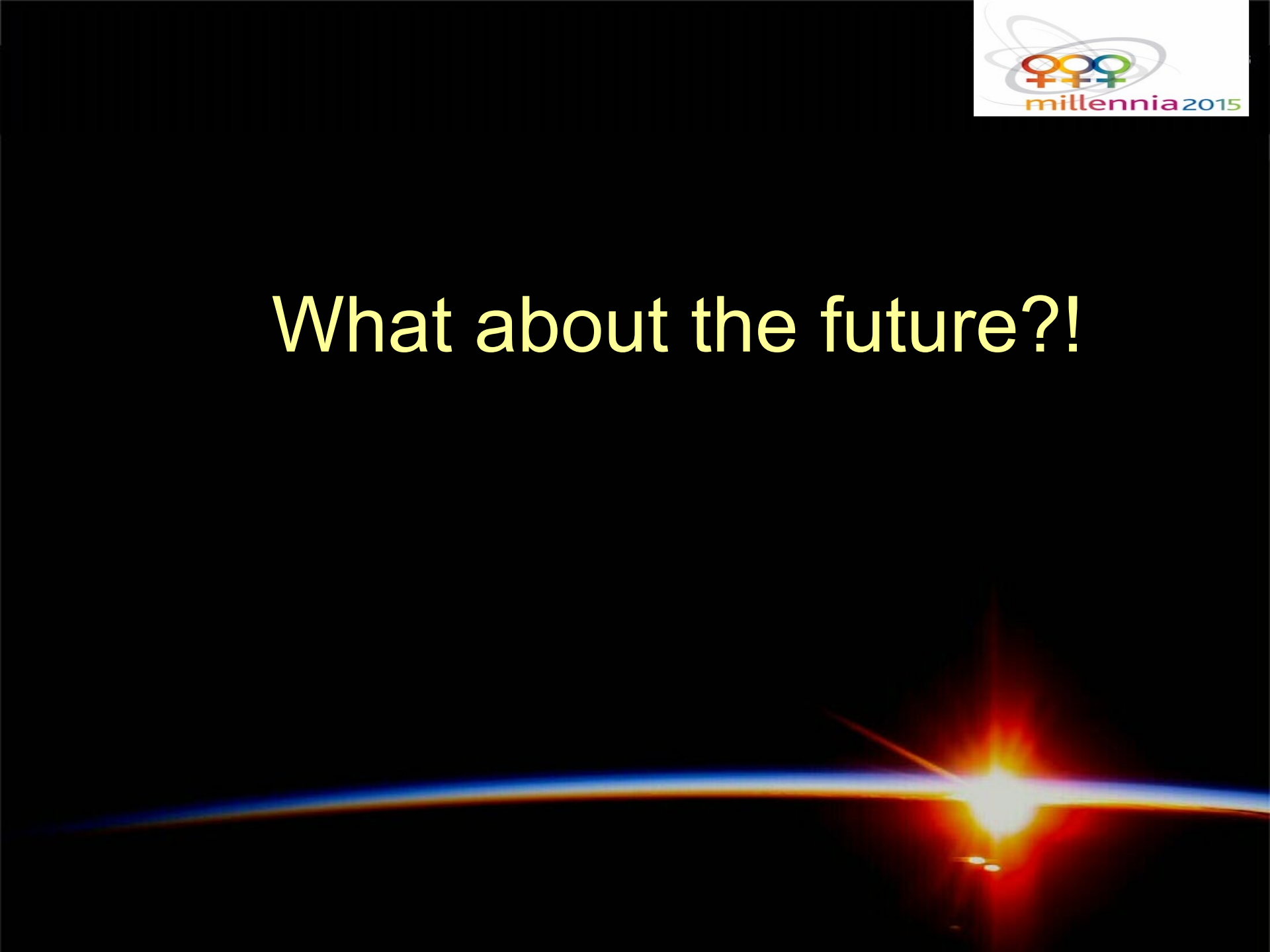
- In US, 37% of women scientists aver the age of 50 are childless compared to 9% of men
- In US, 30% of female scientists are not married, compared to 6% of men
- Status of wife and mother are strong factors in women's scientific career and women have to manage both

Problems & Gaps

Despite the improvements !!

- Gender disparities in knowledge production is a rule around the world, and under present trends we won't meet Millennium goals
- Women account to minority of world's researches
- Many women around the world do not have a chance to enter R&D system
- Gender gap intensifies at the advanced level of academic career
- Lack of women at the ministries and agencies, which regulate S&T development throughout the world
- Lack of statistics & information for robust policy
- Lack of awareness that current trends should be changed
- Discrimination becomes far more subtle and indirect
- Balancing Career and Family

What about the future?!



Change mind and stereotype

"A boy needs a career whereas a girl needs a husband

Outlook

Where we are moving to?!

To Knowledge-based economy

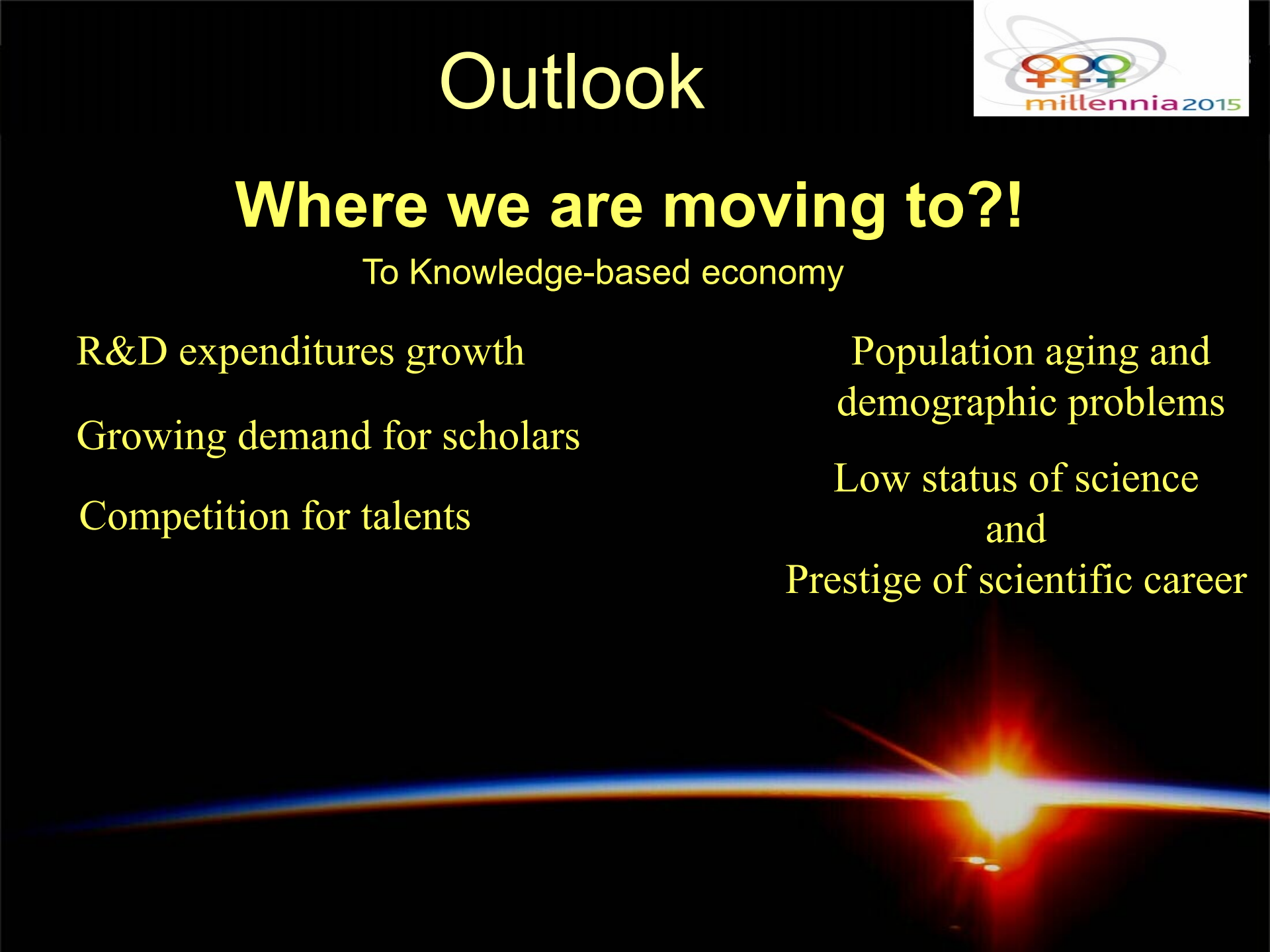
R&D expenditures growth

Growing demand for scholars

Competition for talents

Population aging and demographic problems

Low status of science and Prestige of scientific career



Outlook

Where we are moving to?!

- To Information society
  - E-government – louder voice of women in policy making
  - Distance learning (for those who broke her academic career)
  - ICT will help to Balance Career and Family, to develop family-centered policy with flexible working

Outlook

Where we moving to?!

- To new status of women is society (more women at the top of policy hierarchy)
  - Increase representation of women at national, regional and international policy – and decision making bodies responsible for regulation S&T
- To democratization of S&T policy development process
  - Gender equity should be a part of democratization of policy development process in S&T
  - Gender equity should be a part of S&T agenda
  - Women should be among stakeholders in participatory approach implementation for S&T strategy and policy development

Outlook

New emerging role of Women in Science

- Dialogue between science and society
- Dialogue between science and religion
- Providing sustainable development, environmental security
- Responsibility under uncertainties
  - Novel technologies bring huge risks – responsible attitude to new scientific breakthroughs
  - Bring knowledge about opportunities of novel technologies to family, schools and society

Foresight for the future exploration, building networks & shaping tomorrow

- Strategic thinking of women!!
- Conceptualization of gender equity in science
- Conceptualization and outlining key emerging problems & opportunities for female in science
  - Mapping of regional differences of problems and roots of problems
- Contribution of female scientists to the achievement of Millennium goals/ national strategic goals
- Foresight - a place for building networks and dialogue between different stakeholders
- Foresight – a learning process, sharing & accumulation of knowledge
- A place for the building awareness of top officials – men

Thank you