



# The Social Responsibility of Scientists – A Pugwash Perspective

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# Russell-Einstein Manifesto (1955)

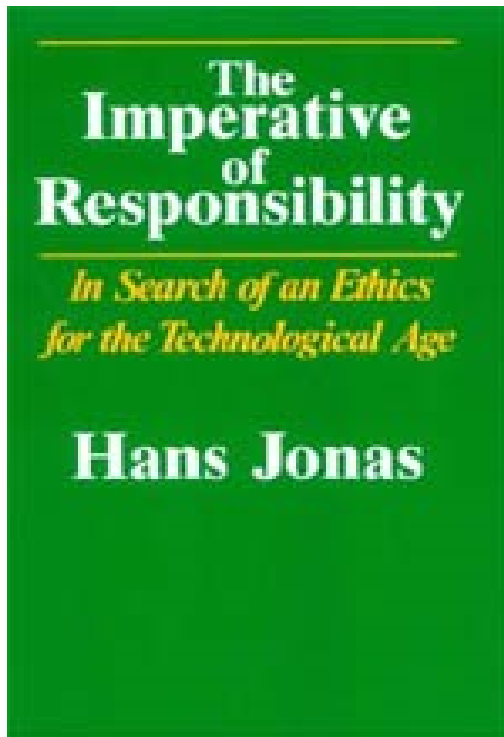
1. Modern Science can bring about enormous destruction
2. Scientists ought to take a stand on these issues
3. The future is open – also scientists can help to create a human world.



Rotblat 1908–2005



# The imperative of responsibility



*"Act so that the effects of your action are compatible with the permanence of genuine human life" ...*

*Never must i/ the existence or ii/ the essence of 'man' as a whole be made a stake in hazards of action.*

Jonas (1903-1993).



# Pugwash Conferences on Science and World Affairs



## 1. Scientific community

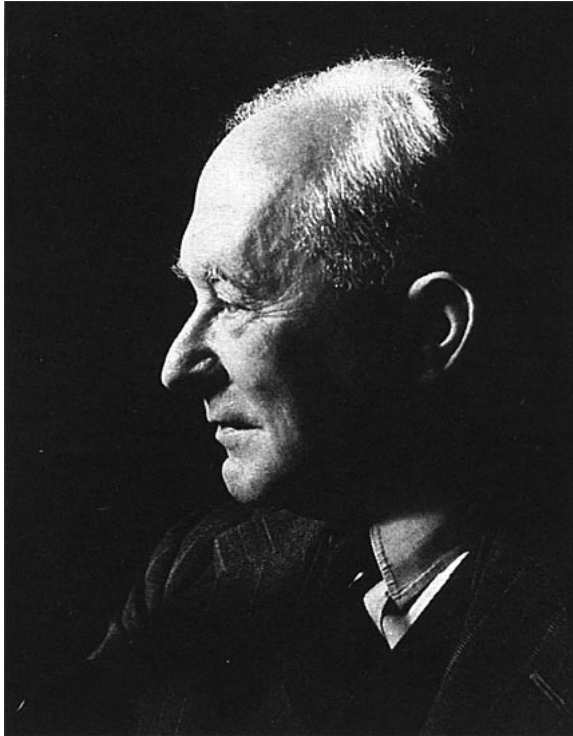
- Academic &
- Social Responsibilities

## 2. Prevent misuse of science

- Nuclear peril
  - WMD
  - Regional conflicts
  - Space security
  - Non-military threats
  - Social responsibility



# Max Born (1882 – 1970)



Affect the members of the scientific community by asking them to endorse a moral imperative

*(... to try to arouse the conscience of our colleagues, p. 9)*



## Frédéric Joliot-Curie (1900 – 58)

A big conference must be organised (...)

*to assess objectively the effects of nuclear weapons, the magnitude of the threat facing mankind in the event of their use, and the effect of continued testing of these weapons, p. 10.*





# Bertrand Russell (1872 – 1970)



Use the press to educate  
the public

Ask governments to sign a  
declaration

- Approach every neutral power: *I think Switzerland most likely to agree at first*, p. 9
- *Russell then outlined the contact he had recently with Prime Minister Jawaharlal Nehru [of India]*, p. 14.

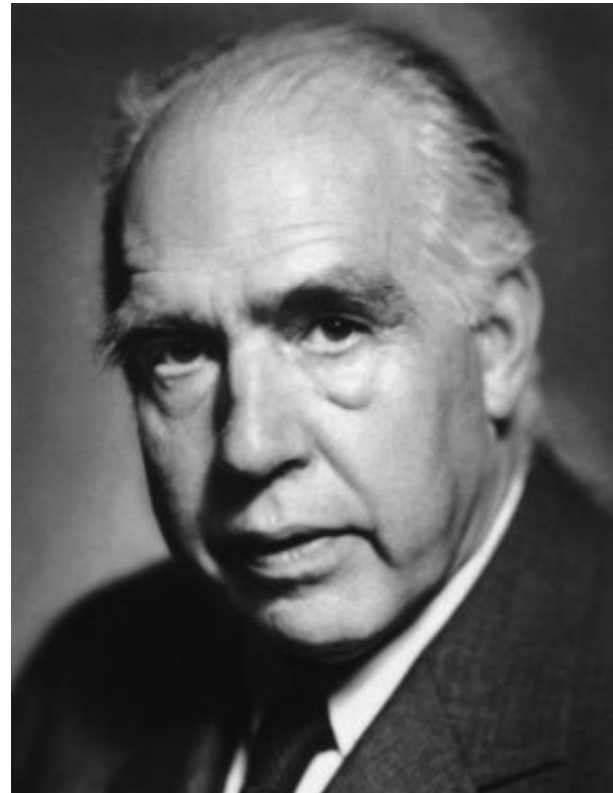


## Niels Bohr (1885 – 1962)

Try to control and influence  
International law.

*He would have believed that  
"anything of this sort of  
Russell's proposal should  
come really from the United  
Nations, p. 16.*

Bohr's open letter to UN,  
June 9, 1950.







# Teaching Ethics to Science and Engineering students

**Ethics Education Programme - Mozilla Firefox**

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http://portal.unesco.org/shs/en/ev.php-URL\_ID=6199&URL\_DO=DO\_TOPIC&URL\_SECTION=201.html

**United Nations Educational, Scientific and Cultural Organization**

**Social and Human Sciences**

**FOOD FOR THOUGHT, THOUGHT FOR ACTION**

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**Ethics > More**

**Ethics Education Programme (EEP)**

This programme aims at initiating and reinforcing educational activities for the teaching of ethics to scientists and the development of a quality assessment and certification system. Schools of ethics (as networks of experts) will be established with pilot-programmes in teaching of ethics of science and technology, in order to promote education and to serve as a forum for the exchange of ideas between specialists, as well as to encourage studies, research projects and diffusion of information on the social, ethical and legal implications related to the advancement of science and technology. The priority areas for ethics teaching in this biennium are Latin America and East and Central Europe.



# How to prevent misuse of Robotics

1. Formulate a moral imperative that scientists and engineers are asked to endorse
2. Organise conferences where the effects of robotics are objectively outlined. (Does robotics pose a threat to Humanity?)
3. Influence national governments to take action and abstain from certain uses
4. Influence UN to take action: Towards an international treaty regarding robotics?
5. Develop teaching material to be used in the ethical training of science and engineering students



# Social Responsibility of Scientists

Knowledge and understanding of technical problems bring responsibility:

2. Technical advice and assistance for solving the incidental problems that may emerge.
3. Warn of dangers that may arise from current discoveries.
4. Take a global view in the interest of mankind.



Michael Atiyah (b. 1929)



# Roboethics on the Pugwash agenda?

## Prime criteria

1. The topic should be an emerging issue, i.e. that is largely uncharted in public awareness and still offers scope for remedial action;
2. The topic should comprise a real or potential security challenge, i.e. be a threat to sustainable peace;
3. It should pose analytical and ethical challenges to current conventional wisdoms, and therefore require a way of thinking fitted to the new circumstances.