ICRP Task Group 94 on the Ethics of Radiological Protection

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ICRP TG 94

2nd NA Workshop
Harvard Kennedy School, Cambridge, MA, USA
March 10-12, 2015

Terms of Reference of TG 94

- The MC approved the creation of **Task Group 94** on the ethics of radiological protection in Abu Dhabi in October 2013
- The Task Group will develop an **ICRP Publication** presenting the ethical foundations of the system of radiological protection recommended by the Commission.
- The purpose of this Publication is to:
  - **Consolidate** the Recommendations
  - **Improve** the understanding of the system
  - **Provide a basis for communication** on radiation risk and its perception

Task Group 94 members

Full members:

Kunwoo Cho, Korea (Chair since March 2015)

Deborah Oughton, Norway (Chair; Oct. 2013~Feb. 2015)

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Sven Ove Hansson, Sweden

Chieko Kurihara-Saio, Japan

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Critical reviewers C4:

- François Bochud, Switzerland
- John Takala, Canada

Critical reviewers MC:

- Car-Magnus Larsson
- Eliseo Vano

Where are we now?

Draft Report Structure

Historical Context

Common Values

Core Ethical Values Underpinning the System

- Beneficence/Non-maleficence
- Dignity
- Justice
- Prudence/Acting Prudently

Applications

- Medical
- Worker and Nuclear Safety
- Waste Management
- Accidents
- Environmental Protection

Important “Floaters”

- Reasonableness and Tolerability
- Transparency and Accountability

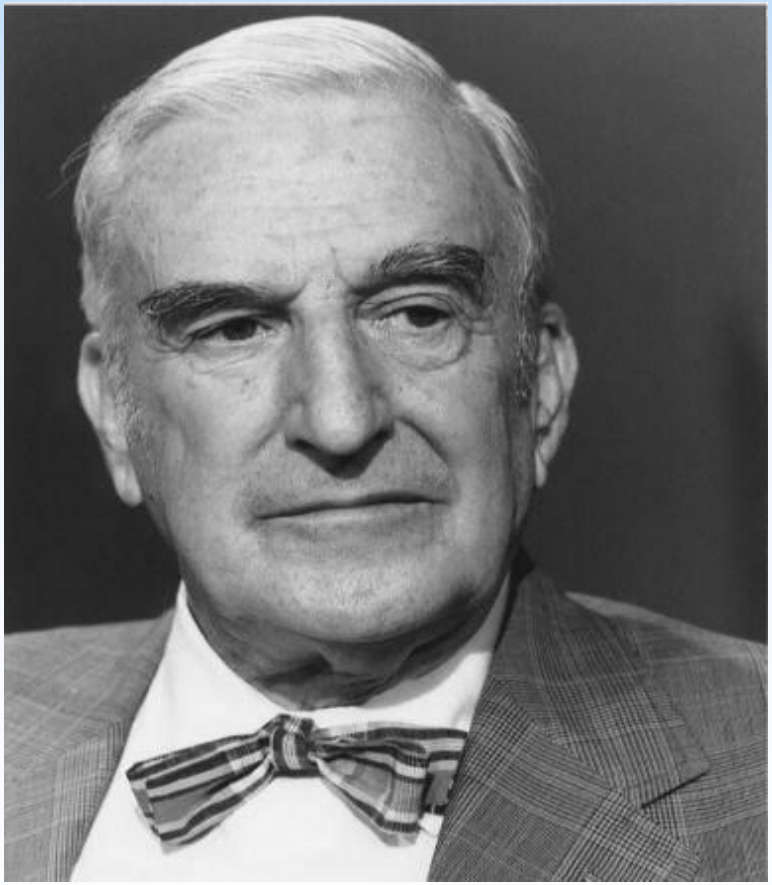
- Part of **development** and **implementation** of the system rather than key values underpinning the system?

Historical Context

Evolution of the System of Radiological Protection: Science, Ethical Values, and Experience

- Influence of scientific developments
- Influence of different applications – medical, energy, accidents, …
- Influence of changes in societal and cultural attitudes

Science and ethics in radiological protection
- A long tradition -



"Radiation protection is not only a matter for science. It is a problem of philosophy, and morality, and the utmost **wisdom.**"

Lauriston S. Taylor (1902 – 2004)

The Philosophy Underlying Radiation Protection
Am. J. Roent. Vol. 77, N° 5, 914-919, 1957
From address on 7 Nov. 1956

slide from Jacques Lochard

Implicit Values

- "the dangers of over-exposure ... can be avoided by the provision of adequate protection" ICRP 1928
- "every effort be made to reduce exposures to all types of ionizing radiation to the lowest possible level". ICRP 1951
- "… to contribute to an **appropriate level of protection** against the detrimental effects of ionising radiation exposure without unduly limiting the **benefits associated** with the use of radiation." ICRP 103, § 26
- "… to manage and control exposures to ionizing radiation so that **deterministic effects are prevented**, and the risks of stochastic effects are reduced to the extent **reasonably achievable.**" ICRP 103, § 29

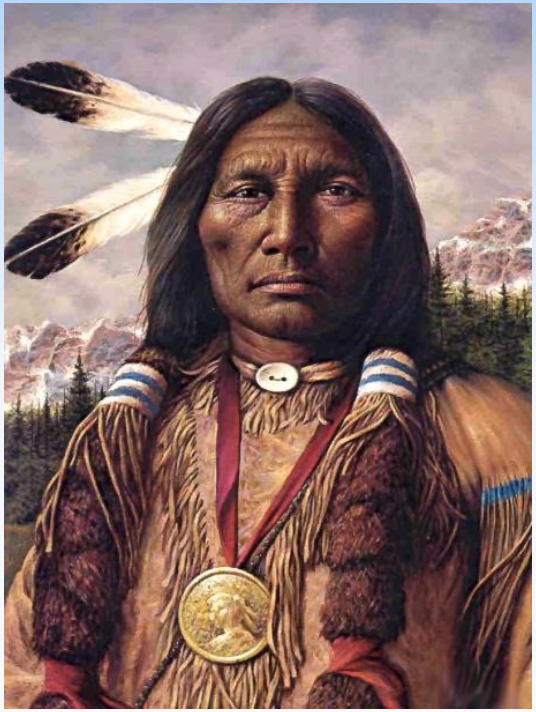
… implicit values

- The principle of justification**.** Any decision that alters the radiation exposure situation should **do more good than harm**

- The principle of optimisation of protection**.** All exposures should be kept **as low as reasonably achievable**, taking into account **economic and societal factors** with restrictions on individual exposure to **avoid inequities** between individuals

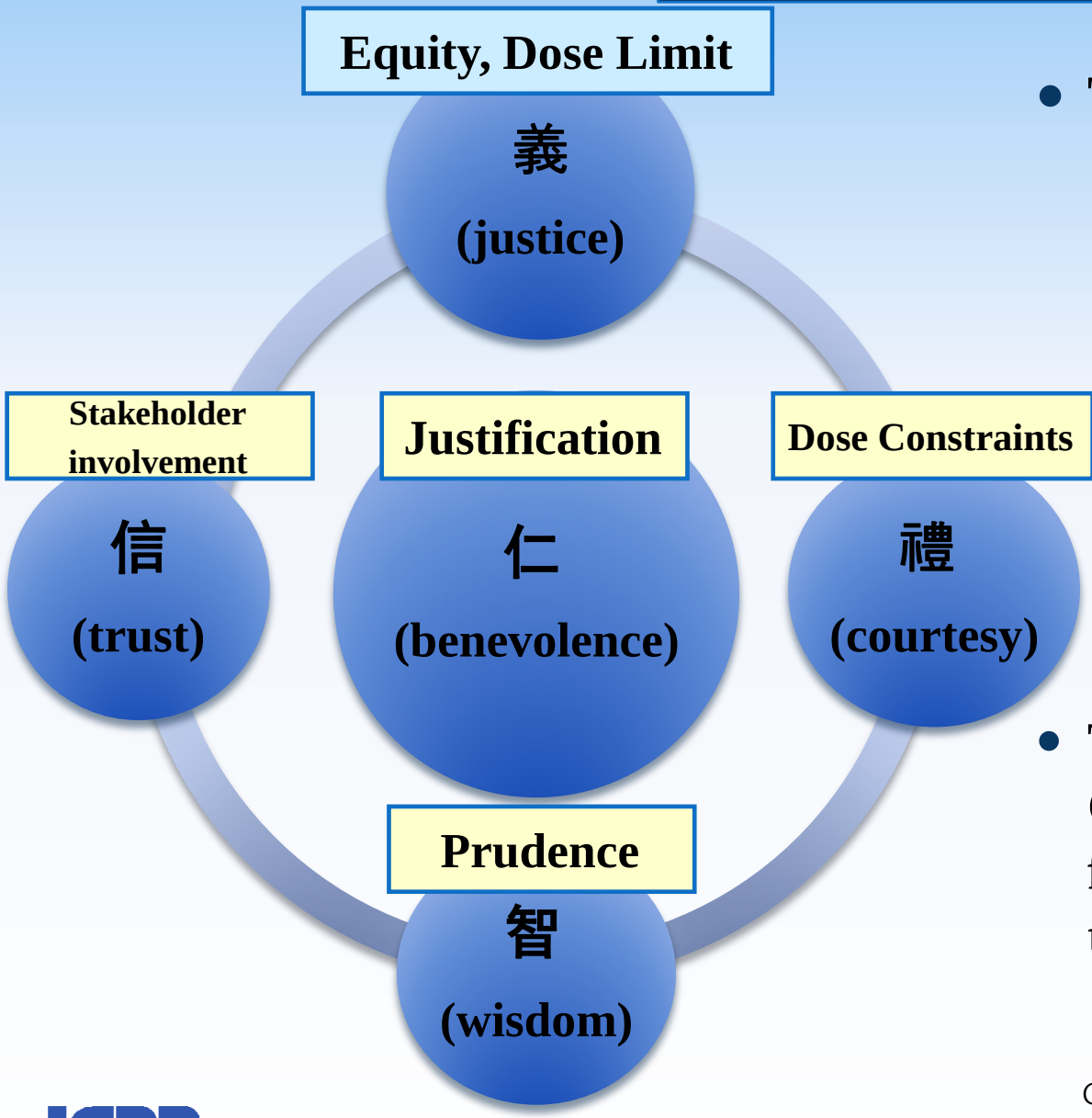
- The principle of limitation of individual exposure: All individual exposures should **not exceed the dose criteria** recommended by the Commission

Common Values Approach


Not only grounded in Western Ethical Theories but on a **study of the oral and written traditions** which have guided people in different cultures over the ages (Friedo Zoelzer, 2011)

The value system of Classic Confucianism



- **The five virtues:**
  - **Benevolence**
  - **Righteousness/justice**
  - **Courtesy (Propriety, Manners)**
  - **Wisdom**
  - **Sincerity/trust**

- **The traditional ethics in China is mainly derived from Classic Confucian thought.**

Courtesy of Mr. Senlin Liu, ICRP C4
& slightly modified by Kunwoo Cho, ICRP C4

Biomedical Ethics - Beauchamp and Childress, 1979 (1st edition)

- **Respect for autonomy** (a norm of respecting the free-will and decision-making capacities of self-governing persons)
- **Nonmaleficence** (a norm of avoiding the causation of harm)
- **Beneficence** (a group of norms for providing benefits)
- **Justice** (a group of norms for distributing benefits, risks and costs fairly)

UTILITARIANISM | DEONTOLOGY

Ethical Theories

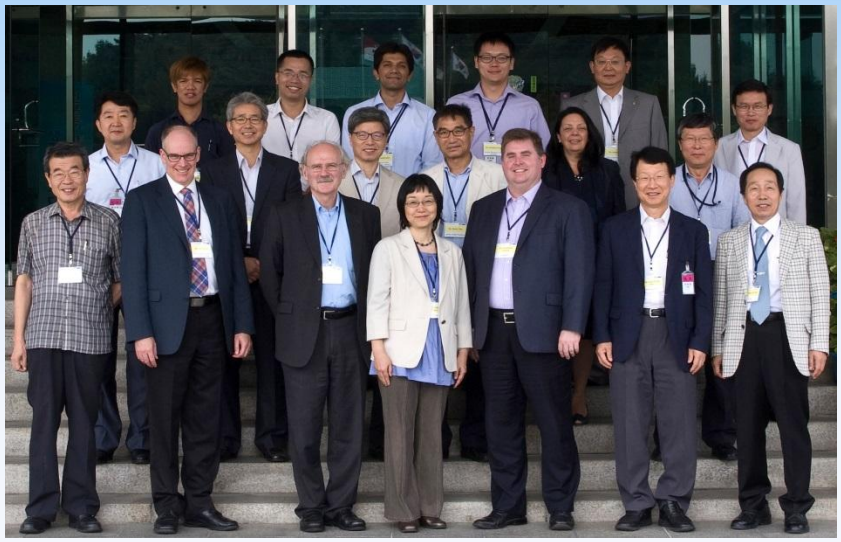
Broadly compatible with the principles of:

Autonomy | Beneficence | Non-Maleficence | Justice

Biomedical Principles

Widely adapted in other areas: public health and environmental ethics, technoloy assessment, etc

The first series of workshops on the ethical dimensions of the radiological protection system



Daejeon, Korea, August 2013

Milan, Italy, December 2013

London, UK, June 2014

Baltimore, US, July 2014

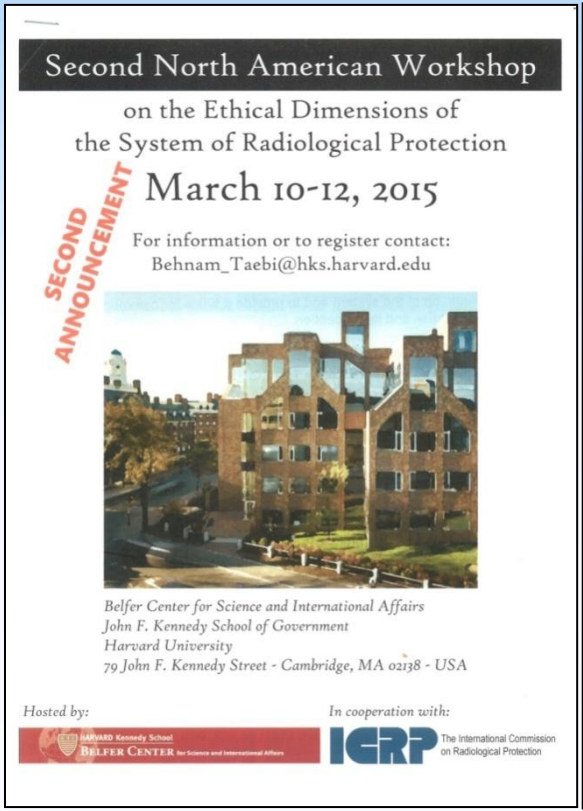
Related Meetings

- AOCRP-4, Kuala Lumpur, Malaysia, 12-16 May 2014
- 2nd International Symposium on Ethics of Environmental Health, Budweiz, Czech, 15-19 June 2014

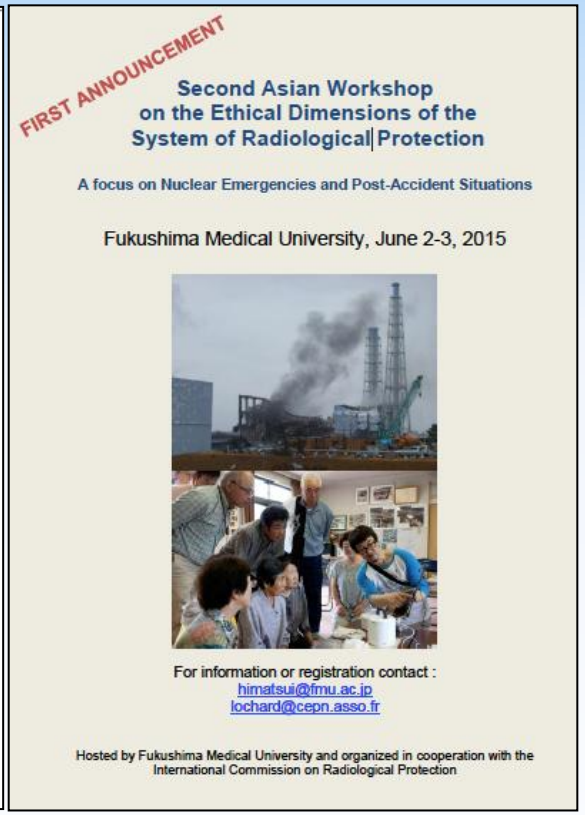
- Fourth European IRPA Congress, Geneva, Switzerland, 23-27 June 2014

The second series of workshops on the ethical dimensions of the radiological protection system

Madrid, Spain
Feb. 2015



Cambridge, USA
March 2015



Fukushima, Japan
June 2015

Core Ethical Values Underpining the System

- **Beneficence/Non-maleficence**
- **Dignity**
- **Justice**
- **Prudence**

In no particular order or hierachy. Balance will depend on case and context.

Values or principles (or norms or….)

Beneficence/Non-Maleficence

Definition in ethics

Beneficence (*and non maleficence)* – promoting or doing good as well as preventing, removing or avoiding evil or harm (Frankena, 1963);

Non-Maleficence – first, do no harm (The Hippocratic Oath)

Relevance in RP

Beneficence – health benefits of radiotherapy; indirect benefits of other applications involving radiation exposure; benefits of reducing exposure

Non-Maleficence – all exposures have an inherent risk of causing harm

Challenges – distribution of risks, harms and benefits; measurement of benefits and harms

WHO definition of health – well being

Dignity

Definition in ethics

Implication: Every individual deserves unconditional respect, whatever her/his age, sex, health, social condition, ethnic origin and religion

Respecting Autonomy – the capacity to choose freely for oneself and be able to direct one's own life; to be treated as an end, and not only as a means….Not natural, described by Kant (18C), enshrined in the UN Universal Declaration of Human Rights (1948) conquest over the inhuman

Relevance in RP

Consent – patients, workers (public)

Stakeholder engagement – empowerment

Partially from slide of Jacques Lochard

Justice

Definition in ethics

Fair distribution of resources, risks and benefits
Focus on the vulnerable/worst-off (Rawls, Sen)
Distributive Justice, Corrective/Reciprocal Justice, and Procedural Justice
Equity – equal opportunity/equal treatment or equal status

Relevance in RP

ALARA and constraints
Distribution of risks and benefits
Differences across age, gender, time and space
Future generations

Prudence/Acting Prudently

Definition in ethics

Long ethical tradition: Aristotle, Buddhism, Confucianism, ancient peoples of Oceania and America

Aristotle: *"phronesis"* (practical wisdom, rational choice)

OED: "to recognize and follow the most suitable or sensible course of action … caution"

Rio 1992: "the precautionary approach … where there are threats of serious or irreversible damage, lack of full scientific certainty shall be not used as a reason for postponing cost-effective measures to prevent environmental degradation"

Relevance in RP

Cornerstone of radiation protection

ALARA, LNT, etc

Evaluation of core values against applications/examples

- **Medical**

Ethical issues in Justification, patient consent and information, health professionals, attention to dose/ competences & equipment, patient and society

- **Nuclear sector**

Workers dose, RP culture, stakeholder engagement, low doses and prudence

- **Future Generation**

Selected list of RP issues concerned with future generations, definition of future generations, radioactive waste management, intellectual legacy

Where to next?

Further
Evaluation of core values against applications/examples

Forthcoming meetings

- SRP Annual General Meeting on the topic of “Radiation Protection Culture and Ethics”, **Eastbourne, England, 19-21 May 2015**

- Second Asian Workshop on the Ethical Dimensions of the System of Radiological Protection, **Fukushima, Japan, 2-3 June 2015**
  - A focus on Nuclear Emergencies and Post-Accident Situations

- ICRP 2015: ICRP 3rd International Symposium on Radiological Protection with a **special session** on the ethics of radiological protection, **Seoul, Korea, 20-22 October 2015**

Provisional timetable

- **Adoption of the TG 94 report by C4** in October 2015 in Seoul, Korea, at the occasion of the general meeting of the Commission in conjunction with the 3rd International Symposium on the System of Radiological Protection
- **Public consultation** beginning of 2016
- General discussion at the **IRPA14 Congress**, Cape Town, in May 2016
- **Adoption for publication** of the revised TG 94 report by the Main Commission in **autumn 2016** or **spring 2017**

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