

# Strahlenschutz PRAXIS

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ionisierender und nichtionisierender Strahlung



Annagelb und Eleonorengrün  
im „richtigen Lichte“ betrachtet

Annagelb und Eleonorengrün  
Angelika Henrichs, 2014  
Quilt-Textilcollage  
100 x 131 cm  
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## The Ethical Foundation of the Radiation Protection System and the ICRP Initiative

The system of radiological protection is based on 3 basic principles – justification of decisions, optimization of protection and application of dose limits – combining scientific knowledge from different disciplines, a set of values rooted in ethics and moral social behaviour, and the experience accumulated from the day to day practice of radiation protection professionals.

### Ethical considerations in ICRP publications

Explicit considerations about the ethical basis of the system of radiological protection are almost absent from ICRP publications. However, there was a constant reflection conducted by the commission on the ethical foundations of the system that can be discovered by carefully analyzing these publications. There are also the past writings of several prominent members of the commission, – writings, which reflect the awareness that the system is also based on ethical values.

“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)

### Historical development

ICRP Committee 4 (C4) established a Working Party (WP) to reflect on the ethics of radiological protection at the general meeting of the commission in Porto in November 2009. The WP reviewed the ethical theories and concluded that the system of radiological protection is rooted in the 3 major

theories of ethics: virtue, deontological and utilitarian ethics (see box at the right side). The WP also recognized the importance for ICRP to adopt a “cross cultural” approach, as international recommendations must be broadly applicable worldwide.

In autumn 2012 in Fukushima, Japan, the ICRP Main Commission (MC) endorsed the C4 proposal to prepare the “terms of reference” for a Task Group on the ethics of radiological protection and also to develop the work in close cooperation with specialists of ethics and radiation professionals through IRPA Associate Societies in the different regions of the world. A cooperation proposal was sent to IRPA late 2012 and an agreement was established between ICRP and IRPA early 2013. Finally, the MC approved in Abu Dhabi in October 2013 the creation of a Task Group (N°94) to develop an ICRP publication presenting the ethical foundations of the system of radiological protection recommended by the Commission. (See box at the next page)

A first series of meetings is organized in 2013 and 2014: Daejeon, Korea, August 2013; Milan, Italy, December

2013; London, UK, June 2014; Budweis, Czech Republic, June 2013; Baltimore, USA, July 2014.

### The system of radiological protection

The system of radiological protection combines the duty to act wisely and reasonably (virtue ethics) at the same time respecting both individual rights (deontological ethics) and the pursuit of collective interest (utilitarian ethics). Prudence, beneficence/non-maleficence, justice and dignity are the cardinal values of the system and they are widely shared across cultures.

- **Prudence** is the virtue of deliberation and judgement in order to make choices without the full knowledge of the consequences of our actions. It is the disposition to choose and act on what is in our power to do and not to do. Prudence is related to action.
- **Beneficence/non-maleficence:** The value of beneficence together with non-maleficence are strongly tied to the utilitarian theory of ethics. They concern human welfare with the objective to reduce the harms and optimize the benefit of social practices.

**Values are widely shared across cultures**

**Virtue, deontological and utilitarian ethics**

### The 3 major theories of ethics

#### Virtue ethics

is moral what is perfecting human beings as virtuous agents. Emphasize is placed on the personality traits driving behaviour.

#### Deontological ethics

is moral what is accomplished according duties and rules whatever the consequences. Emphasize is placed on duties and rules.

#### Utilitarianism ethics

is the most well-known variant of consequentialism. Its generic principle states that is moral any action or rule which is leading to the largest increase of social welfare among several alternatives. Emphasize is placed on the consequences of actions.



### The objective of the Task Group

The Task Group chaired by Deborah Oughton from the University of Life Sciences in Norway is to consolidate the recommendations, improve the understanding of the system and provide a basis for communication on radiation risk and its perception.

- Justice in the system is related to social fairness i.e. how the burdens and benefits within the society are distributed but also refers to avoid or reduce inequities in the distribution of the risk associated to radiation.
- Dignity is an attribute of the human condition meaning that every individual deserves unconditional respect, whatever her/his age, sex, health, social condition, ethnic origin and religion. Dignity of individuals is the corollary of autonomy, which implies freedom and the capacity to deliberate, decide and act.

Reasonableness and tolerableness also are key values for the practical implementation of the system.

#### Next steps

The next steps will be for the Task Group to analyze in greater depth the values and ethical procedures that structure the different components of the system of radiological protection considering the types of exposure situations (existing, planned and emergency), the categories of exposure (medical, occupational or public), the dose criteria (reference levels, dose constraints and dose limits) and requisites (information, training, monitoring, health surveillance, ...).

The Task Group will also elucidate the ethical dimensions of the ICRP recommendations in the different domains of practical implementation of the system: occupational health, medicine, protection of the environment, radioactive waste management etc.

A second series of meetings is planned in 2015 in Spain, Japan, UK and USA. The objective of the TG is to finalize its report in order to have a public consultation by the beginning of 2016. Final discussion will take place at the IRPA 14 Congress, Cape Town, in May 2016 and adoption for publication by the Main Commission in autumn 2016.

It is expected that the dialogue initiated in 2013 by the Commission between ethicists, philosophers, social scientists and the radiation protection professionals will allow to successfully complete the initiative of the Commission.

Jacques Lochard □

### Zum Titelbild

## Annagelb und Eleonorengrün im „richtigen“ Lichte

Hier auf der Abbildung zeigt die Künstlerin Angelika Henrichs, dass ihre Quiltarbeit im richtigen Lichte betrachtet auch strahlen kann. Die Arbeit wurde bei der IRPA-Tagung in Genf im Juni 2014 in einer parallel zur Tagung verlaufenden Ausstellung gezeigt. (Siehe hierzu den Bericht auf Seite 73 ff.)

Angelika Henrichs war die Triebfeder zu dieser Ausstellung und konnte 42 Künstlerinnen gewinnen, Arbeiten zum Thema „Radiation“ zu erstellen. Wir freuen uns, dass dieses Jubiläumsheft wie die allererste Strahlenschutz-PRAXIS auch mit einem Bild auf der Titelseite geschmückt ist, das zu einer Strahlenschutztagung entstanden ist und dort gezeigt wurde. Hier demonstriert die Künstlerin mit einer UV-Lampe, dass die aufgenähten Glaselemente fluoreszieren können. Sie hatte durch eine großzügige Spende von Henning von Philipsborn ihr Werk mit Teilen ausstatten können, die es in Annagelb und Eleonorengrün leuchten lassen. Aus der Beschreibung von Angelika Henrichs: „Uranoxid wird bei der Glasherstellung verwendet, besonders beliebt waren die Farben ‚Annagelb und Eleonorengrün‘, benannt nach den Töchtern des bekannten Glasfabrikanten Josef Riedel und seiner Frau Anna-Maria aus Böhmen.“

Hinweis der Schriftleitung: Ein Besuch der Glashütte Riedel, heute in Kufstein zu finden, lohnt sich immer.

Schriftleitung

