

ETHICS IN RADIATION PROTECTION

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Ethics is a branch of philosophy. Its object is the study of both moral and immoral behaviour in order to make well founded judgements and to arrive at adequate recommendations.

Ethics has a two fold objective:

it evaluates human practices by calling upon moral standards and it may give prescriptive advice on how to act morally in a specific kind of situation

The first implies analysis and evaluation. The second is to provide therapeutic advice, suggesting solutions and policies. It must be based on well-informed opinions and requires a clear understanding of the vital issues. In the medical world, doctors are governed by the Hippocratic Oath. Essentially this requires medical staff to do good, not harm.

IRPA has become interested in ethics, with discussion on the creation of a code of ethics at the Executive Council Meeting in Southport in June 1999, the publication of a discussion paper on enhancing the role of IRPA in November 1999 and the matter was discussed at the Associate Societies Forum in Hiroshima in 2000. At that time, it was felt any code should be for individuals and indeed be a code of conduct rather than ethics.

There are two aspects to this.

The first concerns codes of conduct. The Health Physics Society in USA and the Australian SRP have both produced codes of conduct. These deal with the moral issues such as maintaining good work standards, etc.

The other concerns the actual issues involved. There appear to be 10 main issues.

Equity v efficiency. The benefits to society of radiation outweigh the detriment to individuals. But it could also be said that this must not be achieved by the misery of a minority or even future generations. With current radiation protection practice today, the risks are considerably less than in many other walks of life.

Health v economics. Large amounts of cash are needed to further improve RP in the Western world. The improvements would be minor, but only a relatively small amount of cash in the underdeveloped world would have a much greater effect on the population generally.

Individual rights v societal benefits. We have to consider minimal risk v any risk. Zero risk does not exist. A 1% risk may be low, but for the person affected, it is 100%. An interesting example is in the UK. Efforts to stop illegal immigrants are being hampered by an inability to check trucks and trains. A new xgamma machine is in use to irradiate trucks, trains to see if illegals are hiding inside. There are major issues here. Sleeping drivers have already been irradiated inadvertently.

Due process v necessary sacrifice. This applies to the previous example. Illegals will not show themselves, so will be irradiated for the general public good. No consent will be given, even if sought, though how it could be sought is unclear.

Stakeholder consent v management decisions. Some say that the public should have a right to know and consent. Others say that a general consent is enough. anything else would be too costly in terms of time and money. Fear of radiation is more harmful than radiation itself .All persons have different knowledge and experiences. Radiation cannot be seen, hence it is to be feared. Risks that one person will accept have little or no bearing of the true nature of the risk. This applies in all areas of life. Example, sailing v diving.

Fear of radiation as a contribution to genocide. This fear may mean that a nation may reject a cost effective tool, e.g. nuclear power generation of electricity, in favour of a much more costly alternative. Costly may mean financial, but may also include other deleterious effects.

Science : the question of truth. What is the truth? The public generally does not trust scientists. What is the truth about low dose and the nonlinear threshold hypothesis? Is there in fact an answer?

Communication. The concern here is of general public communication. It is just not done well enough. In the western world, gloom and disaster make good press for the papers.

Improvements in RP receive scant if any attention. This is a reflection of the society we live in. It makes things very difficult for those of us in areas of safety and protection generally, not just radiation.

Workers standards. Why should workers be exposed to a greater risk than the public? This applies to all areas of risk, not just radiation. However, with current safety standards and dose levels, radiation dose to workers is low and has shown little deleterious effect, except where rules have been broken or ignored. We tend to accept a little risk for more benefit ourselves. But do not forget, good training, regularly updated, is essential and must not be ignored. The fact that no incidents have occurred does not mean that training can be forgotten. Safety records are only as good as the last incident. Recent world events are an all too sad example of poor safety procedures.

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