

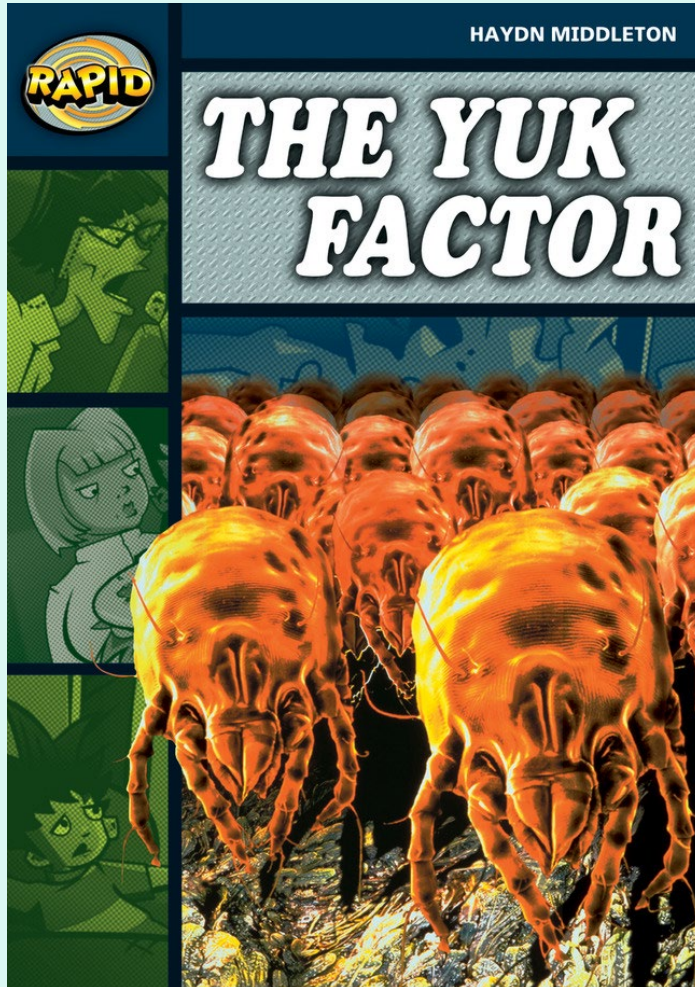
Ethical Frameworks

Deborah Oughton
Rradew, Lisbon,
March 2025



[illegible]

... it's not just emotions



After Athur Caplan

Biotechnology and Monstrosity

Why We Should Pay Attention to the "Yuk Factor"

by MARY MIDGLEY

We find our way in the world partly by means of the discriminatory power of our emotions.

The gut sense that something is repugnant or unsavory—the sort of feeling that many now have about various forms of biotechnology—sometimes turns out to be rooted in articulable and legitimate objections, which with time can be spelled out, weighed, and either endorsed or dismissed. But we ought not dismiss the emotional response at the outset as "mere feeling."

What kinds of moral objections are there to such interventions as xenotransplantation, genetic engineering, and bio-engineering generally? Ethicists today often divide moral objections firmly into two sets, those that point to dangerous consequences and those saying that the act itself is intrinsically wrong. Of course this division between act and consequence is often useful. But unless the two angles are brought together again at some point it can split the subject disastrously.

It is often very hard to consider probable consequences on their own because we really do not know what they are likely to be. On the other hand, trying to consider intrinsic objections on their own, apart

from consequences, often seems unrealistic. We are inclined to feel that these direct objections must be irrational because the only rational way to judge things *is*—as the utilitarians suggest—by weighing their consequences. Many people are inclined to dismiss intrinsic objections as emotional, subjective, something that can't really be justified or argued about at all. But as just noticed, the probable consequences themselves often are not clear enough to make reasoned conclusions possible either. So both lines of inquiry fail.

I want to suggest that it is usually a bad idea to see debates in this way as flat conflicts between reason and feeling because usually both thought and feeling are engaged on both sides. In the case of bio-engineering, I think it is especially unfortunate that people often now have the impression that while feeling is against them, reason quite simply favors the new developments. This kind of stereotyping paralyzes us.

Mary Midgley, "Biotechnology and Monstrosity: Why We Should Pay Attention to the 'Yuk Factor,'" *Hastings Center Report* 30, no. 5 (2000): 7-15.

September-October 2000

HASTINGS CENTER REPORT 7



Moral Philosophy

- Metaethics
 - What is value? What counts in ethical assessment?
- Normative Ethics
 - Derivation of ethical theories and frameworks
- Applied Ethics



Ethical Theories



Virtue Ethics

Deontology

Utilitarianism (Consequentialism)

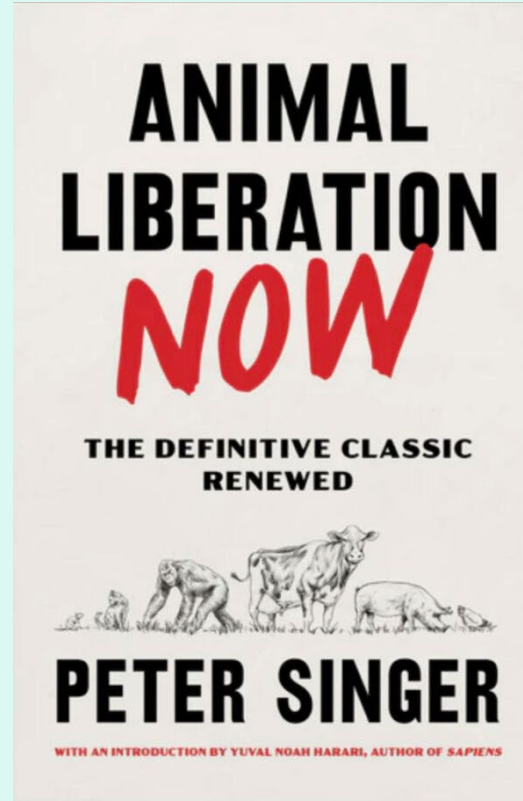
Contractarianism (John Rawls)

Ethics of Care

Feminist Ethics

Environmental Ethics

(Anthropocentrism, Biocentrism,
Ecocentrism)



www.utilitarianism.ne/utilitarian-thinker/peter-singer

Principle Based Ethics

Beauchamp and Childress

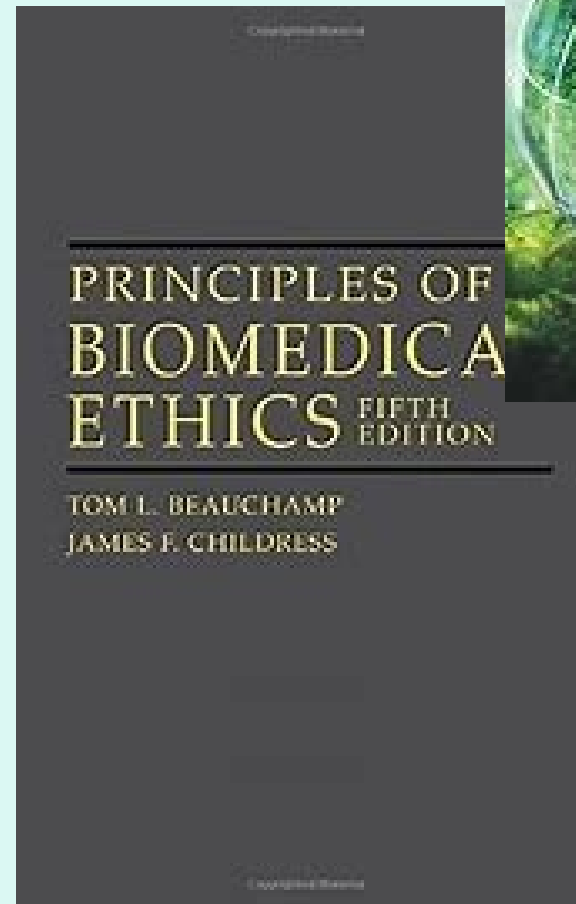
ICRP Framework

Climate Change

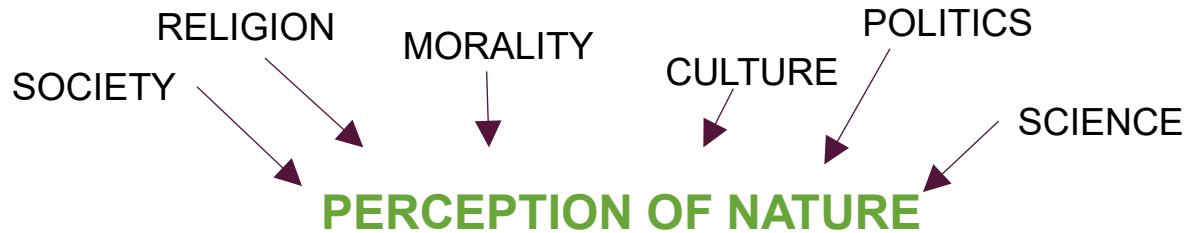
AI Ethical Principles



<https://www.unesco.org/en/ethics-science-technology/climate-change>



Environment and Radiation Protection (IAEA, 2002)



Conceptualised as:

ANTHROPOCENTRIC

BIOCENTRIC

ECOCENTRIC

Broadly compatible with the principles of:

Conservation

Biodiversity

Sustainability

Environmental
justice

Human
dignity

Value-basis

*Philosophical
worldviews*

*Primary Principles
of Environmental
Protection*

*2nd Level
management
principles*

IAEA-TECDOC-1270

***Ethical considerations in
protecting the environment
from the effects of
ionizing radiation***

A report for discussion



INTERNATIONAL ATOMIC ENERGY AGENCY IAEA

February 2002

Precautionary Principle

Best Available Technology

Stakeholder Involvement

ALARA

Polluter Pays

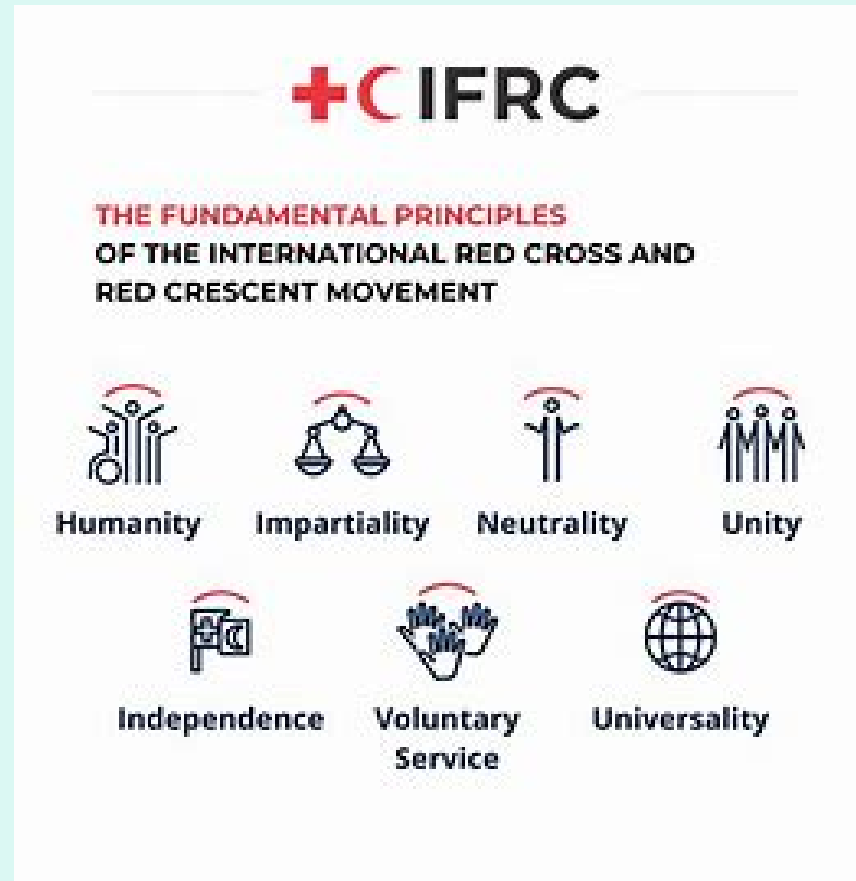
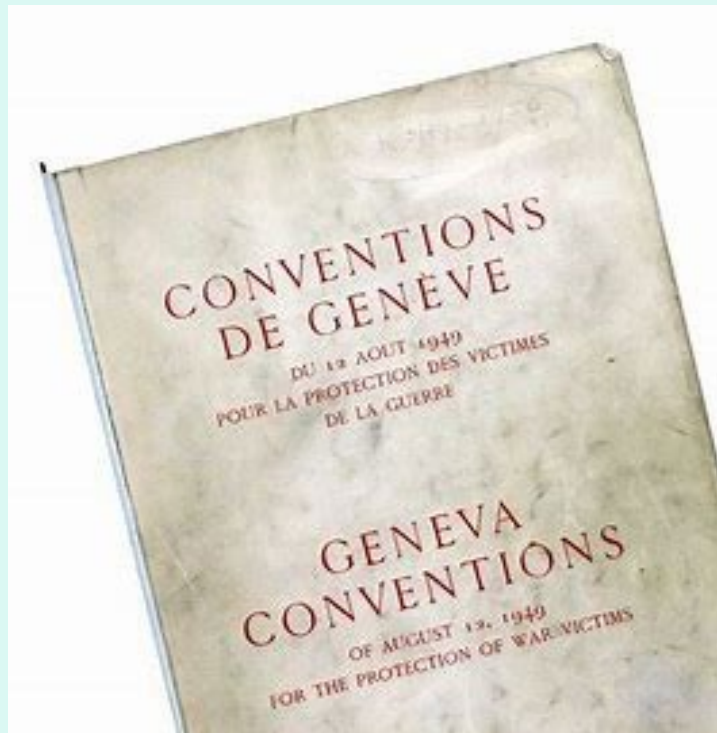
International Commission for Radiological Protection (ICRP): Core Ethical Values (2017)



- Beneficence/Non-maleficence
 - Dignity
 - Justice
 - Prudence
-
- Transparency
 - Stakeholder Engagement



Codes of Conduct



Ethical Matrix - RRADEW



Ethical Framework for RRADEW discussions

	Well-being	Dignity/ Autonomy	Justice/ Equity	Prudence/ Precaution	...
Individual Citizens					
First Responders					
Military personnel					
Nuclear facility workers					
Communities					
Nations					
...					
...					

Ethical Matrix - Examples



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JOURNAL OF
ENVIRONMENTAL
RADIOACTIVITY

Journal of Environmental Radioactivity 74 (2004) 171–183

www.elsevier.com/locate/jenvrad

An ethical dimension to sustainable restoration and long-term management of contaminated areas

Deborah Oughton^{a,*}, Ellen-Marie Forsberg^b, Ingrid Bay^a,
Matthias Kaiser^b, Brenda Howard^c

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D. Oughton et al. / J. Environ. Radioactivity 74 (2004) 171–183

Table 1

Illustration of a tentative value matrix developed for use in a radiation accident situation

Stakeholder	Examples	Well-being (example: health and economic welfare)	Dignity/integrity (example: choice/consent/(legal) rights)	Justice/distribution (Is any sub-group of stakeholders worst-off?)
Owners/employers	Government	Doses to humans	Self-help	Possibility for conflict between different industries or projects
	Farmer	Loss/gain in income	Consent	
	House dweller	Loss of property	Property rights	
	Land owner	Damage to, or reduction in value of, property	Being allowed to pay their duties	
	Hotel owner	Loss of taxes	Contract fulfilment	
	Shop owner	Compensation	No disruption	
	Business proprietor		No insecurity	
	Factory owner		Liberty	
Workers/employees	Local authority	Doses to humans	Traditional skills and practices	Possibility for disputes and social inequity
	Tenant farmer	Fear of job loss	Trust and loyalty to local farmers	
	Farm workers	Gain/loss of income	Consent	
	Factory workers	Insecurity	Training	
	Contractors	Family relationships		
	Countermeasure workers	Compensation		
	Immigrant workers			
Users/community	Other employees			Potential conflict of
	Neighbours	Access	Respect for public	


ICRP Values Applied to Health Surveillance (Shamisen Recommendations, 2017)

Ethical Value				
	Well-being	Dignity/Autonomy	Justice/Equity	Prudence
Health Surveillance for the benefit of affected populations	Addressing direct and indirect health effects	Loss of control over lives bought about by the accident and mitigation actions.	Vulnerability of children to radiation; of the elderly to disruption and evacuation, etc.	Not being over-conservative in dose estimates (i.e., not assuming the highest possible rather than best estimate)
	Economic consequences (direct through loss of livelihood or sales; indirect through loss of consumer trust, etc.)	Provision of measurement tools and equipment to help empower populations (self-help actions)	Differences in compensation strategy (e.g. between radiation and tsunami affected populations)	Balancing uncertainties when assessing different outcomes
	Cultural and Societal impacts (e.g., loss of access to traditional sites)	Stakeholder participation in decisions that affect their own lives	Perceptions of discrimination or stigmatisation	Not underestimating the potential for societal, economic and cultural impacts.

Ethical Matrix - Shamisen



Table 1
Ethical Challenges in Health Surveillance and Accident Management (adapted from Oughton et al. (2017)).

	Ethical Value			
	Well-being	Dignity/Autonomy	Justice/Equity	Prudence/Precaution
Health Surveillance for the benefit of affected populations	Addressing direct and indirect health effects	Recognising the loss of control over lives that can be brought about by the accident and mitigation actions.	Vulnerability of children to radiation; of the elderly to disruption and evacuation, etc.	Not being over-conservative in dose estimates
	Assessment of economic consequences (direct through loss of livelihood or sales; indirect through loss of consumer trust, health services, etc.) Cultural and Societal impacts (e.g., demographic changes, loss of access to traditional sites)	Provision of measurement tools and equipment to help empower populations (self-help actions) Supporting stakeholder participation in decisions that affect their own lives	Assessment of consequences of compensation strategy (e.g. differences between radiation and tsunami affected populations) Recognising that discrimination or stigmatisation can arise, and promoting mitigating actions	Balancing uncertainties when assessing different outcomes, including social, economic and ethical uncertainties
Screening (and thyroid screening)	Providing information on the expected reduction in disease incidence or severity from screening. Considering economic impacts on health services	Ensuring voluntary participation and free informed consent of	Recognising different risks, perceptions and needs of different populations (including children and	Advocating due care with communication of results. If reassurance is a key objective
Epidemiology and data registries	Addressing problems with over-diagnosis, false positives etc. Recognising the importance of improved disease registries Promoting sharing of information between countries	part Part Part pop desi Res info part Mec stak and in q	<div>Contents lists available at ScienceDirect</div> <div><h2>Environment International</h2><p>journal homepage: www.elsevier.com/locate/envint</p></div>	



An ethical dimension to accident management and health surveillance

Deborah Oughton^{a,*}, Liudmila Liutsko^{b,c,d}, Sanae Midorikawa^e, Philippe Pirard^f,
Thierry Schneider^g, Yevgeniya Tomkiv^a

Ethical Matrix - RRADEW



Ethical Framework for RRADEW discussions

	Well-being	Dignity/ Autonomy	Justice/ Equity	Prudence/ Precaution	...
Individual Citizens					
First Responders					
Military personnel					
Nuclear facility workers					
Communities					
Nations					
...					
...					

Examples

Free informed consent for first responders

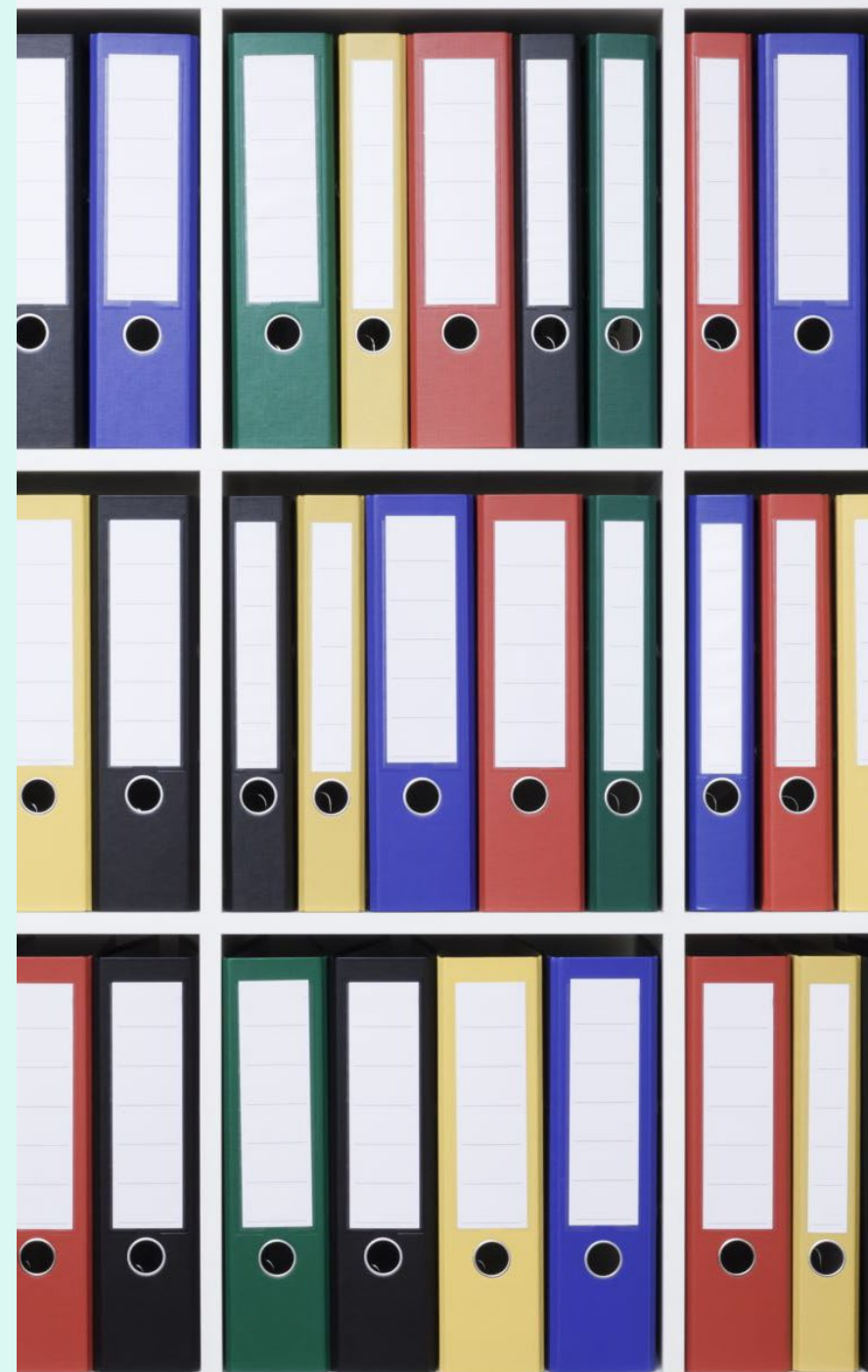
Psychological stress of coerced/captured
nuclear workers

Positive consequences of community
resilience

Impacts of conflict on the vulnerable

Treating prisoners of war with respect

Need to “sacrifice” some people under triage



Group Discussions

Post-it Notes

- Blue– Well-being
- Green – Dignity/Autonomy
- Pink – Justice/Equity
- Yellow – Prudence + other

Note which of the stakeholder(s) the issue refers to

