

Technical and Cultural Aspects of Risk Perception and Management

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Risikokommunikation und -management

**Technical and Cultural Aspects
of Risk Perception and Management**

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FEATURES OF RISK

- risk in functioning
- risk in operating
- risk in abuse

FORMS OF RISK

- statistical risk
- cultural risk

EXPENDITURES IN RISK PREVENTION

- Costs to save one more life:
- medicine
- 10.000-20.000 routine cancer diagnosis
- 30.000 medical ambulance equipment
- 150.000 renal dialysis
- traffic
- 20.000 better road surface
- 34.000 better traffic signals
- 300.000 roadside clearance, guardrail
- 320.000 airbag technology

Differential Risk Assessment

<u>Broad Terminology</u>	<u>Specific Terminology</u>
Mostly correct	Sometimes incorrect
Not very useful	Very useful

RISK IN RISK ASSESSMENT

- normal case assessment
- worst case assessment
- complex case assessment
- spin-off case assessment
- additional case assessment

DIFFERENTIAL RISK ASSESSMENT SCHEME

1. Problem identification
2. Develop alternative scenarios for action
3. Present a set of alternative scenarios
4. Formulate a justification for your selection

DIFFERENTIAL RISK ASSESSMENT SCHEME I

1. PROBLEM IDENTIFICATION

- a. collect technical (medical) data
- b. collect significant human data
- c. identify value elements
- d. discuss relations between technical and moral issues

2. DEVELOP ALTERNATIVE SCENARIOS FOR ACTION

- a. establish reasonable possibilities for each scenario
- b. identify stakeholders
- c. identify principles uncertainties
- d. discuss ethical and technical risk and uncertainty

DIFFERENTIAL RISK ASSESSMENT SCHEME II

3. PRESENT A SET OF ALTERNATIVE SCENARIOS

- a. discuss uncertainty in each scenario prognosis
- b. assess technical and moral benefits and risks
- c. discuss assessments with stakeholders
- d. evaluate differences in benefit-risk balances

4. FORMULATE A JUSTIFICATION FOR YOUR SELECTION

- a. specify your reasons for selected course of action
- b. include stakeholders in reviewing decisions
- c. understand ethical shortcomings of justification
- d. anticipate and discuss objections to your selection

DEFENSIVE RISK ETHICS – PROGRESSIVE RISK ETHICS

– technological progress outweighs moral capacity; therefore reduce or restrict technological development

– technological progress demands better moral risk competence; therefore strengthen individual risk education and responsibility

MANAGEMENT OF INTERNAL RISK

- precision
- safety, stability
- efficiency

MANAGEMENT OF EXTERNAL RISK

- personal value competence
- social and cultural solidarity
- experienced risk competence

SUBJECTS OF MORAL RISK MANAGEMENT I

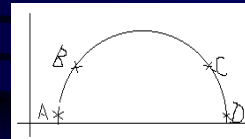
- Individual citizen
 - value assessment competence
 - value-and-wish competence
 - responsibility experience
- Professional, technician
 - management of internal risk
 - professional self-regulation
 - information-sharing in passing risk

SUBJECTS OF MORAL RISK MANAGEMENT II

- Government
- indirect risk management
- risk education and value information
- reduction in central risk management
- risk sharing by market forces
- encouragement of individual risk management
- Selected Direct Risk Management
 - protection against foreign aggression
 - selected areas of domestic safety
 - indirect risk management

BENEFITS AND LIMITS OF HETERONOMOUS RISK PROTECTION

Liberty
Security



A-B basic risk management
B-C ambiguity in risk management
C-D decrease in individual risk competence

THE TWO MANDARINS I

This is the story of the blue and the red mandarin: Both mandarins had brought a great discovery to their province; the blue mandarin a precious blue stone of miraculous powers, and the red mandarin a precious red stone of similar miraculous powers. Both wanted their people to improve their qualities of life, success, health and happiness. The blue mandarin created a system of relatively just access to the powers of the miraculous stone; the red mandarin just handed the stone over to the people to take care of it and enjoy it directly with the support and advice of a few experienced professional stone handlers.

THE TWO MANDARINS II

- The red mandarin made his people happy, healthy, and prosperous immediately and directly, while in the province of the blue mandarin where the handling of the stone was kept in the close circles of feudal underlings problems of just access, information, and education among the citizens in using the great powers were missing so that the powers of the new discovery could not be exploited for the sake of individual happiness and societal health and prosperity.

THE TWO MANDARINS III

The stories of the blue and the red mandarin picture two different risk cultures in providing wealth care, health care, and wisdom to the people: one way is the old fashioned way of handling things primarily through the circles of elites, the other way is to give wealth and wisdom directly to the people. All revolutions have to have two levels, one level of invention and vision and one level of implementation, distribution, and cultivation.

THE TWO MANDARINS IV

No revolution, political, social, or scientific, will ever be successful if the people are not given and are not allowed to take their own risk and to pick their own visions and to have the powers to handle health, wealth, and wisdom themselves.

Long live this revolution, said the people who were grateful to the blue mandarin, his wisdom, his riches, and his gifts.

Thank you !

Life is not without risk !

Taking risk is part of life !

Master risk for quality of life !