



# Ethical Aspects of Studies on Populations Resident in Contaminated Sites

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URL: [www.colinsoskolne.com](http://www.colinsoskolne.com) (*archive of PPT presentations*)

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Contaminated Sites, Rome, Italy

*Contaminated Sites and Health:  
Recent Findings and the Way Forward*  
October 22, 2014 ([Text in press, 2016](#))



# Acknowledgement

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**THANK YOU**

**Taiwan Ecological Stewardship  
Association**

**AT WHOSE KIND INVITATION I AM VISITING  
TAIWAN**

- *Nancy Tzu-Mei Chen*
- *Yuping Chen*



# Personal Examples

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- **Contaminated fertilizer shipped from Texas, USA, to Bangladesh**
- **Sydney Tar Ponds, Nova Scotia, Canada**
- **Industrial Chemical Manufacturing complex under Soviet rule in Sumgayit, Azerbaijan**
- **In Italy ... much WHO work in this area**
- **Formosa No. 6 Naphtha Cracking Complex, Yun-Lin, Taiwan**



# Objectives

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- **Examples of contaminated sites**
- **Bringing professional ethics into the discourse on studying people in contaminated areas/sites**
- **Distinguishing contexts: between the need for more research and the need for action; and, between historically contaminated sites and sites experiencing ongoing contamination**
- **Providing a generic framework for ethical decision-making**

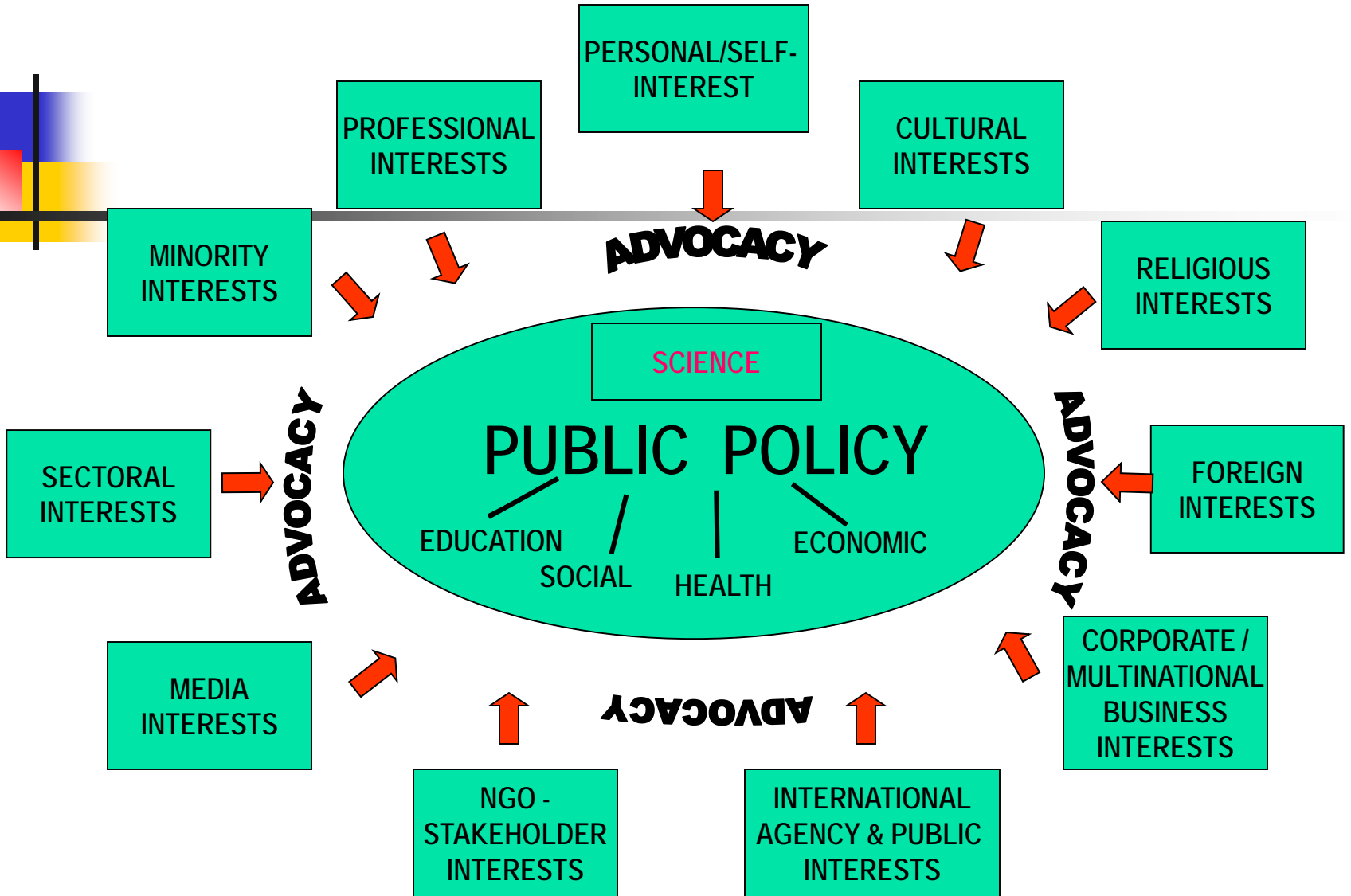
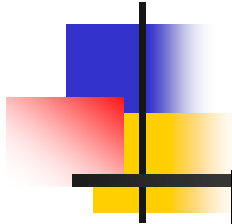


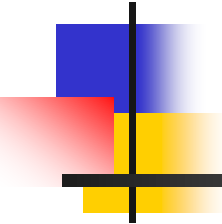
# EPIDEMIOLOGY

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**An applied science that bridges the basic sciences to human health and well-being**

**The science that informs health policy**





**“Industry’s offensive against  
the regulation of health and  
safety hazards uses academics  
to downplay or deny the  
seriousness of the hazards...”**

**Clayson and Halpern**

**J. of Public Health Policy**

**September, 1983**







# Judge Miles W. Lord, 1982

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On *“Corporate Ethics and Environmental Pollution”*:

*“Corporations create 80% of our GNP. They, of all entities working, have the most potential for good or evil in our society.”*

**This was in 1982. Today it is surely more like 90%.**



# The 'Four D's' - Institutional

Applied to scientists studying that which does not support the *status quo*:

- **Deny**
- **Delay**
- **Divide**
- **Discredit**
- **[ Dismiss ]** [ Death – Meryl Streep in the movie Silkwood, 1983; Julia Roberts in Erin Brockovich, 2000]



# THE GOLDEN RULE - *adapted*

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- **What is hateful unto you, do not do unto your neighbour**

*Hillel, Babylonian Talmud, Tractate Shabbat, 31B*

- **Treat others as we would want them to treat us or our loved ones**

*Luke 6:31 and Matthew 7:12*

- **Treat others justly so that no one would be unjust to you**

*From the Prophet Mohamed's Last Sermon*

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- **Do our level best**
- **Assert ourselves if we find that someone has done ill**



# Core Values & Mission Statements

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- **They provide the anchor for our activity and collective motivation**  
*... maintain, enhance, and promote health in communities worldwide ...*  
*work to protect the public health interest above any other interest ...*

# VALUES ... CONTEXT

A10 The Edmonton Journal, Tuesday, March 12, 1996

## Opinion

Publisher: Linda Hughes  
Editor in Chief: Murdoch Davis  
Managing Editor: Sheila Pratt  
Associate Editor: Duart Farquharson



# Deontological (i.e. duty-based)

In essence, the scientific ethic expects of scientists the duty to:

1. Use appropriate methods
2. Be objective
3. Be honest in reporting
4. Publish results - **POSITIVE** as well as **NEGATIVE**
5. Prohibit distortion in, for example:
  - Falsification of data
  - Biases inherent to study design
  - Proper analytical procedures
  - Objective interpretation
6. Do one's own work:
  - Plagiarism
  - Acknowledge sources
  - Graduate students not to be exploited

**GOOD ETHICS ↔ GOOD SCIENCE**



## Classical techniques that skew results: from biased methods to **junk science**

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- **Linear reductionism without post-normal science to complement quantitative methods**
- **Under-powered studies**
- **Inadequate follow-up methods**
- **Inadequate follow-up time**
- **Contaminated controls**
- **Unbalanced discussion**
- **Selective disclosure of competing interests**



# The **FUNDAMENTAL PRINCIPLES** of **BIOETHICS** include:

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## **RESPECT FOR AUTONOMY**

- Requires respect for individual rights and freedoms (Also: **Veracity & Fidelity**)

## **BENEFICENCE**

- Requires doing good / Consider consequences of interventions in people's lives and of findings

## **NON-MALEFICENCE**

- Requires doing no harm

## **JUSTICE**

- Requires fair and equitable allocation (of risks & benefits) to all without discrimination





# The FUNDAMENTAL PRINCIPLES of BIOETHICS include (under Justice):

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- ENVIRONMENTAL JUSTICE

- *Who is taking the risks?*
- *Who is deriving the benefits?*

- THE POLLUTER PAYS

- *incentive to internalize costs*



# Primary Principles in Public Health

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- **Protect the most vulnerable in society** (e.g., unborn, children, Inuit, frail elderly)
- **Involve communities in our research** (ensure community relevance of our work)
- **Integrity in Public Health**
  - **Serve the public health interest above any other interest**



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# **A natural tension exists among all of the principles**

**We simply cannot perfectly  
satisfy all four principles fully on  
any single issue, but we must try  
to optimize each, transparently**



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# **Where does epidemiology fit into classical risk assessment?**



# Classical Health Risk Assessment

*reductionist and linear in approach (US EPA 1960s)*

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1. **Hazard Assessment**
2. **Vulnerability Assessment**
3. **Risk Evaluation** ←
4. **Risk Communication**
5. **Risk Management**



# What are we up against?

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- **What creates/drives misconduct in science?**
- **What tempts scientists away from the pursuit of truth?**
- **How does misconduct derail scientific discourse?**
- **How does misconduct influence public policy and hence population and global environmental health?**
- **Confrontation, and the challenge of speaking truth to power!**

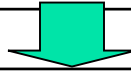
# Making an Ethical Decision

## 2. CLARIFICATION & EVALUATION

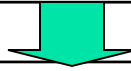


# Generic problem-solving model for ethical decision-making

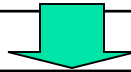
**Gather all relevant information**



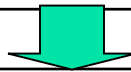
**Specify clearly all components of  
the identified ethical dilemma**



**Specify all options as possible  
courses of action**



**Select a single best  
alternative**



**Act and review**





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# A Case Study

of a bottom-up approach

**CAUTION:**  
**ETHICAL IMPERIALISM**



# Whose role is it to deal with societal determinants of health?

## The case of the Nigerian lead-poisoning epidemic by John D. Pringle and Donald C. Cole

- **In: Canadian Institutes of Health Research–Institute of Population and Public Health (2012). *Population and Public Health Ethics: Cases from Research, Policy, and Practice*. University of Toronto Joint Centre for Bioethics: Toronto, Ontario, pp. 176-185.**



# Soskolne - Case Discussion (1 of 2)

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- **The key relevant information** *(i.e., biologic, economic, social, political, or ethical) and knowledge gaps, as well as the basis for these facts.*
- **Identify the key stakeholders in the case** *and the most appropriate decision-maker(s) and/or legal authorities to approach the ethical issue, if applicable.*
- **Identify the key values and concerns** *of the identified stakeholder(s), as well as any potential risks and benefits.*



## Soskolne - Case Discussion (2 of 2)

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- **Identify the options available to the decision-maker, *including reasonable alternative courses of action, consideration of implications, and potential intended and unintended consequences.***
- **Suggest a resolution or decision to the case *by choosing the supported option, and justify the decision.***
- **How might the decision and/or action be evaluated?**



# And more going on internationally

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A top-down approach to  
protections through constitutional  
amendments

# South Africa

## 1996 Bill of Rights



- 24. Environment: Everyone has the right**
- a. To an environment that is not harmful to their health and well-being; and**
  - b. To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that**
    - (i) prevent pollution and ecological degradation;**
    - (ii) promote conservation; and**
    - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable social and economic development.**



# And Other Countries too ...

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- **Brazil, Columbia, Ecuador, Cuba, Andorra, Ukraine, France, India, China, Philippines, Papua New Guinea, Montenegro, Iraq, Kenya, Bhutan, ...**
- **In 2012, David R. Boyd's "The Right to a Healthy Environment Revitalizing Canada's Constitution"**
- **In 2014, David Suzuki Foundation campaign to amend Canada's constitution to entrench the right to a healthy environment for all Canadians**



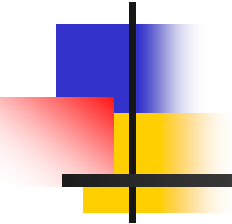
# Distinguish between community needs for ...

- **More RESEARCH?**

*OR*

- **More ACTION?**





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# DISCUSSION