

# **Scientific Factors that Obscure and Obstruct our Understanding of the Limits to Growth**

**Colin L. Soskolne, PhD**

**Professor emeritus, University of Alberta, Edmonton, Canada**

**Adjunct Professor, University of Canberra, Australia**

**URL: [www.colinsoskolne.com](http://www.colinsoskolne.com)**

***ISEE 2013 – Basel, Switzerland***

***Symposium S13: Limits to Growth and Public Health***

***August 19-23, 2013***



# Lenses through which we may apply our training

## ★ Macro-level lens

- *Overview from an elevation of ~10,000 meters*  
*ALWAYS EXAMINING EVIDENCE FOR CAUSAL JUDGMENTS*

## ★ Meso-level lens

- *Higher-level view from an elevation of ~100 meters*

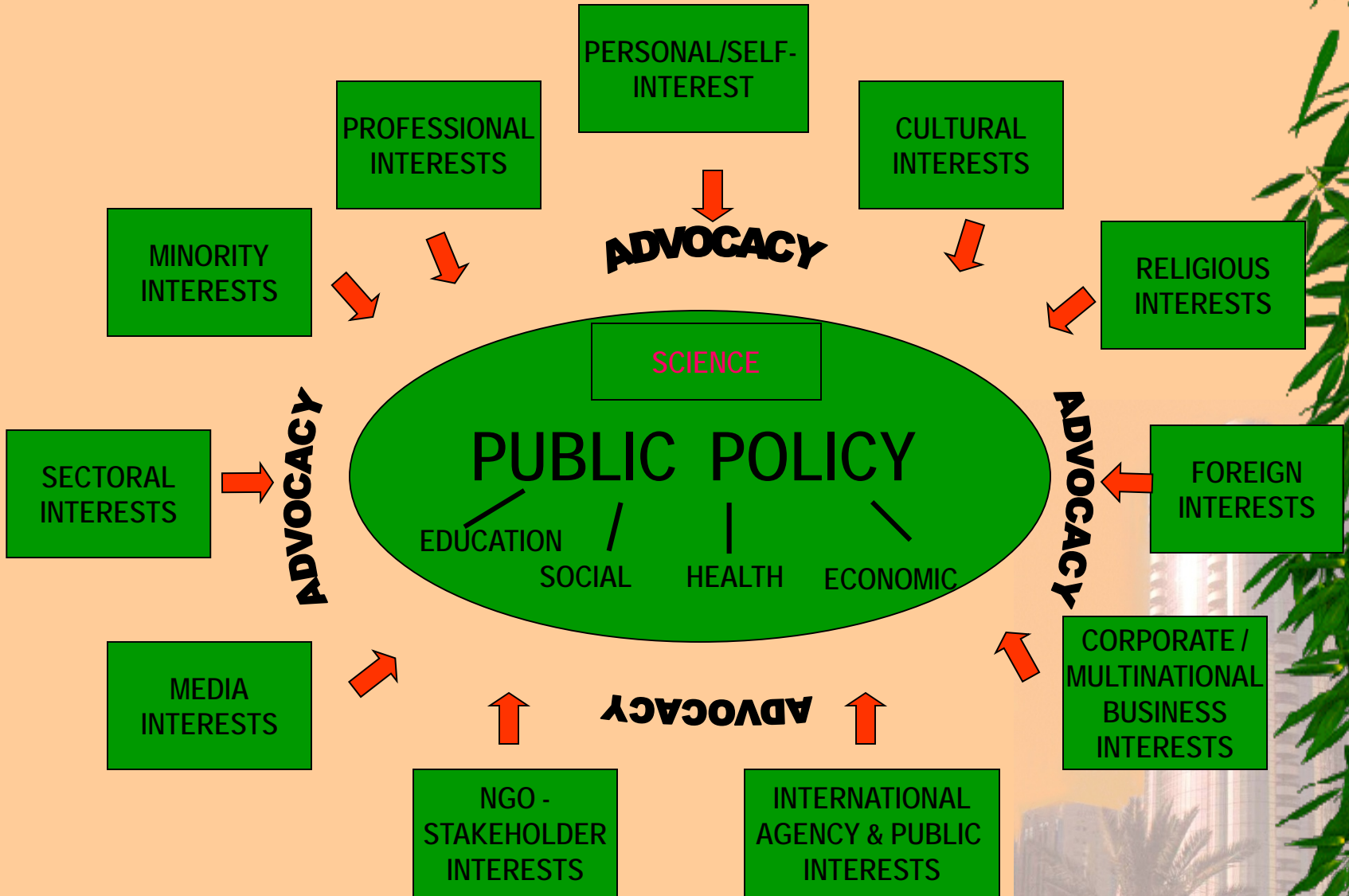
## ★ Micro-level lens

- *On the ground from an elevation of ~1 meter*  
*ALWAYS CALLING FOR FURTHER RESEARCH*

T  
E  
N  
S  
I  
O  
N

**At the macro-/meso-levels ...**





**Science is but one such  
pressure**

**--- HUMILITY AND  
EMPATHY FOR THE  
POLICY-MAKER**



**Be aware of forces at play that influence both science and policy.**

**... Great vigilance and personal integrity are required to counter the influence of financially interested parties and corrupt / morally bankrupt governments.**

# Influences and pressures

- ★ **From funding sources to peer review**
- ★ **From the questions we ask through access to data**
- ★ **From study design to data analysis and interpretation**
- ★ **From dissemination to job security**

**“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

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.”*

TEFLON?...  
LINKED TO BIRTH  
DEFECTS?

DON'T WORRY,  
THE ACCUSATION  
WON'T STICK.



MYLES  
Edmonton  
Journal

# **The Center for Public Integrity**

**<[www.publicintegrity.org](http://www.publicintegrity.org)>**

## **Industry Muscle Targets Federal**

***“Report on Carcinogens”*** July 30, 2013

***“Industry attacks on Public Health research  
have become more strident.”***

**Linda Birnbaum, Director, US-NIEHS**

# Eleven articles ...part of a crime-fraud

<https://www.rightoncanada.ca/?p=2078>

June 7, 2013

- ★ **In a powerful decision, a New York appeal court has found that eleven articles, published in scientific journals, were potentially part of a crime-fraud. The articles, financed by Georgia-Pacific, were intended to cast doubt on the capability of chrysotile asbestos to cause cancer.**



# On Denying Climate Change

Among others:

- ★ **Bjorn Lomborg (Denmark)**
  - *The Skeptical Environmentalist* (2001)
- ★ **The Koch Industries (USA)**
  - Powerful interests (in particular, oil)
  - One subsidiary is **Georgia-Pacific (asbestos)**



# **A Dictionary of Epidemiology** **5<sup>th</sup> Edition, *OUP*, 2008**

- \* Oppression / Suppression Bias**
- \* Repression Bias**



# **At the micro-level**



# The Four D's applied to scientists studying that which does not support the *status quo*

- ★ **Deny**
- ★ **Delay**
- ★ **Divide**
- ★ **Discredit**
- **[ Dismiss ]**



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

- ★ **Under-powered studies**
- ★ **Inadequate follow-up methods** (incl. pathology review; limitations on matching methods related to database limitations)
- ★ **Inadequate follow-up time** (very long latency from exposure to the relevant disease outcome)
- ★ **Contaminated controls**
- ★ **Unbalanced discussion**
- ★ **Selective disclosure of competing interests**

# Manufacturing Doubt

- ▶ Epstein.  
*The Politics of Cancer*, 1978
- ▶ Davis.  
*When Smoke Ran Like Water: Tales of Environ Deception ...*, 2002  
*The Secret History of the War on Cancer*, 2007  
*Disconnect: The Truth About Cell Phone Radiation ...*, 2010
- ▶ Michaels.  
*Doubt is their Product: How Industry's Assault on Science...*, 2008
- ▶ McCulloch & Tweedale.  
*Defending the Indefensible: The Global Asbestos Industry ...*, 2008

*By fomenting uncertainty, the health policy-maker's role is undermined ...*

*→ the subversion and ambushing of science*



# **Understanding Influence and its Impact**

- ★ The Dominant Paradigm**
- ★ The Contextual Narrative**
- ★ The Role of Impartial Science in the Public Interest**



## Hill concludes ...

- ★ **“All Scientific work is incomplete – whether it be observational or experimental. All scientific work is liable to be upset or modified by advancing knowledge. That does not confer upon us a freedom to ignore the knowledge we already have, or to postpone the action that it appears to demand at a given time.”**

# End

