

# *Integrity in Epidemiology as the Science Basic to Rational Public Health Policy: Conflicting Interests at Work*

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# Epidemiology

The study of the distribution and determinants of disease in populations and its application to the control of health problems

- *Our focus is on preventing harms to populations (morbidity; premature mortality; and well-being)*

# Policy relevance

**Epidemiology is the science that is basic to rational (evidence-based) public health policy formulation**

# Epidemiology

**Our job is to **inform policy** with a view to reducing harms by preventing disease and premature mortality at the community level**

# Epidemiology

Being an **APPLIED** (i.e., **soft**) science — as opposed to a **BASIC** (i.e., **hard**) science — *it is more amenable to manipulation and influence in the design, conduct, and interpretation of studies.*

# Our professional duty

*How can we more effectively deliver on our professional obligations when we and our colleagues are tempted by forces that can cause us to no longer work to protect the public interest?*

- *Honesty*
- *Impartiality*
- *Respect*
- *Collegiality*

# Why ethics in the professions?

- ▶ Keep ourselves on track, and keep our own house in order
- ▶ Socialise our students
- ▶ Professional accountability
  - According to norms of behaviour
  - **IN WHOSE BEST INTERESTS?**
  - **WHO IS TAKING THE RISKS?**
  - **WHO IS DERIVING THE BENEFITS?**

# The scientific ethic\*

A set of norms that define the scientific endeavour → an ethos that evolved gradually and organically.

This ethic defines the **boundaries** that must be respected by those who wish recognition as part of the scientific community.



# Deontological (i.e. duty-based/obligations)

The *scientific ethic* expects scientists to demonstrate integrity by:

1. **Using appropriate methods**
2. **Reporting honestly**
3. **Publishing results - POSITIVE as well as NEGATIVE**
4. **Prohibiting distortion in, for example:**
  - Falsification of data
  - Biases inherent to study design
  - Proper analytical procedures
  - Objective interpretation
5. **Doing one's own work:**
  - Plagiarism
  - Acknowledge sources
  - Graduate students, etc., not to be exploited

**GOOD ETHICS ⇔ GOOD SCIENCE**

# THE NORMAL RANGE OF HUMAN CONDUCT



**POWER CORRUPTS. ABSOLUTE POWER  
CORRUPTS ABSOLUTELY!**

(Lord Acton's premise)

**NO ONE IS IMMUNE!**

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

**... Great vigilance and personal  
integrity are required to serve  
the public interest**

# Influences and pressures at any stage in the research process:

- ▶ **Funding sources to peer review**
- ▶ **Questions we ask through access to data**
- ▶ **Study design to data analysis and interpretation**
- ▶ **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**

TEFLON?...  
LINKED TO BIRTH  
DEFECTS?

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



Myles  
Edmonton  
Journal

# THE GOLDEN RULE - adapted

- ▶ **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 someone else who has done ill**

# Case 1 – Tobacco promotion deconstructed

**Over 50 years of deception, since ~1952**

*For every \$1 raised for health promotion to warn the American public about the health hazards of tobacco, the tobacco industry found public relations firms to counter these messages, deceiving the public; and, also in buying scientists to prostitute themselves to the industry by designing studies to demonstrate that tobacco is not harmful ...*



# Case 2 – Aspartame (1 of 3)

- ▶ **Italy** - Toxicological Study (rats) published in 2005 (Eur J Oncol) and 2006 (EHP). Demonstrated a definitive dose-response relationship **in both male and female rats (aspartame-induced lymphomas and leukemias)**.
- ▶ Researchers at the Channing Laboratory (affiliated with Brigham and Woman's Hospital (BWH) and Harvard Medical School, Boston, USA) recognized that they had access to a **human data repository containing the prospective collection of aspartame-related information on a large, long-term nutrition study cohort of both men and women**. With this data source, they explored the relationship between aspartame and cancer incidence in humans.

## Case 2 (slide 2 of 3)

- ▶ Their human study demonstrated a significant increase of certain haematopoietic cancers **in men** (correlated with aspartame consumption), **but not in women**, thus, at least partially, replicating in humans the findings from the Italian animal models.
- ▶ On October 24 2012, the Board of Regents cast doubt, **some 35 minutes prior to the embargoed on-line release time for the accepted article**, on the soon to be published article in the American J of Clinical Nutrition.

## Case 2 (slide 3 of 3)

# Questions of ethical relevance

*These questions need to be discussed among all scientists, especially applied scientists, internationally, if the integrity of the scientific enterprise, academic freedom, and the public interest are to be protected.*

# The “Four D’s” — Classical institutional responses

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

- ▶ **Deny** – *blame the victim*
- ▶ **Delay** – *maintain the status quo*
- ▶ **Divide** – *create uncertainty, foment dissent*
- ▶ **Discredit** – *undermine your credibility*

# And, beyond epidemiology ...?

**Nestlé, Monsanto and other corporations:** *They have strategies for seeking to privatise and profit from traditional/indigenous knowledge*

## – Sociopaths

- ▶ **Power seeking**
- ▶ **Con artists/confidence tricksters**
- ▶ **No social conscience**
- ▶ **Greed**

# Julius Malema, Polokwane, April 23, 2013

## In court, on charges of:

- Fraud
- Corruption
- Money laundering
- Raquetearing
- Also, tax evasion and contempt of court

Examples of *rot at the top* that pervades all of society ... if one believes in civilisation and the *rule of law*

*Is this an example of how being beholden to special interests interferes with our ability to operate with integrity in the public interest?*

*Beware and be aware*

## Questions of personal and professional integrity

**In whose best interests - self or public?**

**Sociopathic behaviour**

# Conclusions: what to do?

- ▶ **Be aware and vigilant of the forces that would serve to derail science**
- ▶ **Apply the Golden Rule (adapted) by being assertive in the face of the abuse of science and inappropriate conduct**
- ▶ **Always serve the public interest over self- and special interests**



*Integrity in the face of  
conflicting interests ...*

# Discussion

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