Week 15: Popular Articles

Most of the pieces here concern science and the law and particularly the Daubert trilogy of Supreme court cases

a) Science and Society: The Interdependence of Science and Law, Stephen Breyer (*Science*, April 24, 1998)

Stephen Breyer is currently a Supreme Court Justice; this article in Science is a good backdrop for the Daubert trilogy of Supreme Court decisions and how science is supposed to influence the law with judges as the gatekeepers.

Breyer explicitly mentions predictions of "future dangerousness" and indeterminant detention

Remember the [Scientific Reference Manual from the Federal Judicial Center]; this is supposed to be an aid to judges in their gatekeeper roles; google what is in brackets to get a free pdf of this

b) Something Rotten At the Core of Science?, David F. Horrobin (*Trends in Pharmacological Sciences*, February, 2001)

David Horrobin is the person who wrote the personal paper on sample size reprinted in SGEP

This is a "sour grapes" piece about "evening primrose oil" and "peer review" and Horrobin not getting any respect or funding

c) Is Science Different for Lawyers?, David L. Faigman (*Science*, July 19, 2002)

This is a story about fingerprints being admissible under Daubert, i.e., whether a statement of a "match" should be admissible

He discusses Kumho (part of the Daubert trilogy) which extends Daubert to all expert testimony

The idea of "science" versus "specialization" (with regard to fingerprinting)

Maybe we should relook at our earlier piece that we read on the fallibility of fingerprint identification

A great word *ipse dixit* is used: "because I said so"

d) Scientific Evidence and Public Policy, David Michaels (*American Journal of Public Health*, Supplement 1, 2005)

David Michaels is the Assistant Secretary of Labor, Occupational Safety and Health (a former Assistant Secretary of Energy under Clinton)

He deals with Daubert issues and crying "junk science" to get corporations off-the-hook

Also, "manufactured uncertainty" and the idea that "doubt is their product"; weight-of-the-evidence ideas are discussed

We give a long quote on the Data Quality Act:

Manufactured uncertainty has achieved a new level of official respectability in the Data Quality Act, which requires federal agencies to establish procedures to ensure the quality of information disseminated by government. Promoted by tobacco and other opponents of regulation, this largely unknown statutory provision was slipped into a thick federal appropriations bill and passed without debate. It allows

parties subject to regulation to challenge every piece of evidence considered by regulators. Opponents of regulation have deceptively promoted the Data Quality Act and the application of Daubert in regulatory proceedings as a plea for "sound science." In reality, while these "sound science" reforms "sound like science," they have little to do with the way science and scientists work. Instead, they are yet another tactic to delay or halt the imposition of requirements to protect the public's health and environment.

e) Doubt Is Their Product, David Michaels (*Scientific American*, June, 2005)

This is a redaction of his book "Doubt is our product" (from the Tobacco Industry documents)

Beginning quote on p. 391: Industry groups are fighting government regulation by fomenting scientific uncertainty.

The Taxicab Standard for beryllium (p. 392):

When President Bill Clinton appointed me, the Department of Energy's exposure standard for beryllium had not changed since 1949, some years after the substance's health dangers had become clear. In response to a crisis involving many sick workers and community residents, two scientists working with the Atomic Energy Commission estimated what they thought to be a safe level – two micrograms of beryllium per cubic meter of air – while they were riding in a taxicab on their way to a meeting. The commission, the predecessor of the DOE, then implemented the so-called taxicab standard.

On p. 394 on turning "significance" into "non-significance" :

In 2002, however, statisticians from another product-defense firm, Roth Associates in Rockville,

Md., and the University of Illinois published a reanalysis of a 10-year-old CDC study. By changing some key parameters, the authors raised the estimates for the background rate of lung cancer so that the elevation caused by beryllium was no longer statistically significant. (This procedure is rather easily accomplished, whereas the opposite – turning insignificance into significance – is extremely difficult.)