



From Monty Python and the Holy Grail

A current chant of anti-regulatory zealots is that EPA's programs only prevent "statistical deaths," rather than real deaths. Apparently, they want EPA to provide something like Monty Python's "bring out your dead" scene, which is pictured on the left.

Michael Livermore has a good response to this line of argument in [Grist](#):

The science showing the harmful effects of particulate matter, or soot, is very strong. The microscopic bits spewed out of smokestacks around the nation are small enough that they can travel deep into human lungs and can even slip directly into the bloodstream.

The result: higher incidences of asthma, bronchitis, impaired lung development in children, and heart disease.

I think, however, that Michael is missing the point, which is not really based on the content of the scientific studies. Instead, it rests on a demand that evidence of harm include *individualized* proof of causation, not merely statistical evidence of harm.

This is akin to the popular misconception that you can't convict a person of a crime based on circumstantial evidence, without eyewitness testimony or DNA evidence. We do it all the time. It's only on TV that you need a smoking gun as the basis for a conviction.

For instance, if you've been married five times, and each of the five spouses has drowned in the bathtub soon after writing a will in your favor, that "statistical" evidence is enough for a conviction, even if you didn't leave any fingerprints or DNA. Similarly, if hospital admissions and ER visits for asthma go up on days when air pollution spikes, it would be irresponsible for the government to ignore that evidence.