Reading assignment and cultural critique: Excess deaths in Iraq.

As reputedly pointed out by H.G. Wells, “Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.” Arguably, that day is already here.

For example, in late October, 2004, the respected British medical journal The Lancet published a research article that attempted to estimate the number of excess deaths associated (both directly and indirectly) with the invasion of Iraq (Roberts et al. 2004). This research article gained some attention in the media in the context of the coming presidential election, and was the subject of considerable debate. While some argued over the political motivations of researchers and publisher, many points of contention concerned interpretation (and misinterpretation) of the statistical design and data analysis.

For this assignment, you will first find and read the original publication. The complete citation is listed below and the article is available both electronically and in print via the Olin Library (lbis.kenyon.edu). While reading the article, consider what you have learned about sampling methodology and estimation, the two statistical tools that are most important for understanding this research. Also think about the concepts of bias and variability in parameters, and sampling distributions, which you are reading about in Section 3.4 for this coming week. Specifically, come prepared to discuss:

1. What sort of sample is the cluster survey?
2. In what sense are the resulting estimates “conservative?”
3. The confidence interval is directly related to the standard deviation of the sampling distribution. What does it mean to say that about 98000 excess deaths have occurred, with a 95% confidence interval of (8,000 – 194,000)? Are all values in this interval equally likely? All else equal, what would happen if the sample was larger? Would the mean estimate change? Would the confidence interval (i.e., the standard deviation) change?

Finally, I want you to search the internet for a popular (i.e., non-academic) report or response to this article. This can be a newspaper or magazine article, a governmental press release, or a blogger’s rant. Just make sure that it concerns the Lancet study specifically. I found several by searching on “Lancet Iraqi death” on Google. Email me the URL before Monday at kerkhoffa@kenyon.edu.

How does the popular article handle the statistical content of the Lancet article? Do you see evidence of misinterpretation or a twisting of the facts? Do you see reasonable methodological critique? Think about what mediates the transition from a dispassionate, scientific study to a political hot-potato.

Come prepared to discuss the article in depth on Monday, including both statistical method and the cultural ramifications of its interpretation. In preparation, please record
some notes while reading both pieces (1 page or less expected, more if you want): these may be thoughts, observations, or questions. Also note the author and source (including URL) for your popular report on the issue. You will turn these notes in after the discussion. I just want to see your mind working; plus it will fuel the discussion.