**Leamer, 1983.**

1. *Explain the meaning of S and M in equation (4) at page 32.*

The *M* matrix represents the variance of the bias terms due to omitted variables, measurement error, or simultaneity. It captures the degree to which the model is misspecified. The *S* matrix represents the sample covariance matrix of the OLS estimates.

1. *When is M zero?*

The *M* matrix is zero only for the perfectly conducted experiment.

1. *What does Leamer say about the whimsical character of inference, how sensibly to base inferences on opinions when facts are unavailable?*

Leamer asserts that “objectivity” is a false idol. Researchers should embrace the whimsical character of inference by conducting sensitivity analyses to see how the results depend on their assumptions.

1. *What does Leamer mean by “The mapping is the message”?*

Researchers should limit themselves to reporting the mapping between assumptions and results, though they may still choose which assumptions are worth including in their report.

1. *What does Leamer mean when he says that experimental inference admits a conventional horizon in a critical dimension, namely the choice of explanatory variables?*

In a properly conducted experiment, it is reasonable to assume that the misspecification matrix *M* is approximately zero. Thus, one may include only outcome of interest and the sources of experimental variation.

1. *What is the purpose of Table 2?*

Table 2 suggests the degree of researcher freedom in specifying her model in an observational setting.

1. *What is the main takeaway of this article?*

Econometric evidence is presently unconvincing, so practitioners should think perform sensitivity analyses. While they may sometimes rely on convention in determining the space of relevant assumptions, the work of testing that boundary is never complete.

**Angrist and Pischke, 2010.**

1. What do A&P see as the main difference between their analysis and Leamer’s analysis? 2) Why do they want to discuss natural and quasi-experiments? 3) What doe A&P mean when they say that the difference between a randomized trial and an observational study is one of degree? 4) How do they summarize “Lucas critique”? 5) What is the point of Figure 1? 6) A key passage is when A&P discuss the specific threats to validity that justify the use of randomized trials, or ivs, diff-in-diff, and regression discontinuity. Discuss. 7) When discussing research in industrial disorganization, A&P say that structural estimates should line up with those derived under weaker assumptions. Discuss. 8) What do A&P say about the existence of a trade-off between internal vs external validity of empirical work? And what solution do they propose to increase the external validity of natural or quasi-experiments? 9) What is the main takeaway of this article?

Nevo and Whinston, 2010.

1) What do Nevo and Whinston mean by structural model? 2) What are two advantages of working with structural models, and how are they related to the trade-off between internal vs. external validity of empirical work? 3) What are the limitations that N&W ascribe to the analysis of Hastings? And how are they related to the trade-off between internal vs. external validity? 4) In what sense extrapolation is simpler using an economic model? 5) What type of problems does the “optimal legal review” introduce in the analysis? 6) What is the main takeaway of this article?

Sims, 2010.

1) What does Sims say about the use by Donohue and Wolfers of over-indentifying restrictions and why are they useful? 2) What are the ingredients of the economic model that Sims would like to see Donohue and Wolfers develop? 3) What concerns does Sims have about the work by Romer and Romer, and how does that concern affect other cases where government agencies take decisions? To what extent are those decisions exogenous to the model? 4) How does Sims think that a school principal can extrapolate (again, external validation) the results from the study of Angrist and Lavy? Is the range of possible policy actions narrow or wide, and why? 5) What is the main takeaway of this article?