

**LSE Seminar – Summer Term 2001**  
**Evidential Issues in Evolutionary Biology**  
**Elliott Sober**

CI = Sober (ed.), *Conceptual Issues in Evolutionary Biology*, MIT Press, 2<sup>nd</sup> ed., 1994; PB = Sober, *Philosophy of Biology*. Westview Press, 1993; RTP = Sober, *Reconstructing the Past*. MIT Press, 1988.

**Background Reading:** Sober, PB, ch. 1; Sober, “Introduction to Bayesian Epistemology” (on Sober’s web site).

**Likelihood, Evolution, and Design – Session 1; Testing Hypotheses of Common Ancestry – Sessions 2-5; Testing Adaptive Hypotheses – Sessions 6-9; Wrap Up – Session 10**

<b>Session</b>	<b>Date</b>	<b>Readings</b>
1	March 15	“The Design Argument” (on Sober’s web site)
2	May 23	E. Sober, PB, ch. 6; E. Sober, RTP, ch. 1-3.
3	May 24 (11-1)	W. Hennig, “Phylogenetic Systematics,” in CI; S. Farris, “The Logical Basis of Phylogenetic Analysis,” in CI; E. Sober, RTP, ch. 4.
4	May 30	J. Felsenstein, “Cases in Which Parsimony and Compatibility Methods can be Positively Misleading,” <i>Systematic Zoology</i> 1978, 27: 401-410; S. Farris, “Likelihood and Consistency,” <i>Cladistics</i> , 1999, 15: 199-204; E. Sober, RTP, ch 5.
5	May 31 (2-4)	P. Lewis, “Maximum Likelihood as an Alternative to Parsimony for Inferring Phylogeny Using Nucleotide Sequence Data,” in D. Soltis, P. Soltis, and J. Doyle (eds.), <i>Molecular Systematics of Plants II – Data Sequencing</i> . Kluwer, pp. 132-63; E. Sober, “Bayesianism – its Scope and Limits” (on Sober’s web site); E. Sober, RTP, ch. 6.
6	June 6	Sober, PB, ch 3,5; S. Gould and R. Lewontin, “The Spandrels of San Marco and the Panglossian Paradigm,” in CI; J. Maynard Smith, “Optimization Theory in Evolution,” in CI.
7	June 7 (2-4)	E. Sober and S. Orzack, “Common Ancestry and Natural Selection,” unpublished mss; W. Mitchell and T. Valone, 1990, “The Optimization Research Program.” <i>Quart. Rev. of Biology</i> 65: 4 3-52.
8	June 13	Mark Ridley, <i>The Explanation of Organic Diversity</i> , OUP, 1983, pp. 1-44; E. Sober, “Reconstructing the Character States of Ancestors,” (on Sober’s web site).
9	June 20	S. Orzack and E. Sober, “Adaptation, Phylogenetic Inertia, and the Method of Controlled Comparisons.” unpublished mss.
10	June 27	--

