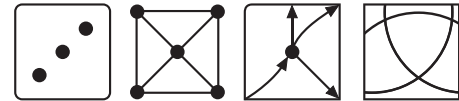


Joint event of the Research Seminar  
on Foundations of Statistics and the  
MCMP Colloquium on 29 July 2011



# MCMP & Statistics Department

14:30 Coffee & Cake “MCMP & Statistics Department”

15:15 **Teddy Seidenfeld (Carnegie Mellon University)**

## **Three contrasts between two senses of coherence**

(Joint work with M. J. Schervish and J. B. Kadane – Statistics, CMU)

B. de Finetti defended two senses of *coherence* in providing foundations for his theory of subjective probabilities. *Coherence*<sub>1</sub> requires that when a decision maker announces *fair* prices for random variables these are immune to a uniform sure-loss – no *Book* is possible using finitely many *fair* contracts! *Coherence*<sub>2</sub> requires that when a decision maker’s forecasts for a finite set of random variables are evaluated by Brier Score – squared error loss – there is no rival set of forecasts that dominate with a uniformly better score for sure.

De Finetti established these two concepts are equivalent: *fair* prices are *coherent*<sub>1</sub> if and only if they constitute a *coherent*<sub>2</sub> set of forecasts if and only if they are the expected values for the variables under some common (finitely additive) personal probability.

I report three additional contrasts between these two senses of *coherence*. One contrast (relating to finitely additive probabilities) favors *coherence*<sub>2</sub>. One contrast (relating to decisions with moral hazard) favors *coherence*<sub>1</sub>. The third contrast relates to the challenge of state-dependent utilities.

This event will take place at the Alte Statistik-Bibliothek, Ludwigstr. 33, R. 245; it is kindly supported by the *Institutskolloquium des Instituts für Statistik*

More info online: [www.statistik.lmu.de/~thomas/Research/ResearchSeminar](http://www.statistik.lmu.de/~thomas/Research/ResearchSeminar)  
[www.philosophie.uni-muenchen.de/lehreinheiten/logik\\_sprachphil/mcmap](http://www.philosophie.uni-muenchen.de/lehreinheiten/logik_sprachphil/mcmap)