

**STANFORD UNIVERSITY  
DEPARTMENT OF STATISTICS  
DEPARTMENTAL SEMINAR**

3:15 p.m., Wednesday, November 7, 2007  
Building 380, Room 380-C

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**Diachronic Coherence and Radical Probabilism**

The question of diachronic coherence, coherence of degrees of belief across time, is investigated within the context of Richard Jeffrey radical probabilism. Diachronic coherence is taken as fundamental, and coherence results for degrees of belief at a single time, such as additivity, are recovered only with additional assumptions. Additivity of probabilities-of-probabilities is seen to be less problematic than additivity of first-order probabilities. Without any assumed model of belief change, diachronic coherence applied to higher-order degrees of belief yields the martingale property.