FRIDAY, SEPT. 15
SOO HONG CHEW
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**12:15 PM - 1:30 PM
UCLA Anderson
Cornell Hall
Room D-307**

"Ellsberg meets Keynes: Missing Links among Sources of Uncertainty"

In his 1921 *A Treatise on Probability*, Keynes articulates, "if two probabilities are equal in degree, ought we, in choosing our course of action, to prefer that which is based on a greater body of knowledge". To illustrate this point, he suggests that betting on the color of a ball drawn from an urn with a known 50-50 composition of black and white balls would be preferred to drawing it from another urn with an unknown color composition. Subsequently, Ellsberg (1961) observes that the unknown urn involves multiple possible priors and offers the view that an aversion towards the unknown bet, he calls this ambiguity aversion, may be traced to a sense of pessimism in weighing potentially unfavorable odds disproportionately. Becker and Brownson (1964) further observe that the unknown bet may be viewed as a compound lottery on the possible priors, leading to Segal's (1987) account of ambiguity aversion in terms of a preference for the 50-50 known bet over the compound lottery with the same overall winning probability. Revisiting Keynes, Fox and Tversky (1995) present evidence using temperatures in San Francisco and Istanbul in support of the idea that people may tend to prefer betting on risks arising from a more familiar source of uncertainty than an unfamiliar one. Overall, these studies suggest that even when lotteries are viewed as being identical in terms of probabilities and outcomes, decision makers may differentiate among them depending on the nature of ambiguity, whether multiple stages are involved, and how familiar they may be with the underlying source of uncertainty. The demonstration in Halevy (2007) of a strong link between ambiguity attitude and attitude towards the reduction of compound lottery leads naturally to a closely related question: How do these two attitudes relate individually to attitude towards a source of uncertainty which is distinct from the known bet and does not involve multiple priors? We investigate these "missing links" between ambiguity attitude and reduction attitude with source preference elicited from betting on whether the trailing digit of the temperature of a city is odd or even. In an experiment with 1878 subjects in Singapore, we find significant associations of source preference with ambiguity attitude and with compound risk attitude in addition to a tight association between ambiguity and compound risk attitudes. In individual type analysis, 66% of the subjects are nonneutral in all three attitudes and 20% are nonneutral in two of three attitudes compared to 6% who are uniformly neutral. Significantly, our overall results are replicated in a sample of 1002 in Beijing. In terms of further theoretical development, our findings tend to support source-based modelling of decision making under uncertainty pointing to the need to account for the close relation among attitudes towards ambiguity, compound risk, and source of uncertainty.