1057-60-307 **Robert E Molzon*** (`molzon@ms.uky.edu`), Department of Mathematics, University of Kentucky, Lexington, KY 40506. *Random Matching and the Central Limit Theorem.* Preliminary report.

Much of economic theory and policy is based on expected value. Although models are often formulated in a way that takes stochastic shocks into consideration, the analysis of the models is often so intractable that a way out of the mathematical difficulties is sought. One way out is to employ a heuristic "law of large numbers" to argue that the stochastic shocks will cancel out if the population size is allowed "to go to infinity". Thus the stochastic model is replaced with a deterministic model with parameters computed as the expected values of the variables in the stochastic model. Katrina type disasters remind us that fluctuations from the mean really do matter.

In this paper we develop a powerful mathematical tool, a central limit theorem for matching processes, that allows us to study the distribution of equilibria in a number of economic models. Our examples show that a very different picture presents itself once we go beyond expected value and consider variation in the outcome of matching models. Our first example examines a simple two strategy game played by a (large) finite number of players who switch strategies based on the outcome of the previous round played. (Received January 25, 2010)