1046-05-1506 **William M Ella*** (wella9cd@umw.edu), 1914 Cambridge Drive, Vinton, VA 24179, and **Michael L Follett**, **Chelsey A Cooley**, **Eric A Gilson** and **Lorenzo Traldi**. *Generalized Dice: An Investigation of Dice Families.* Preliminary report.

A generalized die is an ascending list of integers; we think of the integers in the list as labels appearing on the "sides" of the die. A die X is stronger than a die Y if there are fewer pairs (i, j) with $x_i < y_j$ than pairs (i, j) with $x_i > y_j$; if neither of X, Y is stronger than the other then X and Y are tied. A dice family $D(n, a, b, s)$ contains all n-sided dice whose labels lie between a and b and sum to s. We discuss interesting experimental results concerning the overall tie density in a family, and the percentage of dice that tie over half of their "siblings." Families of four-sided dice have unusually high tie percentages. We also explore theoretical results concerning weakly balanced dice, which have equal numbers of wins and losses, and symmetric dice, which have a palindromic label structure; these two initially very different sounding subsets turn out to be closely related. We also discuss experimental results related to other open questions regarding dice families. (Received September 15, 2008)