**Monogamy, Free Love, and a Combinatorial Formula for $S_{2n}$**

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This summer, (as a warm-up to my regularly scheduled research) I sat down to do a calculation in Riemannian geometry that I figured would occupy a couple lazy July afternoons. A shockingly inordinate amount of time later, and I found that I had in fact proven a rather non-trivial-looking result in combinatorics. Not quite content with this, I proceeded to find a very satisfying and purely combinatorial proof of the result. It is my intention in this talk to first give a (very) brief account of how Riemannian geometry led me to this result, and then spend the bulk of the time talking about the structure of $S_{2n}$ which I was led to consider as well as the proof of the main result. (Absolutely NO Riemannian geometry is required to comprehend this talk. In fact, the talk will be quite accessible to undergraduates.)