

1067-11-2101 **Paul Pollack*** (ppollac@illinois.edu), 1409 W. Green St., Department of Mathematics,
MC-382, University of Illinois, Urbana, IL 61801. *Sociable numbers, or* How I messed with
perfection and lived to write papers about it.

Let $s(n) := \sum_{d|n, d < n} d$ denote the sum of the proper divisors of the natural number n . We call n *perfect* if $s(n) = n$. The study of such numbers goes back thousands of years, but many of the most natural questions remain unanswered. Similar comments apply to the study of *amicable pairs*, which are pairs of natural numbers n and m for which $s(n) = m$ while $s(m) = n$. (In this case, both n and m are called *amicable numbers*.) I will describe recent results concerning perfect numbers, amicable numbers, and their higher-order generalizations, so-called *sociable numbers*. (Received September 22, 2010)