A Matter of Judgment

As an actuary, I'm supposed to be good with numbers. I can handle basic arithmetic operations with ease, calculate square roots without a calculator, and determine a linear regression "best fit" without resorting to an @ function on my spreadsheet. These are all within my zone of comfort. But there are some numbers that I have difficulty grasping.

Take, for instance, the recent discovery by paleontologists of a massive dinosaur in the Egyptian desert. Nicknamed Paralititan, this species stretched 80 to 100 feet and weighed 70 tons. Although I can do the multiplication, I find it difficult to comprehend the implications of a 140,000-pound animal running through my backyard. How much would this poster child for vegetarianism eat every day? And where would he sleep (besides the obvious "anywhere he wants")?

Another number I have difficulty understanding is $480 million—at least as it applies to the amount handed down by a Florida jury in August of 2001 to three plaintiffs who were seriously injured in a plane crash.

There are some smaller numbers in this case that are equally perplexing. As reported in USA Today, "the jury deliberated about six hours before awarding compensatory damages (of $80 million) and a half-hour before deciding on the punitive penalty (of $400 million)." Thirty minutes to choose the number $400 million?

Then, there's the number $3 billion—the amount awarded by a Los Angeles jury in June 2001 to a single plaintiff in a tobacco liability suit against Philip Morris. The plaintiff, Richard Boeken, was a 56-year-old securities dealer who had smoked two packs of cigarettes a day for the past 40 years. If you do the math, that's 584,000 cigarettes, many of which were pulled from packages clearly marked with the surgeon general's warning that smoking can be hazardous to your health.

Legal experts may dismiss the magnitude of this award by reminding us that such "excessive" awards are often reduced upon appeal. In fact, a judge did offer Mr. Boeken the opportunity to accept $100 million in punitive damages or he would grant Philip Morris a new trial on the punitive damage award.

But what if this award wasn't reduced? Our legal system relies heavily on precedents, so what if just a few of these "excessive" awards are allowed to stand? It would be as if a Paralititan were let loose in the suburbs with no one quite sure how to subdue it. And how can judge and jury disagree on the appropriate amount of punitive damages by $2.9 billion? That kind of gap must surely call into question someone's arithmetic.

Or perhaps this is a case of "anchoring," the psychological bias that arises from relying too heavily on an initial value. In this case, the plaintiff's attorney asked for damages between $100 million and $10 billion. Did the jury feel its award ($3 billion) was reasonable since it was well below the maximum? Did the judge feel conservative by reducing the "excessive" award to a value ($100 million) at the bottom of the demand range?

In their article "The Psychology of Suit and Settlement," authors Rachlinski, Guthrie, and Wistrich note that "faith in the judicial process depends upon good judgment" and observe that "whether judges are determining law, determining fact, or facilitating settlement, they must strive to avoid systematic errors of judgment."

The same should be true for juries.

Since I like numbers, I decided to do some extrapolations. Today, there are 40 to 50 million Americans who smoke. If just 500,000 continue to smoke for the next 30 years (or half a million cigarettes, whichever comes first) and juries award just $2 billion to each of them (a rather paltry sum compared to the Boeken award after adjusting for 30 years of inflation), the combined damage awards would equal a number represented by a "one" followed by fifteen "zeros." According to Webster, that's a gazillion dollars.

Which is another number I can't comprehend.