Some choices we make—what to have for dinner, going out to a movie versus watching a sitcom on television—have very little in the way of a time horizon. But many decisions, both private and public, have longer-term implications: to smoke, to attend college, United ordering aircraft from Boeing or the Defense Department buying a new aircraft carrier, building a dam for hydroelectric power or irrigation, granting a 20-year patent, addressing (or not addressing) an environmental concern.

In these latter cases we have to find some way to compare the present and future flows of costs and benefits. In part because the costs and benefits do not occur simultaneously. For example, one forgoes income and pays college tuition over a four-year period ages 18 to 22—and then reaps some expected financial gain from age 22 to, say, 70. One can then calculate the economic rate of return from that human capital investment.

(An old dog may actually be able to learn new tricks, but the time period in which Spot can capture those benefits is much shorter. This is the principal reason for going to college at 18 rather than 50.)

In finance theory—mortgage payments, life insurance policies, French “viager” contracts, annuities, how to value a human life—priceless in one sense, but far from it for public policies involving safety or medical procedures—are all variations on present value themes.

All of us “discount the future” to some extent: we prefer that good or pleasurable things happen to us now, and that unpleasurable things—going to the dentist for a root canal—happen later, or not at all. Children and politicians have very high discount rates. That leads to screaming and rolling on the floor when a six-year-old is denied an ice cream cone by his or her mother (going to Baskin-Robbins tomorrow instead of right now has very little value). To remain in office, Senators and Governors frequently propose worthless projects with hidden expensive price tags later on to curry favor with or pacify their constituents today. Mayor Richard M. Daley’s decision a few years ago to trade 75 years’ worth of parking-meter quarters for $1.15 billion—when the estimated present value of that revenue stream was closer to $2.3 billion—is one instance; pension liabilities for Illinois and Chicago are another.

One goal of being a good parent is to lower your child’s discount rate—getting him or her to value the future more and today less. This is a futile exercise with politicians. Winning a $1 million lottery prize, payable at $50,000 a year...
for 20 years, is not, in present value terms, the same as $1 million today; in fact, it’s about half that amount, which is why winners who choose an up-front lump-sum payment get a check for about $500,000 (minus taxes).

Most religions have a list of Thou-Shalt-Not transgressions, such as murder, adultery and theft, with severe sanctions for those who commit them. In 2007, Pope Benedict XVI told a parish gathering in Rome that “hell is a real place where sinners burn in everlasting fire.” At first blush that would appear to be a pretty stiff penalty. And yet in present value terms —the benefits associated with a dalliance with my neighbor’s wife today in exchange for possibly burning in hell down the road—this transgression may be worth it. Being burned at the stake tomorrow or being shot by her husband would constitute a much bigger deterrent.

Along similar lines, prison sentences in the United States are arguably too long. Stealing a purse or a car, or killing a rival gang member, benefits me today; if I, in economist-speak, discount the future at a high rate, getting caught today is more of a deterrent than serving 20 years instead of 10 in the Stateville Correctional Center. This suggests how our policing, legal, and prison resources should be re-allocated if we want to make a bigger dent in criminal activity.

Finally—speaking of burning in hell—because of present value considerations, global warming is our most challenging environmental problem. Keeping the earth’s temperature from inching up will require significant modifications in our lifestyles today. In exchange, we’ll have the pleasure of knowing that 100 years from now, the climate will be more hospitable for our great-great grandchildren. Trading off sacrifices today for largely unknown benefits in the 22nd century is a public-policy nightmare to say the least.