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Mind Tools: Applications and Solutions

The Mathematics of Persistence

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Everyone is born with an empty wallet and no skill. Yet some go on to acquire means and expertise. How likely is that?

Your prospects for a quick financial windfall are not good. Accounting fraud—once a popular approach to fast cash—has fallen on hard times as escalating legal costs and prison sentences erode its benefits. Inheritance has never been reliable: There are far fewer wealthy relatives than willing heirs, and the ones that exist have a selfish fixation on their own longevity. Powerball is a sucker's game. Imagine a string stretched from Owatonna, MN to Orlando, FL. A one-inch segment represents your odds of hitting the jackpot; the remainder, your odds of continuing your present lifestyle.

If your chance of instant riches is minuscule, your chance of instant expertise is zero: Nobody acquires skill in a day. Still, for those who persist, the long-term prospects are good. Both money and knowledge can compound over time.

To understand the compounding of money, consider a "five-dollar" experiment. Each week put five bucks in a cookie jar. Once a year, pull out \$260 and invest it at 8.5% (a reasonable market return over the long haul). Do this year after year.

You'll need a dozen years to build up your first \$5000—that's quite a while—but you'll need only six additional years to accumulate your next \$5000. You'll have your third \$5000 in another four years, and your fourth \$5000 in just three more. In the early stages of compounding, gains are meager. Significant gains don't occur until later. But once they appear, they start to snowball.

How about becoming an expert? Within their areas of competence, experts have many more categories of awareness than novices. The perception of subtleties is what Michael Jordan, Warren Buffett, and Yo-Yo Ma have in common. Not only have experts gathered many "elemental" facts about their field; they have linked them to one another to produce a vast array of "relational" facts.

In simplest terms, a relational fact is the knowledge gained when you combine two elemental facts. To picture this, draw two dots and connect them with a line. The dots represent elemental facts; the line, a relational fact.

Add new dots, connecting each to all the others. With three dots, you'll have three connecting lines. With four dots, six lines. With five dots, ten; etc. Every new dot compounds the number of connecting lines. Likewise, every new piece of information compounds the pool of available relationships.

With a knowledge base of one hundred elemental facts, you have at your disposal about 5000 potential connections. Double your knowledge base and you will increase the potential connections to nearly 20,000. Learn a thousand things and the potential connections approach half a million.

It is these latent relationships that the mind processes in its search for insight. The processing is autonomous and subliminal, but you can encourage it. Each day use your powers of observation and reasoning to learn some new thing about your field. Reflect on its connection to what you already know. Reflection compounds knowledge.

With a sufficient knowledge base, you can start to build a portfolio of noteworthy work—problems solved, know-how acquired and applied. To the extent that your growing portfolio is valued by others, your income is likely to increase. This, in turn, can accelerate the growth of your financial base.

The power of dollars and of facts is collective, not individual. Before either can generate really large returns they must reach a critical mass. Mass grows as the accumulating returns on your past efforts are enhanced by the on-going contributions of your new efforts—in short, as you persist.

There is no persistence without discipline. But self-coercion is fools' discipline. A devitalizing force at heart, it will eventually burn you out. Far better are the attractive forces of love, desire, and fascination. These are rejuvenating; their objects, energizing. The wise recognize this and harness them to travel to the City of Good Luck.

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