

Chapter Two: *Deliberate Practice and Stock Picking*

by Nathan Polackwich

When people ask me about my job, I tell them it's the antithesis of building a fence. With fence-building, you get immediate feedback on your progress. When you're done you can stand back and marvel at your work. You can feel the fence's resistance to test its strength, or use a level to make sure it's straight. The job has an end, and when it ends you don't have to think about it anymore. Not so with stock-picking.

With stock-picking we confront the problem of delayed feedback. We take an action and the fruit of our labor takes years to play out. And because it takes time to learn whether prior decisions were good ones, it's difficult to correct for errors. Further complicating matters, as investors we deal with such infinitely complex systems as the economy, politics, and the madness of crowds, which makes it hard to identify cause and effect. So even when we know the result of a prior decision, we often struggle to explain the reasons *why*.

The stock market's immeasurable complexity – like that of the weather, ocean currents, the solar system, and the economy – is a direct result of its mathematically chaotic nature. What makes chaotic systems so opaque is their extreme sensitivity to initial conditions. Imagine standing at the top of a hill with a tennis ball. Mark a spot, put the ball there, and give it a push. No matter how many times you do it, the ball is unlikely to bounce exactly the same way down the hill and stop in the same place twice. The slightest difference in factors such as the force you use, the angle at which you push, and even the humidity in the air can dramatically affect where the ball goes.

The following poem, a version of something Benjamin Franklin once wrote in his yearly *Poor Richard's Almanac*, also illustrates the nature of systems with a high sensitivity to initial conditions:

For the want of a nail the shoe was lost,
For the want of a shoe the horse was lost,
For the want of a horse the rider was lost,
For the want of a rider the battle was lost,
For the want of a battle the kingdom was lost—

And all for the want of a horseshoe nail.

Imagine the potentially infinite number of “nails” that could affect the outcome of the battle and thus the war and kingdom. The stock market and economy are no different.

Chaotic systems are also deterministic. This means if you knew everything about every factor that could affect such a system, you could theoretically “determine” its outcome. Realistically, of course, this is impossible. Take the relatively simple problem of trying to predict what will happen when you strike a billiard ball. According to the mathematician Michael Barry, while the first few impacts are easy to foresee, to predict

the ninth impact you have to account for the gravitational pull of people standing next to the table. By the 56th impact, you must factor every elementary particle in the universe into your calculations! And not just their present locations, but their future positions in the space of time between the first and 56th impact.

Predicting billiard ball movements, however, is a breeze compared to even more complex systems like the stock market and economy, which include something outside the realm of predictability – the “free will” of their human participants.* Additionally, to foresee the future of the stock market, economy, and humanity in general you have to anticipate technological changes that have yet to occur. How could someone living in the 19th century, for instance, accurately envision the future without knowing that inventions like electricity and the internal combustion engine were in store? How can we predict the future today without knowing what new technologies will shape our world in the coming decades?

If stock-picking suffers from the problem of delayed feedback and an infinitely uncertain future, can you still use the deliberate practice method in investing? Yes, but since there’s no investing equivalent to the driving range, you have to concentrate on refining your investment process.† You have to build “mental models” of your business, giving special attention to how the models interrelate. Warren Buffett’s long-time partner Charlie Munger once expounded the importance of developing mental models in a speech at the USC Business School in 1994.

What is elementary, worldly wisdom? The first rule is that you can’t really know anything if you just remember isolated facts and try and bang ‘em back. If the facts don’t hang together on a latticework of theory, you don’t have them in a usable form. You’ve got to have models in your head. And you’ve got to array your experience both vicarious and direct on this latticework of models.

What are the models? Well, the first rule is that you’ve got to have multiple models because if you just have one or two that you’re using, the nature of human psychology is such that you’ll torture reality so that it fits your models, or at least you’ll think it does. It’s like the old saying, “To the man with only a hammer, every problem looks like a nail.” And the models have to come from multiple disciplines because all the wisdom of the world is not to be found in one little academic department.

You may say, “My God, this is already getting way too tough.” But, fortunately, it isn’t that tough because 80 or 90 important models will carry about 90% of the freight in making you a worldly wise person. And, of those, only a mere handful really carry very heavy freight.

* Some philosophers argue that free will and determinism are incompatible.

† “What It Takes to be Great” Geoffrey Colvin, *Fortune*, Oct. 19, 2006.

There is a tendency among investors – particularly those with backgrounds in the neat exactitude of mathematics – to look for models that try to quantify the past in order to precisely predict the future. But these sorts of models are useless in the messy chaos of the stock market. Sometimes they're worse than useless. They can be outright *dangerous* if they lead those who use them to act as if their predictions represent incontrovertible fact.

So rather than the precisely predictive mathematical models used by most investment professionals to fool themselves (and their clients) into thinking they can control the future, the mental models described in this book can best be characterized as abstract and descriptive. They "describe" how the investing world can work, though not necessarily how it will always work and not with any pretense of mathematical precision. They provide guidance not guarantees.

At my investment firm, for example, I recently assessed our stock-buying decisions over the preceding decade. I discovered that *all* of our worst stock picks had performed exceptionally in the three years before we first bought the stock. But of our best picks only one had done unusually well. Mean reversion in the stock market is a very real phenomenon.

After I presented these findings to our Investment Committee, someone asked whether we should institute a rule to never buy stocks that had performed extraordinarily well over the prior three years. I replied, "No. It's a general rule to incorporate into our thinking, but it is not hard-and-fast." I was then asked, "Well, what good is it?"

This was an important question because it made me think about how, exactly, descriptive models are useful. The short answer is that they help you place your bets more intelligently. But again there's no guarantee that those bets will work as expected.

For instance, the fact that all of our worst stock picks were star performers before we bought them suggests that buying a big winner can be dangerous.* But at the time we bought these stocks we were unaware that we were making unusually risky bets. And one of the surest paths to disaster is making a bet with a low probability of success *and not knowing it*.

That doesn't mean you should always eschew low probability bets. Only a fool would pass on a \$1 lottery ticket with a 1 in 100 chance of winning and a \$5 million payoff. Or take a company whose stock has risen threefold in the past few years, but still has an attractive valuation, huge competitive advantages, and operates in a rapidly expanding industry. In that case, having the flexibility to buy a soaring stock is desirable. That's why strict rules don't apply in the stock market – Every situation is unique.

But if you know buying such a stock is risky, yet you still allow yourself the flexibility to buy the stock, what good is the knowledge? The answer is that *you enter the bet with your eyes wide open to the potential risk*. Knowing that, you'll make absolutely certain

* At least it has been for us – perhaps because of the types of stocks we tend to gravitate toward.

that your reason for taking the risk is compelling – in other words, the potential payoff is enormous.

The above is just one example, but it shows how a descriptive model (i.e., stocks that have performed unusually well are at high risk of crashing back to reality), applied flexibly, can be valuable. Of course, as Munger cautioned, you need more than just one or two models. Knowing only what bait to use won't put fish on the table. You must also know how best to present the bait, what spots the fish frequent, and the time of day and tide they're most aggressive, among other things. The power of mental models, then, comes not from their intrinsic value but from how they connect to everything else we know. Without context, they're little more than useless trivia.