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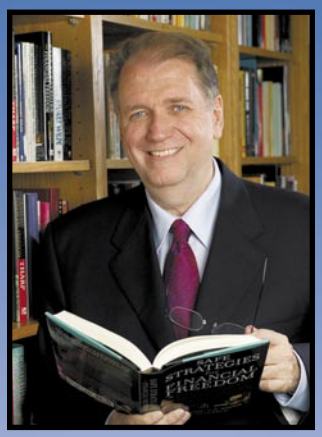
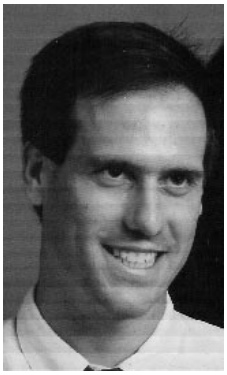


Van K. Tharp, Ph.D.

Market Mastery Fourth Quarter 2005

How Academia Leads Wall Street Astray: An Interview with Scott Brown, Ph.D.



Dr. Scott Brown

By Van K. Tharp, Ph.D.

My purpose in writing this article is to suggest the following:

- *The super rich create a money game and a trading game. Through academic research, they justify the great Wall Street Machine, which feeds off commissions and asset management fees. They use this same research to mislead you into doing all of the wrong things.*
- *Over the years, while modeling top traders, I've developed some principles that are the basis for success. However, the great Wall Street Machine doesn't want you to know these principles. In fact, they want you to believe totally otherwise, so that you'll add your savings to their pockets.*

If you've read my interview with a fund manager in two prior issues of Market Mastery, then you can understand how people inside the Wall Street Machine think in terms of relative performance and are trained to act when they are forced to maintain a 95% minimum allocation in stocks. Thus, they are never out of the markets when they should be.

My purpose in writing this article is to show you 1) how academia endeavors to shape your thinking and 2) how they could never support the principles that work. And to that end, I've elected to interview Scott Brown, a good friend of mine who just got his Ph.D. in finance and has become a finance professor.

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But first, let me give you some background into my thinking process.

I remember taking several courses in experimental psychology in the early 1960s. Psychology then was an infant science, and they were trying to model themselves after a "hard" science, saying, "We want to be a 'hard' science like physics."

There was one problem with what they were doing. They were modeling themselves after Newtonian physics that had been proven obsolete many years earlier. In the back of my mind, I knew that. I'm sure the professors knew that too. Yet there I was learning "scientific procedures" based on a "hard" science that was already obsolete.

Later on, I studied the structure of scientific revolutions. Apparently, academic science largely stands still until someone, usually from outside the mainstream field, suddenly provides some insight that is so outstanding that it totally shakes the foundation of most of the theories that everyone believes. Of course, this new "insight" is resisted strongly by the status quo. However, eventually new people come into the field and the new ideas become mainstream concepts. Then the field settles down and gets stagnant until someone from the outside introduces a new revolutionary idea to upset everyone.

After I got my doctoral degree, I found that one had to publish or perish to survive as an academic. However, if you tried to publish anything that was too different from the mainstream theories, your ideas would be promptly rejected. What was even more frustrating was to observe "successful" researchers progress as academics because they submitted articles that pleased the status quo professors in control of the academic psychology journals. Their articles did nothing to expand our knowledge of psychology, but they were rewarded with tenure because they did not rock the boat. Thus, over time, I was quite happy to move away from doing psychological research and into my own field of modeling top trading behavior and helping traders.

What I didn't realize at the time was that I was somewhat of an outsider in another field of science—economics and finance. I've spent the last 25 years modeling top traders and developing models that help people trade well. I've had no background in economics and finance, and that's probably been to my advantage because my thinking has not been closed off by the ideas and research coming out of the fields of finance and economics. And in this interview, I will introduce you to some principles that we've learned from modeling top traders that are almost the antithesis of what people learn in academic finance.

For example, the Efficient Capital Markets Theory (ECM) basically states that the market, at any time, always reflects all the known information about it. Almost every good trader or investor knows intuitively that this hypothesis can hold in certain situations, such as highly liquid markets in the very short-term. Yet everyone seems to forget that it tells us nothing about the long-term. Nonetheless, this theory still shapes the thinking of mainstream finance and economics practitioners in both the short-term and long-term views of asset price behavior.

Market efficiency theory tells us that if markets are efficient then prices should move in a random walk. This sounds like a great theory, but why do huge moves (such as the stock market crash of 1987) happen all too frequently—not once every 1000 years as the theory would predict?

A totally rebellious area juxtaposed against mainstream finance and economics has sprung up over the last 10 years in the backdrop of the theory of Efficient Capital Markets and that is the area of behavioral finance. Behavioral finance is the application of psychology to finance, specifically the part of psychology that deals with decision-making. Psychologists have begun to study human decision-making, and not surprisingly they have concluded that human beings do not make rational, efficient decisions at all, as economists have assumed. Thus, behavioral finance has sprung up as a fledgling part of economics.

Human beings do not make rational, efficient decisions at all, as economists have assumed.

However, even in this area, there is a major problem in the focus. Researchers in behavioral finance are trying to predict market price behavior based upon the idea that human beings are not efficient decision makers. To me this approach is not very efficient. Applied behavioral finance, which is what my specialty is, should be directed toward making people good decision makers rather than trying to predict markets based upon human inefficiencies.

Today, the control of much of America's money is in the hands of the "Wall Street Machine." Trillions of our dollars are at stake. The Wall Street Machine is driven by commissions and asset management fees. Some of the ideas from the academic fields of economics and finance are perfect for driving more of America's money into the Wall Street Machine. In fact, one wonders if these theories were not specifically invented to support the machine.

With that in mind, let me introduce Dr. Scott Brown. Scott became a big proponent of my work after working through a number of my home study courses and workshops. Scott was well versed in the fundamentals of "Tharp Think" before he went to graduate school to get his Ph.D. in finance. In fact, I even warned him that he'd have to forget many of the ideas that he believed in order to survive in academia. However, he had a strong part of him that wanted a Ph.D. and he did survive the ordeal. And that puts him in an excellent position to comment on what's happening in academia in the areas of finance and economics. His opinions on many current theories in finance and the way they feed the "Wall Street Machine" are much more charged than mine.

Scott, tell me what the average person learns when they get a finance degree.

There are four primary ideas that all finance majors become indoctrinated in before they become brokers, portfolio managers, or financial planners: Efficient Capital Markets (ECM), the Random Walk (RW) hypothesis, which is used to test and support the idea of ECM, Modern Portfolio Theory (MPT), and the Capital Asset Pricing Model (CAPM). Remember that most financial professionals are totally indoctrinated in these theories before they assist you.

So let's go over each of these factors. Please explain them in simple language that everyone can understand. And give your opinion about how it influences Wall Street. Let's start with ECM.

Eugene Fama's Efficient Capital Markets Theory says that all financial prices correctly reflect all public information at all times. In simple language this means that you never under or over pay for a stock or futures contract given what is publicly known at all times. This theory says that prices may appear to be too high or too low at times, but any prices that seem to be incorrect must be an illusion according to ECM. The average investor totally fails to understand that this will only hold true at very best in the very short-term, like in the next ten minutes.

And, in simple terms, what do you think is wrong with ECM?

All of the major textbooks today, which promote a view of the markets as working rationally and efficiently, do not provide arguments as to why speculative bubbles can occur. These textbooks do a major disservice to university finance students today because they neglect to mention widely documented bubbles or Ponzi schemes. To quote one of our most highly regarded economists today, Dr. Bob Shiller of Yale University, "these textbooks convey a sense of orderly progression in financial markets, of markets that work with mathematical precision. If the phenomena [psychological factors] are not mentioned at all today, then students are not given any way to judge for themselves whether or not they are in fact influencing the markets." More importantly Shiller says that, in demanding precise mathematical precision in financial research at the academic level, financial economics forces results that are irrelevant to the investor.

Okay, how about Random Walk (RW)? What is it and how does it influence Wall Street?

The theory that financial markets are very efficient and the extensive research in financial economics investigating this theory form the leading intellectual basis for arguments against the idea that markets

are vulnerable to excessive psychological optimism or price bubbles. Stock prices, by this theory, approximately describe "random walks" through time: the price changes are unpredictable since they occur only in response to genuinely new information, which by the fact that it is new, is unpredictable.

And haven't they just randomly generated prices to attempt to mimic stock market behavior?

One of the arguments that I see presented all of the time by efficient market academics are charts of price movements created by some mathematical model that simulates randomness. It irks me when they point out what appear to be trends in their random price simulations and then smugly say, "See how this proves that there are no trends in the stock market!" This to me is equivalent of standing on the edge of the ocean with a lunatic who sublimely smiles as he points to the horizon and says, "Look at the flat line out yonder and behold how I have proven that the world is flat!"

Isn't it correct to say that markets could easily be random except for the fat tails? Markets tend to have huge price swings that cannot be explained by randomness. For example, the stock market crash of 1987 contained a 20% move in the stock market in one day. On a random basis, you might expect that once in a thousand years, not within a few years after an S&P futures contract is developed.

The literature on the evidence for this theory includes work of the highest quality and therefore, whether or not we ultimately agree with it, we must at least take the efficient markets theory seriously. In the long-term there are no financial theories that exist that either prove or disprove long-term, multi-year price trends in stocks or commodities. Gradually shifting supply and demand relationships in the futures markets or psychological herd behavior that gradually shifts aggregate perception in the stock markets could create long-term trends. I think Paul Samuelson, the father of modern mathematical economics and Professor Emeritus at the Massachusetts Institute of Technology (MIT), sums it all up nicely: "the stock market shows 'micro-efficiency' but NOT 'macro-efficiency.'"

And why do people think the theory is true?

The most simple and direct argument for efficient markets, which the supporters of the theory banter around, is the observation that it seems to be difficult to make a lot of money by buying low and selling high in the stock market.

That's true, but I think it has to do more with people's psychology and lack of understanding of position sizing than anything else.

Surprisingly to me at least, these very smart financial academics miss the point entirely that this argument that they hold in such high regard does NOT tell us that the stock market cannot go through periods of significant miss-pricing, lasting years or even decades. This limitation of the efficient markets theory is nearly universally overlooked in university finance textbooks and classroom discussion. The assumption is very falsely made that the same efficient markets theory that says it is difficult to predict "day-to-day" changes also implies that one cannot predict "any" changes. In reality, EMT tells us absolutely nothing about long run price changes in the stock market.

In addition, I believe that we have secular bull and bear markets. And you could define these entirely by valuations.

During secular bull markets, the economy grows, but the price earning ratios of stocks grows even more. Thus, you could buy stocks and hold them throughout such a market and make a lot of money. But during secular bear markets, such as the one we are in now, even if the economy grows strongly, the price earning ratios of stocks (i.e., valuations) tend to shrink. Thus, if you buy and hold stocks, you'll lose a lot of wealth.

I think two books illustrate these phenomenon quite well—Michael Alexander's *Stock Market Cycles* and Ed Easterling's *Unexpected Returns: Understanding Secular Stock Market Cycles*. Ed's work even shows what will happen to your portfolio over 20 years should you invest when valuations are high, and it's not pretty. Is this type of theory covered at all in the finance education that people receive?

It is very reasonable for markets to go through years or even decades of extreme highs or extreme lows as per everything I just said. Secular bear and bull markets are totally reasonable if not to be expected. Ironically, at the very top of the bull markets I remember a couple of well-known academics that were prognosticating that the bull market would keep on going to much higher heights and backed up their argument with very sophisticated math and thinking.

The jury is out as to whether we are in a secular bear market,[1] but it is not beyond the realm of reasonable possibilities. Your assertion of the existence of secular bear and bull

1. Scott would probably say the jury was out until we've had 15-20 years of lackluster performance.

markets is exactly what Uncle Paul (Dr. Samuelson's nickname) means when he says that markets are not macro-efficient.

So let's move on to the next theory. Tell me about MPT.

Modern Portfolio Theory (MPT) was pioneered by Harry Markowitz in 1952. It says that diversification reduces the risks that do not provide returns (i.e., the risk associated with specific stocks), while emphasizing the risks that do provide the returns (i.e., the risk associated with the market). So, if you buy stocks that have market risk, then you should expect a premium for taking that risk (i.e., a higher return than you should get from say buying a bond). Basically, MPT explores how risk-averse investors should construct a portfolio in order to optimize expected returns for a given level of risk.

What does it basically say and how does it influence Wall Street?

The objective of MPT is the study of consumption and investment decisions made by individuals and firms. Economists started this analysis by considering the simplest of all worlds: a one-person/one-good economy using Robinson Crusoe shipwrecked on an island as a heuristic example. Robinson Crusoe has to decide whether or not to consume his coconuts now or save them for future consumption.

Markowitz (1952) presented a solution to this problem in a mathematical model of a portfolio with two risky assets and a risk free asset (like a three month treasury bill) using utility theory. Specifically, he showed that under these most simplistic of conditions, using assumptions of investor rationality based on utility theory that the investor has to choose a percentage to invest in each asset that minimizes the return volatility [variance] subject to the expected mean return constraint. What was unique about Markowitz's argument was that he was the first to define the investor's problem in this way. Furthermore, he was able to show that the problem is equivalent to maximizing the investor's expected utility (not return).

I've worked with a lot of investors and traders and none of them think that way—unless they've really been indoctrinated in MPT. So what are the implications?

When this theory is generalized to many assets, the properties of diversification and the Capital Market Line, which most investors are fuzzily familiar with, unfolds. Diversification says that if you buy a whole bunch of different stocks, then you can reduce the volatility of returns on your portfolio and achieve a desirable average return. For this reason you may also hear this called mean/variance portfolio theory.

If investors all have homogenous beliefs, then they all have the same efficient linear set of mean/variance portfolios called the Capital Market Line (CML). The CML is a linear relationship showing that if everyone agrees that treasury bills, for instance, are less risky than stocks and stocks are less risky than futures contracts, then the t-bills should have the lowest returns and futures contracts should have the highest.

There are serious problems with blindly learning this. My finance students are all taught (until they get to me) that if an investor wants more return, he or she should take on more risk. That is just like saying that if you want a more intense sexual experience you should engage in unprotected sex!

What investors really should do is find situations other people aren't paying attention to. Top investors, as you have found in your modeling work, do just the opposite from what mainstream academics teaches; they spend all of their time looking for LOW risk, HIGH yield opportunities. If they find no such opportunities, they simply refuse to trade. What a contrast they are to the mentality of mutual fund managers who have been shown to be incompetent when their performance is compared to the market averages.

I really don't hear traders talking or thinking about the "riskiness" of each asset class. In fact, very astute traders who understand risk management and position sizing (as I teach it) can invest in futures with very little risk—less than 1% exposure in each position. And most people think that futures contracts are the riskiest asset class.

That is precisely true. Position sizing is the correct way to approach the asset allocation problem where a continuum is seen to exist between all cash (fully out of the market) and all assets (fully in the market).

Alternatively, grounding the asset allocation problem in utility theory puts economists into the herd behavior of blindly using it and thinking that there is nothing else to explain investor behavior. Academics in finance, for this reason, have been slow to recognize the shortcomings of utility theory and even slower to seriously consider alternative theories.

The current alternative is either game theory[2] from economics or prospect theory from psychology. Game theory is mathematically too complex and awkward to realisti-

2. Watch the movie *Beautiful Mind* to find out what this theory is based on.

cally employ in financial modeling and empirical research and prospect theory, which is offered up by experimental psychology, was empirically supported by just plain bad science, explained below.

Perhaps I can present a different view of game theory that is not based upon economics. I believe that we play a trading game and a money game. Both games were invented by the wealthiest people in the world. They make up the rules about how you play the game and how you win. And if you accept their rules blindly, you will probably give your money to them and they will win. And I think the empirical evidence of what happens to the average person's money when they try to play the markets speaks loudly for the evidence of such a game.

Even worse look what happens to their money when they put it into the hand of finance "professionals" to manage it for them who are direct extensions of those rich families you mentioned!

So let's extend this version of game theory even more. What if the same wealthy people controlled our leading institutions of modern education? That is, they didn't get funding unless they emphasized certain areas—like the ones we are talking about.

You might be able to find evidence to support that, but it would probably be hard to prove it. Although when you sit through a Michael Moore movie, you certainly get the uneasy feeling there is a world order that has nothing to do with brotherly love!

Anyway, with those thoughts in mind, let's discuss the other theories. What about CAPM? Don't MPT and CAPM really go together in terms of their implications?

Absolutely! CAPM is an extension of MPT. The Capital Asset Pricing Model (CAPM) was developed by one of Markowitz's students, William Sharpe. It provides a method of dealing with the risk of being in the market, systematic risk or beta, which cannot be diversified away. Sharpe showed under unrealistic assumptions that a portfolio's expected return hinged solely on its beta—its price relationship to the overall market. CAPM measures the portfolio risk and the return the investor can expect and provides a framework for constructing portfolios with an optimal reward and risk relationship.

And isn't the next result the idea that you cannot diversify enough risk out of your portfolio yourself, so you should buy and hold a mutual fund. And that fund, of course, may generate a lot of internal commissions (which you pay for indirectly) and they can collect fees from your account forever?

Exactly! They promote excessive diversification and portfolio rebalancing for this reason, and then they collude with Congress to pump as much of the public's retirement dollars into the hands of mutual fund managers who are explicitly or implicitly in collusion with managing insiders in corporate America. Specifically, Wall Street works hard to make public investors believe that they are too stupid to manage their own money. A person who thinks for themselves and knows what is right for them, as you teach, is a danger to Wall Street!

Ironically, the world's wealthiest investor, Warren Buffet, says "The strategy we've adopted precludes our following standard diversification dogma. Many pundits would therefore say the strategy must be riskier than that employed by more conventional investors. We disagree. We believe that a policy of portfolio concentration may well decrease risk if it raises, as it should, both the intensity with which an investor thinks about a business and the comfort-level he must feel with its economic characteristics before buying into it.[3]" Later on, he says, "diversification is a substitute for thinking."

I guess Markowitz and Sharpe would call him a statistical abnormality. Warren Buffet also said, "many in Wall Street—a community in which quality control is not prized—will sell investors anything they will buy.[4]"

What does CAPM basically get everyone to do? How does it influence Wall Street?

Markowitz's work was extended using the concept of market equilibrium in order to determine the market price for risk and the appropriate measure of risk for a single asset. CAPM was one economic model used to solve this problem and is normally associated with Bill Sharpe (1963, 1964) who won the Nobel Prize in economics for his work on the matter. To give you an idea of how much importance economic academics place on these seminal theories, take note that in 1990 Harry Markowitz, Merton Miller, and Bill Sharpe shared the first Nobel Prize in economics given to researchers in finance. Markowitz was awarded the prize for portfolio theory, Miller for

3. 1993 Chairman's Letter to Shareholders
4. 2000 Letter to Shareholders

the theory of corporate finance, and Sharpe for CAPM. What few people know is that the CAPM solution was really developed almost simultaneously by Treynor [1961], Mossin [1966], Lintner [1965, 1969], and Black [1972]. A second important equilibrium-pricing model, called the arbitrage-pricing model (APT), was developed by Ross [1976] that is much more general and testable than CAPM. CAPM is really a special case of APT.

By the way, it's interesting to note that two Nobel Laureates in economics were part of Long-term Capital Management, the hedge fund that failed and whose investors were actually bailed out by the Federal Reserve.

They were among the economists we've mentioned, but I guess it still goes to show how close academic finance and Wall Street really are.

Okay, so what are we talking about here with CAPM? What are the implications?

CAPM says that investors can diversify away all risk except the way an asset's price moves with relationship to the market as a whole. The CAPM model calls this systematic risk. Alternatively, the risk that is independent of the market as a whole CAPM labels unsystematic risk. The model uses a regression coefficient called "beta" to measure the systematic risk that the model claims is the only variable that is important to the investor. This theory really excited Wall Street because it gave the Wall Street Machine, as you call it, a simple way to justify the existence of mutual funds in the 1960s and 1970s.

And didn't the whole idea of mutual funds get totally crushed after the Great Depression? If you understand that history, please illuminate us.

Before the stock market crash in 1929, mutual funds were called "investment pools." Investment pools are historically notorious as elaborate schemes to con the public out of money.

> **Diversification is a substitue for thinking.**
>
> **– Warren Buffet**

How so?

The pool managers would steal money out of the pool. Oftentimes the pool would make a lot of money over time and people would get attracted by the consistent returns. Once there was enough money in the pool, the manager would empty the account and run off with the money. A lot of the pools were associated with "bucket shops" that are like illegal off track horse betting where no money is actually placed on the race. In the same fashion, no shares were bought or sold in bucket shops, which still allowed people to place bets on stock price movements. It was even easier for the manager of an investment pool to steal money by trading public funds through a bucket shop because these dingy halls were not monitored by the stock exchanges.

And the result was?

If you told an investor in the 1920s or 1930s that managing an investment pool (mutual fund) today is considered a respectable job, they would just shake their heads in disbelief and surprise.

Of course, all sorts of laws were put in place in the 1930s to make sure that this sort of behavior doesn't happen and justify the existence of such funds again. Given those legal changes, how did mutual funds, historically associated with fraudulent thievery, get justified through academic research? I know that today the situation is ridiculous. There are more mutual funds than there are stocks. And most retirement funds are forced to invest in mutual funds by laws mandated by congress.

MPT and CAPM gave Wall Street a convenient way, endorsed by the ivory tower of finance and economics, to say, "Hey Mr. Public Q Investor, just give us your money and your worries are gone!" Arthur Levitt grew infuriated as the head of the SEC when he caught congressmen on the payroll of influential inside executives and large fund managers. Senator Joe Lieberman, for instance, was one of the worst stooges for the big Wall Street Machine during Levitt's tenure. Levitt's book, *Take On The Street* is a must read that details the corrupt ties between fund managers, financial journalists, stock analysts, inside corporate executives, and federal law makers.

What the Wall Street Machine tries to do all the time is simply invent products to sell to the public, saying that if you buy this, then your worries are gone. In my opinion, Wall Street secretly develops schemes to nickel and dime the average Joe to death with bogus commissions and hidden fees

In the U.K. now, most individuals trade through the local bookie, rather than some trading exchange. And that's because gambling profits are not taxed in the U.K. Government policy can certainly shape people's behavior easily. So, isn't it interesting that in the United States brokers are not allowed to profit if you profit. It's considered to be unethical. Instead, they've set up a system in which they win if you invest at all. Namely, they get a commission on every trade you make. And that's considered "ethical."

Exactly, and they also make a market for corporate inside managers to dump overpriced shares acquired for free in the form of options gifted by the boards of directors that they control. Until asymmetrical information abuses were uncovered after 2000, corporate insiders legally could give information to big firms in Wall Street that they didn't share with the public.

Fortunately, with the advent of the Internet, the impact of commissions has changed dramatically. When I first traded actively in 1974, I went through a $20,000 account in six months. When I explored my trading costs, it was costing me $65 to buy 100 shares of stock and $65 to sell it. If I bought 200 shares it would probably cost me at least $110 in commission to buy and again to sell. Thus, when it was over, I discovered that, while my money was gone, I'd paid over $20,000 in commissions in the six-month period.

However, today I trade through the Internet and it costs me $7.99 to buy 100 or 1000 shares and another $7.99 to sell it. That's a huge difference. The public can buy and sell at a penny a share through Interactive Brokers. So you could buy and sell 100 shares through them for $2.00. In addition, market makers used to be able to give huge bid ask spreads. Today with electronic trading, that's all but disappeared in the very liquid stocks, with bid-ask spreads as small as a penny a share.

There is no doubt that online discount brokerages have truly transformed the playing field. It'll be interesting to see how trading changes over the years as a result.

I find it interesting that only wealthy people (i.e., qualified investors) can invest in absolute performance hedge funds that really don't make money unless they make you money. That's considered too risky. However, almost all retirement money goes into mutual funds that evaluate themselves on relative performance (i.e., losing 15% if the market loses 17% is considered excellent performance) and isn't considered risky.

In my opinion this is a ruse by Congress to make the little guy think that their interests are protected by big brother. There is nobody looking out for the small investor in Washington and probably never will be. I thought the Democrats were supposed to look out for the little guy. Read what Levitt says about Senator Lieberman in his book and you'll really shake your head. Anyone in the public that thinks that the markets are efficient is a patsy waiting to lose their money in the modern day version of "The Sting" called Wall Street. Most people just have no awareness of the severe abuses committed by corporate insiders and mutual fund managers every day in the stock market.

Isn't it interesting that you never see the tax records of major corporations? They report to their shareholders with a different form of accounting—generally accepted accounting practices (i.e., GAAP).

GAAP is only a set of standards. There is plenty of room within GAAP for unscrupulous accountants and financial executives to distort figures. Even when a company uses GAAP, our students still need to scrutinize its financial statements. I am considered radical by some people because I endorse ignoring financial statements, which are easy to distort. The buzzword today is Sarbanes-Oxley, but I can guarantee you that not only have inside executives found ways around this that we don't yet know about, but Congress really doesn't care if the public gets ripped off…it is all a smoke screen.

People are simply not aware that there is NO public interest group in Washington to protect the interests of individual public investors. But there is a public interest group that hawk eyes every bill to protect the interests of corporate inside managers who are supposed to be protecting the interests of shareholders. In my opinion, people must ignore financial theories that fail to offer meaningful insights into the markets and learn to look at the markets the way the insiders do. If they don't, they are nothing but Wall Street "road kill" waiting to happen. The 401(k), for instance, was a brilliant ruse that allowed corporate insiders to strip Americans of their pension benefits and inject all of the public's retirement money into the hands of mutual fund managers, none of whom can outperform the general market averages in the long haul when you account for commissions, hidden fees and taxes.

There is NO public interest group in Washington to protect the interests of individual public investors.

What about some of the ideas in behavioral finance?

The most applicable psychological theory to the markets in my opinion is psychological feedback theory where investors gradually pile on into rising markets. They slowly buy into markets coming up off of a major extended period of depressed prices and then pile back off when prices crash after long extended bull markets. Psychological theories such as feedback loops, for example, which are based on academic psychological studies of herd behavior, do a pretty good job of explaining

extreme price movements in the financial markets.

The noted social psychologist Soloman Asch performed an experiment in 1952 that he and many others interpreted as showing the immense power of social pressure on individual judgment.[5] He basically showed that people had a very hard time dissenting from group consensus. Asch explained his results as due to social pressure. Ironically, this was reported in the same year of 1952 when Markowitz was linking financial economics to utility theory!

So social pressure can explain some of the herding behavior we see at market tops and market bottoms.

Three years later, psychologists Morton Duetsch and Harold Gerard reported a variant of Asch's experiment.[6] They concluded that the clearly wrong answers to questions given by subjects in the experiment (where people caved in to social pressure) occurred because people simply thought that all the other people in the group could not be wrong.

Another famous psychologist, Stanley Milgram, was able to show that people would administer electric shocks to another person sitting close by, who was unbeknownst to the subject, a confederate. All of these results have been widely interpreted as showing the enormous power of authority over the human mind by academic psychologists and leading edge contemporary economists looking for alternatives to utility or prospect theory in explaining investment behavior and hence asset price changes.

Asch's and Millgram's studies show that people are ready to believe the majority view or to believe authorities even when such views plainly contradict matter-of-fact judgment. Their behavior is in fact largely rational and intelligent because most people have had many prior experiences of making errors when they contradict the judgments of a larger group or of an authority figure, and they have learned from these experiences.

And it is even indoctrinated into us as we grow up in the school system.

This makes sense when you think about what happens to those of us who disagree with the teacher even in kindergarten. Even infantile dissenters are usually punished for their tangential analysis by the teacher and potentially ostracized by their classmates instead of being received with open non-judgmental consideration of their views. Given the kind of decisions observed by these prominent psychologists in researching herd behavior it is not surprising that many people are accepting of the perceived authority of others on such matters as stock market valuation. The securities industry works in collusion with corporate inside executives in using this fact to their advantage in influencing the thinking and behavior of individual public investors.

So what's the solution?

This is why I so strongly support your concept that traders and investors must take full responsibility for their investment decisions. This is also why you emphasize that finding what is right for them is so vitally important or they will be led into the Wall Street slaughter house. This is your unique and vital contribution to the popular investment literature. You are the only guru teaching people to find out for themselves what uniquely being themselves means to them to become powerfully successful investors. Your *Peak Performance Course* is the only home study course in the markets teaching people to become independent in their investment thinking. In my opinion every investor alive today should start their education with your *Peak Performance Course.*

Of course, I believe that as well, but I can't imagine the average investor having the sort of commitment that it takes to get through my *Peak Performance Course* and really learn about how they influence their own investment results.

I just said that they SHOULD.

So let's talk about some of the principles I've developed over the last 20 years modeling top investing behavior. Let me mention some of the key ones and you can comment on how they'd be received by the academic community in finance and by Wall Street.

First, I define risk differently than most of Wall Street. I believe from modeling top traders that you must determine when you open a position the exact point at which you should get out of the market if you are "wrong" about the position. This is your risk, which I call R for short.

Ironically, Wall Street tells people that since markets are efficient, then prices must follow a random walk. As a result, they say it is impossible to forecast a price level or see

5. Soloman Asch, *Social Psychology* (Englewood CLiffs, N.J: Pretice Hall, 1952), 450-501.
6. Morton Deutsch and Harold Gerard, "A Study of Normative and Informational Social Influences Upon Individual Judgment," *Journal of Abnormal and Social Psychology*, 51, (1955): 629-36.

a trend. Because of this they want the public to be fully invested at all times in the mutual funds promoted by the big Wall Street Machine. Carefully planning for a loss before taking a position makes total sense to a professional gambler in a casino. Planning for loss should also make sense to individual investors but it doesn't due to the false security of diversification promoted by CAPM and cherished by Wall Street as a tool to sucker the public.

One concept I picked up in graduate school that is very important for investors to understand is that all price movements occur for some underlying reason. A good researcher tries to understand these reasons, called the underlying data generating process (DGP). There are different DGPs that generate different potentially predictable price movements. An investor should find a DGP that is right for his or her personality (i.e., short-term versus long-term, price changes, etc.) and master his/her understanding of it. This allows our students to potentially overcome the very real dangers of curve fitting[7] and cherry picking[8] that would otherwise make them blind to changes in the DGP. If the DGP changes, then all of the past distributions of returns for that method will change, becoming either more or less profitable.

Before taking any of the steps we are going into now, it is imperative that the investor finds the type of investing that is right for them and masters it. Another way to say this is that the investor must find a DGP that best fits their personality and then master their understanding of the DGP so that if it changes they can decide whether it makes sense to continue. Practicing over past data that you recommend confers this mastery with the caveats that I mentioned.

Second, I believe that you should think about your results in terms of risk reward ratios. That means you can express your trading results as some multiple of your initial (R) risk. I call these R-multiples.

Yes, I understand that. But Wall Street and the academic community certainly don't think that way. Again, Wall Street absolutely does not want people successfully trading the stock markets for their own account. They don't want the word to get out that individuals can be much more successful than finance "professionals" as investors.

Third, I believe that you can express the results of any trading system as a distribution of R-multiples.

Okay, that logically follows from the last belief. R-multiples force people to integrate risk management into their investing in a way that is quantifiable and tangible. Optimism is a real danger in investing because it generally causes people to get lazy and not plan out damage control over periods when their system breaks down.

Fourth, I believe that you can evaluate the quality of a trading system (assuming that you've adequately sampled the population and adjusted for any correlation among multiple positions) using the mean R (i.e., expectancy), the standard deviation of R, and the size of the sample. I call this measure, the System Quality Number and it is equivalent to the following: (Expectancy/Standard Deviation R) × square root of the number of trades.

I have a subtle issue with point four and that is that it may be impossible for people to have enough observations to do the back testing you recommend. Consequently, they could discard a stellar system because they don't know how to adjust. Point four requires a better understanding of research methodology than people can perform and is subject to the dangers of curve fitting and data mining which make a system meaningless.

I have no problem with that at all. However, we do have to give them sound groundwork in how to evaluate a system. I used to tell people to look at expectancy multiplied by opportunity. In other words, if a system produced a 0.4R return per trade as its expectancy, then you could expect that system to return 40R after 100 trades. That meant it was better than another system that only produced 20R after 100 trades. However, all of that changes when you add in position sizing. The better your system quality number, the easier it is to use position sizing to meet your objectives.

I agree that this really does give investors a good starting point that does not require any understanding of advanced mathematics.

You also need a sample of trades from the six different types of markets to adequately reflect what your system might do. That is trades from up, down and sideways markets that are volatile and that are quiet.

What I really like about this point that you are making is that it really forces

7. Curve fitting to me means projecting the statistical results of one time period into a future period, which does not necessarily have the same statistical distribution of returns.
8. Cherry picking to me means picking results from historical data to support the profitability of a trading methodology.

investors to become very familiar with how their system functions in different conditions. For example, the best way to teach a teenager to drive is to have them learn in varied terrain and weather conditions in the mountains and on a flat track. This is the same concept.

My fifth point is that the higher the system quality number, the more likely your system is to make money. In fact, the system quality number is basically the same as a student's T distribution, so it could even be used to test the significance of the trading system at making money.

The famous statistician Gosset under the pen name "Student" developed the student's T distribution when he was working for the Guinness Brewery in Ireland in the 1800s. The company needed a way to sneak into their fields at night and take a handful of samples when the spies from other breweries couldn't see them. This allowed them to identify which fields had the best barley for their beer and gave the Guinness family a significant advantage over their competition.

What the T statistic does is tell you (our students) whether or not the returns from their trading system are statistically significant even when you get an infrequent trading signal. Again, this does not let you off the hook in becoming an expert at understanding the DGP.

One of the best examples of your top students was Dennis Ullom. I am amazed to this day at his mastery of the underlying DGP of O'Neil's CANSLIM system. I was just skimming an article in Technical Analysis of Stocks and Commodities on CANSLIM where the author gets advice from an MBA from Stanford to "improve" the system. I'll be honest with you Dennis was a football coach and in my opinion nobody understands CANSLIM like he does. He doesn't need any academic credentials to impress anybody. If I wanted to learn CANSLIM I wouldn't learn from anybody else, and I hold a Ph.D. in finance. That is the power of understanding the DGP to back up the statistical analysis of the system building skills that are unique to what you [Dr. Tharp] teach.

Sixth, every trader should have clear objectives in developing a trading system. In fact, there are probably an infinite number of objectives.

As you know I am a very active and experienced real estate investor. I have the great pleasure of enjoying the friendship of Mr. John Ulmer, who is in my opinion the best residential real estate investor in the country for various reasons beyond the scope of this article. I first met John for a 45 minute conversation in his offices in Toledo, Ohio. He listened to me brag about all the deals I had done up to that point in time. I was rehabbing, taking subject to, buying notes, and on and on. He patiently listened and when I finished he looked me dead in the eye and said, "You have the most common problem all beginning investors have."

"What's that?" I asked.

He replied, "You have not found the niche that is right for your personality that no one is paying attention to. And even more importantly, you haven't learned how to laser focus on that niche." His words hit me like a bullet to the brain. I now focus intently on developing clear objectives, and I do not allow my focus to be distracted throughout my day as I work toward those objectives.

Seventh, when you know yourself and your objectives, then you can develop a unique trading system that works for you. Most people don't become successful until they discover this critical point and develop a system that fits them.

What you teach in Peak Performance that is totally unique is:

1. Above all, believe in yourself and this also means taking full responsibility for your results. When you do that you can learn from your mistakes, which is an incredible jump forward.

2. You also teach that you should find what is uniquely you and how that relates to finding a trading methodology that fits that uniqueness.

These two nuggets of learning are so important that nothing else really matters because the student's learning will fall into place as a consequence.

The reason that these two points are so critical is that they allow the individual investor to create an efficient learning feedback loop. If they blame their investment failures on someone else they are projecting the problem outside of their minds and in doing so cannot correct it because they have given up ownership. Understanding (1) feedback loops and (2) how they influence market price behavior as each person's investment decisions are aggregated as a society into the market equilibrium both are critical to our understanding of the market price behavior. In the same fashion the individual investor's appreciation of the importance of his or her own feedback loop with the market is critical to the development of the requisite skills for lasting success.

I actually tell people to write down all of their beliefs about the market. People cannot trade the markets; they can only trade their beliefs. But when they write down all of their beliefs, they can get

a much better idea of what they want to trade and they can also see flaws in their thinking much easier (or at least I can help them spot those flaws).

It is of utmost importance that the investor recognizes that his or her mind creates his or her investment experience and he or she is only in complete control of the process when fear and all of its derivations are not projected outside of the mind. This is basically what Shakyamuni Buddha taught. I think he would have been a great investor (if he cared about money, of course)! This may be too advanced for our discussion, but we really dream the whole thing up without recognizing it. Thus, when you say, "We only trade our beliefs about the market," you are dead-on in my opinion. Investing is really an inner game.

The next critical point is that position sizing is the critical portion of your system that is necessary to meet your objectives. It, along with your individual psychology, accounts for 90% of the variability of your trading performance. In fact, position sizing is really the key component of asset allocation, which the academic world and Wall Street don't think is so important. Yet in my opinion few people realize this. I know you were originally going to do your Ph.D. thesis on this topic or something like it, but I couldn't understand a word of what you were saying in your proposal when it was translated into financial economic academic jargon.

Position sizing or portfolio heat, as Ed Seykota calls it, is an individual trader asset allocation problem confounded by leverage in the form of margin that can also apply to non margined accounts. An individual has to decide how much of an asset to buy, which determines the cash buffer they will have in place to avoid bankrupting the account when a large negative R trade comes through the system. This is very different, and not to be confused with the asset allocation problem of a firm deciding to issue stocks and bonds in the capital budgeting problem considered by Miller and Modigliani.[9] A little factoid is that their 1958 article outlining their irrelevance proposition marks the birth of the academic field of finance.

What I found annoying is that there is all this literature about the corporate insider decision of issuing stocks or bonds, while there is no academic work dealing with the question of how much to buy in a margined trading account. I really think this relates to your proposition that academic finance exists to feed the Wall Street machine. I can tell you that Wall Street has NO interest in guiding investors through the position sizing process and I believe that this is reflected in the paucity of research on the matter. I came to realize that in order to study the problem I had to characterize slippage since nobody else had. The characterization of slippage is my dissertation and the Chicago Board of Trade supported my research.

The ninth point is that there are an infinite number of objectives one could have and there probably is an optimal method for position sizing each R-multiple distribution (i.e., system) to meet that objective. This means that people really underemphasize the importance of position sizing if they pay any attention to it at all.

I whole-heartedly agree. In fact, I firmly believe that this relates directly to the problem of over optimism and excessive confidence most investors have of their trading ability. It's like the surveys of driving ability that show that nearly everyone rates their ability as above average. We have a market where most of the participants believe that they possess above average stock picking ability and that they also believe that ability is the key to success. The systematization you teach is so critical because it mitigates any problems arising from any such beliefs that our students may hold. People underemphasize the importance of position sizing for the same reason that think that everybody on the road but themselves is a lousy driver. Humility truly is a valuable virtue that is economically quantifiable as an investor!

The tenth point is that there are a number of types of trading that work if you understand these principles. These types might be classified as momentum—buy what's going up and sell it when it starts to go down. Value trading—buy what's undervalued and hold on to it until it becomes overvalued by whatever standards you use for value. And lastly, arbitrage, which means finding some unique loophole in the law or regulations that allows you to make a lot of money. And, once you find it, trade it as much as you can until the loophole changes.

This falls back to the vital importance of finding something that fits you. Momentum and arbitrage are both very short-term strategies while value investing is long-term. I get very bored easily and find no excitement in the markets. Look at the

9. Modigliani, F. and M.H. Miller, 1958, "The Cost of Capital, Corporation Finance, and the Theory of Investments," *American Economic Review* 48, 261-297.

casinos. I know the math behind all of the games in the house and have a clear understanding of money management as a gambler. I know how to play optimal strategies in craps and video poker for instance which are my two favorite games. Even so I get bored easily and only play for short time periods with minimum bet levels. I am definitely an above average player, but I hardly play because I derive more enjoyment watching "stupid people tricks" for hours when I am in the casinos in Reno and Las Vegas. I watch people consistently and persistently placing bad bets, betting too little, or betting too much and I know that many of these people are stock investors. If so many people are such poor monetary decision makers as I can see with full transparency in the casinos then how can the ivory tower of finance and Wall Street make the claim that the markets are efficient? I don't see many coldly calculating rational betters in the casino and these are the same people trading the markets…go figure!

I remember that one of your professors wanted to see if he could prove my approach to trading as was set forth in Trade Your Way to Financial Freedom. However, I don't remember what it is he wanted to prove. Do you?

We are both very interested in the position sizing problem, and we both would really like to know what algorithms if any individual public futures traders are using.

Anyway, my first thought after you left was that I'd never become famous as a result of any research he did because one critical point would be left out—that the parts of my ideas that were somewhat concrete could not be proved because of the overriding importance of human psychology. If you fail to cut losses short and let profits run, then you won't even have a system that makes money. That's probably point eleven.

The real problem lies in just what Dr. Shiller asserts: financial economists have rendered meaningless to investors most of the academic research in the field of finance, by obsessively driving for absolute mathematical precision. I believe it is more for this reason that you are correct. Academics in finance are blind to issues that are relevant to individual investors. I personally don't think they care. Neither the federal government nor the Wall Street machine cares about the little guy!

Academics in finance are blind to issues that are relevant to individual investors.

Point twelve: if you understand the first eleven points and work on yourself to overcome the natural inefficiencies that humans have in trading, you can take huge amounts of money out of the markets. Small accounts (i.e., under a million dollars) can make triple digit return rates each year if they are really good, and even huge accounts constrained by liquidity can still outperform the market averages. Paul Tudor Jones can regularly make 20% or more on a billion dollar account. Benjamin Graham averaged 17% each year on his managed funds during the Great Depression. And Warren Buffet has carried Graham's principles into the modern world. Yet the closer you are to academia, the more you'd be likely to think of this performance as abnormal. Look at what Tom Baldwin makes in the CBOT bond pit. The guy collects Frank Lloyd Wright houses like one would collect movie posters. Between him and Tudor Jones these guys affect the aura of the pit when they step in. Top investors and futures traders have rewired their brains and simply look at investing and trading in ways different from the crowd.[10] In my opinion you are the only cognitive psychologist in the world that understands and gets to the heart of this process reasonably well.

Perhaps the next point has nothing to do with anyone I coach or am likely to coach, but I do agree that all of this is impossible for the huge Wall Street firms that control trillions of dollars for hundreds of thousands of clients. There is not enough liquidity for them to move their money around that much. They prefer to collect their fees on your money year after year and tell you that relative performance is what counts. And there is always some way that they are relatively better than someone else.

These entities that you are describing are part of what I call the "dark forces" of Wall Street, and at the heart of the shell game the machine uses to strip the public of billions of their retirement dollars. They have done this by forcing people to save for retirement via 401(k)s, which only give people the option of investing in just these funds. Before the 401(k), the public's retirement was managed by pension directors who considered themselves stewards instead of the pirates that mutual fund managers always have been. The 401(k) is the greatest fraud perpetrated in United States history on an unsuspecting public. This fraud has been perpetrated by the inside corporate

10. Scott is making a pun here as the screaming mass of people in a future's pit is also called the "crowd."

managers in collusion with mutual fund managers and most sadly the federal government. I don't even agree with their liquidity argument because I know they only care about the commissions and fees they can pirate off of the fund.

My 14th point, which you may disagree with, is that the small account that produces triple digit rates of returns usually does so by short-term trading. And they can do this now because of much lower commission rates. So, now there is more opportunity for profit. If you make 0.18R per trade (after costs) and have 600 opportunities per year to do so, then your average yearly gain is 108R. And even if you are only risking 0.8% per trade, with compounding you are still going to make triple digit rates of returns. And I've seen this in my best clients.

Actually Van, I don't disagree at all. I simply assert that not many people can master such short-term trading because it is not right for their psychology. Very few people are competent card counters in black jack for instance, for exactly the same reason.

Those are some of my key teachings. What do you think?

Nobody out there but you is teaching this stuff and that is why I hold your teachings concerning system development and trading psychology in such high regard, despite a few unavoidable caveats.

I know you are developing a course about the stock market? What's your purpose here?

I became impatient with the predominance of "get rich quick" stock investment courses that focus on short run stock investing. So, I developed a common sense, non-mathematical approach to long-term stock investing that teaches people how to buy low priced stocks that may rise significantly over a three to ten year period using long-term price charts. I teach people what corporate America and Wall Street don't want them to know about long-term stock investing where potentially huge R-multiple trades are. I consider this hyper value investing because I buy stocks that are so low priced.

I believe I have found a way to identify when corporate insiders and others that seek to gain controlling interest in specific stocks do so by buying under the radar of the SEC. I teach people how to see where insiders might potentially do this on long-term charts. Insiders spend months or years accumulating a stock issue before they hype it to a public that drives up the price. The insiders then dump their stock holdings on the public's head just as has been widely documented at the end of the last century. I don't look at the market as a whole. I look at accumulating, pumping, and dumping of specific stocks. I don't just talk about the big Wall Street Machine; I teach people how to stalk it!

I have found a stock investment system that is perfect for my psychology that I am most comfortable with. I don't like to watch the stock market, and with my system I can check my portfolio just once a month. I am so firm on my understanding of this key point that you teach that I really don't want everyone in the world as a student of my course. I only want people who are seeking a stock investment strategy that allows them to buy stocks very low, not have to monitor the positions frequently, and then sell their stock holdings at potential very large R multiples after a number of years. My stock investment course is called *Bulletproof Stock Investing…What the Insiders Don't Want You to Know!*

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Know When to Hold 'Em Know When to Fold 'Em

By Van K. Tharp, Ph.D.

One of my goals for 2006 is to make enough money playing poker to enter the World Series of Poker. And, if I meet that goal, it would certainly be nice to finish "in the money," rather than throwing away $10,000 just for the opportunity to play in the World Series of Poker.

And as I've been training to become a better poker player, I've had some tremendous insights that apply to trading as much as to poker. Thus, my purpose in writing this article is to share with you my journey into the poker world and my many findings (which have been very useful to me both in poker and as a trading coach).

However, poker is a game of skill with a strong positive expectancy for people who understand the odds and play with them in their favor. Real poker also favors those who are good at reading other people. I tend to believe my skills are high in all of these areas, so poker really appeals to me.

Texas Hold 'Em Basics

Before I give you too much information that you might not understand if you are a poker novice, let me give you some basic information about how the game is played. The basic game of poker that is now played throughout the world is called Texas Hold 'Em. And its appeal probably comes from the fact that ten people can play against each other at a casino with a single deck of cards. For example, with ten people, you'd only use 25 of the 52 cards in a standard deck. And the more people who play, the more money the casinos make (taking a small "rake" off of every pot).

First, let me explain how the betting works. The person to the left of the dealer is required to post the small blind, which is equal to half of the basic bet of the game. Thus, in a $100-$200 game, the small blind would be $50. The person to the left of him is then required to post the big blind, which in the smaller limit on the game. Thus, in a $100-$200 game, the big blind would be $100. Each person is then given two cards face down, called pocket cards. After everyone looks at his or her cards, the person to the left of the big blind has to call the bet of $200, raise the bet by $200, or fold his hand and drop out of this round of the game. A round of betting proceeds this way until everyone has called and there are no more raises (although there is usually a limit of 4 raises).

After the first round of betting, three cards are dealt face up in the center of the table. These are community cards that everyone gets to use to make the best hand. After the three cards (called the flop) are dealt, then another round of betting takes place. During this round, the basic bet unit is still the amount of the big blind (again, in this case it would be $100). However, the first better (always the person to the left of the dealer) can always "check" (i.e., bet nothing). And as long as all the other players agree to check, then no betting takes place. You are always allowed to check, if no one before you has made a bet. However, players are allowed to check-and-raise, which means they can initially check and then raise the bet after any other bet is placed.

When the betting is settled after the flop, another community card is dealt, called the turn. Once the turn is revealed, the basic unit of betting is now double the big blind. And again, the first player to bet can always check. Betting proceeds until everyone has "called or matched" the highest raise or folded.

Finally, a last community card is dealt, called the river, and then another round of betting is completed. The winner is the person with the

1. If you have no interest in poker at all, you can skip this section and just read the insights to gain benefit from this article.

Basic Poker Hand Rankings

1. **Highest Card** (with an Ace being the highest). For example, A, 10, 9, 7, 2 would be an Ace-high hand and would beat and King-high hand such as K, Q, J, 4, 3. (Odds in five cards 1 to 1)
2. **Single pair**. Here the ranking of the pair determines the highest hand, so A-A would beat 10-10. (Odds 1.25 to 1)
3. **Two pair** such as 10-10 and 5-5. Here the ranking of the highest pair determines the winner and if they are the same, then the ranking of the second pair. And if both are the same, then the ranking of the last whole card. Thus 10-10, 5-5, A would beat 10-10, 5-5, 7. (Odds are 20 to 1)
4. **Three of a Kind**: 7-7-7, 2, 4. (Odds are 46 to 1)
5. A **straight**, which is five cards in order such as 10-9-8-7-6. Here the highest card determines the ranking of the straight. However, the A can be high or low in a straight. (Odds are 254 to 1)
6. A **flush**, which is five cards of the same suit. For example, A-Q-10-5-2 of spades would be a flush. Again the highest card determines the ranking. (Odds are 508 to 1)
7. A **full house**, which is three of a kind and a pair. (Odds are 693 to one)
8. **Four of a Kind**. (Odds are 4,164 to 1)
9. A **straight flush**, which is five consecutive cards of the same suit. The highest example of that is the royal flush, which is A-K-Q-J-10 of the same suit. (Odds are 64,973 to 1 for a straight flush and 649,739 to 1 for a royal flush)

highest hand at the end of the game, using the best combination of five cards from his two pocket cards and the five community cards. The list at the right shows the ranking of the hands, with 9 being the highest hand and 1 being the lowest.

The betting in the game is usually based on limits. For example, a $100-$200 game gives the limits of $100 on the first two rounds of betting (i.e., pre-flop and flop) and $200 on the last two rounds of betting (i.e., after the turn and river). With pot limit betting, you can raise the bet by the amount in the pot (i.e., what's been bet so far). And with no limit betting, you can bet as many chips as you have in front of you. In no-limit games, there are advantages and disadvantages to having a lot of chips.

With a lot of chips you can bully other players with fewer chips. For example, let's say you have $100,000 in chips and another player only has $12,000. You could place a bet of $25,000 and your opponent would have to bet all his chips. However, you would only be risking $12,000 of your chips should that player win. The remaining $13,000 would only be at risk if another player called the full $25,000 bet. Remember you are betting 25% of your chips, while the person with less than $25,000 is betting all of his chips.

With a lot of chips you are also risking everything you have exposed. If someone with more chips than you goes all in (i.e., bet all of your chips), then you have to bet all your chips or give up the hand.

My Experiences Playing Poker

In my thirties, I played poker when I went to the casinos, and usually made $200-300 a day in small stakes games. However, one day I went to a card room someplace in California and got my head handed to me on a platter. Major league poker was way out of my league without a lot of practice and work, and I had neither the time nor the resources to develop good poker skills. So, I basically stopped playing.

Today, two things have changed. You can get poker simulation software and you can play poker on the Internet. Both can help you increase your skills without risking money.

Last year I started watching poker tournaments on television. Texas Hold 'Em was now the game of choice. I bought a Texas Hold 'Em software simulation and by the fall of this year, I'd become good enough to play in Las Vegas and make money regularly. I could buy into the low stakes games for $100. That $100 would last me about 4 hours if I had terrible cards, and if the cards fell my way, I could make $200 or so. And about 60% of the time I would make money. So I was satisfied with my performance.

Then about three months ago, I discovered Internet Poker. I particularly like www.fulltiltpoker.com. You can use play money to hone your skills on the Internet against lots of other players. And, if you so desire, you can play for real money as well (check to see if this is legal in your situation). I can get $1000 in play money every five minutes, which is enough to play the $5-$10 games. Once, I managed to accumulate $20,000. I then had enough money to play the $200-$400 fixed-pot games. It's all a great lesson in money management because you really have to understand how much your equity could fluctuate and play the games that are within your limits. For example, once when I had accumulated about $30,000, I went into one of the $200 no-limit games. I discovered that the idiots there will go all in with their entire stake on

mediocre cards. And even if I have good cards and decide to call them, they'd often outdraw me, taking all my money away. And once my money was gone, I'd be back to getting $1000 in play money every five minutes (and you can only get $1000 if you don't have any money) and playing the low stakes games.

Later, I discovered that when I had about $50,000, I could play the $200-$400 pot limit games. The bets in these games could get huge, but not at the beginning when there is less than $1000 in the pot because you cannot bet more than the amount of money in the pot. Also, the pot-limit and no-limit games only allow you to bring a maximum of $20,000 into the game. Thus, if you see someone sitting there with $250,000, it means they've made that much playing that game.

The Big Insight

My goal for the last two months has been to accumulate $1,000,000 in play money. Once I had accumulated about $200,000 in play money, I figured I was ready for the no-limit games. Boy was I wrong—at least at first. I found that I could easily have equity swings of $150,000 a day, playing those games. And the best I seemed to do was stay even. After several weeks, playing a couple of hours each day, I still only had about $250,000 in play money.

I couldn't understand why this was happening. After all, it was very clear to me that the people I was playing against were TERRIBLE poker players. They might go all in with only a 7-6 of hearts in their pocket cards. That hand has about a 7% chance of winning the pot with 10 players. But it didn't seem to matter. The terrible player would seem to draw a flush and I'd get beaten on the last card.

I then read a book by a professional who had the same experience playing in the low-limit games in the casinos. He'd play with people with far inferior skills and get creamed. He discovered that five or six people would play terrible pocket cards, but someone would draw a great hand and end up beating him. So, he changed his style of play to only betting very high probability hands and started beating everyone. I adopted the same style of play on the Internet and also started beating everyone. And that's where the big insight dawned on me. It all has to do with probability and numbers, and if your opponents don't understand that, you have a huge advantage.

In my opinion, very few people play probabilities and numbers well when they are trading. If you play the probability game, which is one of the things we teach, you have a huge advantage.

Playing Poker by the Odds

My first insight was that you could rank your starting pocket hands according to their odds of winning the pot. For example, suppose you did a simulation with 10 players. You played one million hands (with no betting or folding) and just ranked the odds of each hand winning at the end, where only one hand out of every ten will win. If you knew the odds of your starting hand winning, wouldn't that be a tremendous insight? And the odds of winning at the end are only mildly correlated to the starting value of the hand. For example, a pair of 2s only has a 4% chance of making the winning hand after all the cards are dealt. An Ace-King of the same suit, on the other hand, which ranks below a pair of 2s in strength, is the third highest pocket hand with a 68.6% chance of winning the pot at the end.

Insight #1: Only play high probability hands.

What if you only played hands that had at least a 30% chance of winning the pot? There are 169 different combinations of starting hands, but only the top 30, or so, have a 30% chance or better of winning. This means that you'll be playing less than 20% of the starting hands you are dealt. And in most cases, except for when you are the small blind, it will cost you zero to fold the hand. That 7-6 of spades only gives you a 7.2% chance of having the winning hand at the end. If you are playing nine other people, you'd need at least a 10% chance just to win your fair share. So, why not wait for the hand that gives you a 30% or better chance of winning?

Given this insight, I should now win 30% of my hands or better of the hands I stay with—especially if I am playing against terrible players.

Trading Analogy:

What if you made investments that gave you a good chance of a large win at the very beginning? Buying a highly efficient stock or an extremely undervalued stock could give you this kind of edge, couldn't it?[2]

Insight #2: Even if you start with a great hand, if nothing materializes after the flop, fold the hand.

Let's say your starting hand is an A-J of clubs. This hand has a 58.6% chance of winning the pot at the end. Pretty good odds, wouldn't you say? However, when the flop comes up you get a Q of hearts, a 9 of diamonds and a 2 of clubs. You've basically flopped NOTHING. You have three cards toward a flush or a straight, meaning both the turn and the river would have to fall in your favor. And you don't even have a pair. You now no longer have a 58.6% chance of winning the pot.

It's probably now more like 5%. Unless you can play the hand cheaply by checking it or betting the minimum, it's much safer to just fold. And again, doing so will probably cost you very little.

Trading Analogy:

What if you just risked between ¼% and ½% on your initial investment, but then risked more as the investment moved in your favor and proved itself? Wouldn't that be like staying with a winning hand only if it kept improving as more cards are seen?

Insight #3: Make sure the odds are in your favor if you continue the bet.

Let's say that you have four cards to a flush after the flop. Perhaps your starting hand was the A-J of clubs and the flop is a 2 and 3 of clubs, plus a 7 of diamonds. You have two more cards to get your flush and because you hold the ace in your hand, you'll have the highest possible flush. What are the odds here?

In a deck of 52 cards there are 13 clubs. You know five of the cards from the deck (i.e., your pocket cards and the flop) and you know that four of them are clubs. That means that the remaining 47 cards that you don't know about contain nine more clubs. Thus, your odds of hitting a club on the turn are 9/47 or about 0.19. You have a little less than one chance in five of hitting it. However, let's say that there is $1000 in the pot after the flop. The next bet is $200 and three other people have called. Thus, there is now $1800 in the pot. If you bet $200 you stand to make nine times the amount of your bet if you win. Since you have a one in five chance of making your flush (which will probably win), the odds for you are excellent. Call the bet.

Trading Analogy:

We recommend that you only trade when your chances of winning are at least 40% and you will make three times your initial risk (i.e., a 3R gain) if you win. Doesn't that sound similar to the poker situation?

Insight #4: Keep your eye out for danger.

My favorite hand, playing Internet Poker, came when I'd bet $200 in a game and a flush was drawn on the flop. One player went all in and I made the "stupid" bet of calling. My flush was only 10-high and my pockets were a 2 and 5 of clubs. The board had a 4, 6, and 10 of clubs. Thus, unless my opponent held the three and four of clubs, his potential flush would beat me.

Let's look at the odds of my opponent having a higher flush. I had five clubs, which means that there were eight clubs left. There are 36 combinations of clubs that my opponent could have in his hand, and I could only beat one of them. Thus, I only had a 0.028 chance of winning the hand if my opponent had a flush, and he was certainly betting like it. However, he could have been bluffing or working on a flush draw with just one high card like an ace. But I called the bet anyway, not really thinking how heavily the odds were against me.

Suddenly there was $137,448 in the pot (play money), and I was in a showdown. We turned over our cards, since we were both all in, and to my shock I discovered that my flush was only ten high while my opponent had drawn a Q high flush. With two cards to go, I thought I was dead. However, my four clubs were the 2, 4, 5, and 6 of clubs. There was an outside chance that I could get a straight flush if somehow the 3 of clubs came up. There was a 1/45 chance of that happening on the turn and a 1/44 chance on the river. And guess what? It came up on the river. It's my favorite hand, but it was also a very stupid play on my part. I should have never called the hand because I didn't pay attention to the danger I was facing. I risked all my chips with about a 7% total chance of winning. Stupid! I didn't even realize I had the possibility of a straight flush until I actually had it because you only have about 30 seconds to call, while it took me several minutes to calculate the odd that I was probably beaten.

However, I give the illustration of this particular hand because it shows the importance of watching out for potential danger. What could happen against you? What could your opponent have?

- With a pair showing, your opponent could have a full house or four of a kind.
- Without a pair showing, your opponent still could match a pocket pair for three of a kind.
- With three cards of the same suit showing, your opponent could have a flush.
- With three cards that fall within a range of five numbers (e.g., 5, 7, and 9), your opponent could easily have a straight (i.e., in this case he'd have a straight if he's holding a 6 and an 8).
- And you should always consider the possibility that your opponent could have started out with a high pair. For example, a pair of aces has an 86% chance of winning the hand. (It seems I've lost more than 14% of the hands I play with pocket aces, but those are the odds).

The Moral: Always look out for dangerous hands that could be against you.

Trading Analogy:

Consider doing a worst-case contingency plan to determine what could go wrong in your trading. I strongly recommend this to all of my Super Traders and to anyone who develops a business plan for trading under my guidelines. Think about all of the things that could go wrong and how you'll react to them.

Insight 5: Good Poker is Boring.

If you follow the first insight, you are only calling about 20% of the hands you are dealt—perhaps 25-30%, since you get to call the big blind for free (if there are no raises) and the small blind at a discount. Nevertheless, there will be a lot of hands that you fold immediately. And even when you play the hand there will be a lot of times that you don't flop anything and thus fold after the flop. Consequently, most of your time is spent not playing. It's just like good trading: it can be quite boring. And when something gets boring, a part of you may wish to bring some excitement into the picture. How can you do that?

- You can call weak hands. In the example I described earlier, I had flopped a flush starting with a 5 and 2 of clubs in my pocket. A 5-2 suited pocket hand has about a 0.4% chance of winning the pot with 10 people playing. Of course, when I flopped a flush the odds went up, but even then my odds of beating another flush were only 2.8%. And my odds of drawing the straight flush were even smaller. However, I created a lot of excitement by calling that hand and my excitement part was delighted. However, when I call hands like that on a regular basis my equity goes down.

- On the Internet, you can play several hands simultaneously. I've played up to four hands at once to train myself to react quickly. It keeps me busy, and I usually have about five seconds to make a decision. I once blew a winning straight hand because I only had seconds to act before another decision had to be made and then I couldn't find the original hand. By the time I'd found it, I'd already been folded by the computer for not responding, and missed out on the winning hand.

Trading Analogy:

What are some of the many ways that you can sabotage your trading by making it more exciting? Many exist, and almost all of them will cost you money in the long run.

Insight 6: You can have a long streak against you.

Think about it. If you only call 30% of the hand and you could theoretically lose 60-70% of those hands, you can take a heavy pounding—both psychologically and financially. And that's what happens.

The figure below illustrates a very typical night of poker for me. I've played 116 hands and look at the results. I saw the flop 52% of the time, which is way too often. I've won 15 hands, or about 15% of the time. But the most telling statistic is that I've only won 44% of the time when I've gotten in a showdown at the end. At this point there is usually a lot of money at stake and if I've only won 44% of the time, it indicates that I'm really taking a beating. In this case, I'm down about $100,000

In contrast, when I'm winning and doing well I usually see less than 40% of the flops. My win percentage is usually about the same at 15%, but the big difference is that I win 50-60% of the showdowns. When I show those statistics, I'm usually up $100,000 or more. The difference is primarily in 1) the percentage of big pots that I win (i.e., the showdowns) and the amount of

money I give away by seeing too many bad hands.

Trading Analogy:

What happens if you take a lot of bad trades? For example, you enter into a lot of positions that are actually moving down at the time you get into them. The net result is usually a losing month or year. Again, notice the similarity between poker and trading.

Insight 7: You must understand position sizing.

When I play a no-limit game on the Internet (i.e., for play money), I'm only allowed to enter the game with $20,000 of play money. This means that even if I have $850,000 in play chips, I can only bring $20,000 into the game. However, I think this is fairly sound money management considering how crazy the other players are.

Let's say my pocket cards include a pair of Jacks. I really want to play this hand because it has a 64.4% chance of winning the pot. However, I would NOT want to go all in on the hand until it developed. But when I'm playing with a bunch of very poor players, someone might go all in with a pair of 4s (i.e., 8.3% chance of winning) or they might have a pair of Kings (i.e., 74.6% chance of winning). If someone goes all in and I have a monster hand like J-J, I'll play it. However, the flop could be Ace, King, Queen. That means that the flop didn't help me at all, but anyone with one of those cards in the pocket has me beat. I'll probably win six out of ten hands with my J-J, but it also means I'll lose a lot. This is where money management comes in.

I'm only allowed to take $20,000 into the game. Thus, with my $850,000, I'm really only risking 2.2% of my total equity on that hand. I can afford to do that. I also have to realize that when I'm playing crazy people, I could lose four or five of those hands in a row. And if I've accumulated $60,000, I could lose all of it to someone who also has that much in play. This is why money management is important. Even with all of the rules in place, I know that I can still have $100,000 equity swings. But with $850,000 in playing chips I can afford to do that.

Early on, when I went into no-limit games with $30-$40,000, I found that I was going bust because of someone calling me with nothing and then drawing a good hand. It takes a long time to build back up to $40,000 when you start with $1000 and only play $10-20 games. But when my equity is high enough, I can survive big hits and know that at the end of the day (or perhaps after two or three days) I'll be ahead.

Trading Analogy:

When you are trading, notice what your potential loss is for each day or each month. Do you have enough equity to ride that out? Remember that a low risk idea is one with a positive expectancy that's traded at a risk level to allow for the worst possible scenario in the short run so that you can realize the long-term expectancy.

Other Insights

There are several other insights that don't have direct correlations with trading such as:

- When you are sure you have the winning hand, make your opponents pay. (This might be equivalent to strongly riding your winners).

- Another rule says that you should take your betting position into consideration because there is an extreme advantage to having most of the other players act before you. (This might be equivalent to being a specialist on the New York Stock Exchange and getting to see the bids and offers before you set the price). However, it's not an advantage that most of us have as traders.

- If you are not on a drawing hand after the flop, then to stay in the game you should at least have the top pair or a pocket pair that is higher than any of the cards that were flopped. (You might also equate this to the strength of your trade, say, being in a strong trending market and also having fundamentals in your favor).

In summary, poker and trading have the following aspects in common:

- Both involve playing and understanding the probabilities. Only play hands (positions) that give you a good chance of winning. And don't risk much until they develop into even better hands.

- Both involve understanding risk-reward ratios. It's okay to take a 4-1 shot if your payoff is 10:1. It's not okay, if your payoff is only 1:1.

- Both involve understanding position sizing. You must have the bankroll to tolerate the potential losses at the risk level you are playing.

- Both involve tremendous psychological control.

If you want to really understand yourself and you are waiting to build your trading equity, then you can learn a lot about yourself playing Internet poker for play money. Try it and let me know what you learn.

By the way, I haven't mentioned bluffing at all. It works with good players with real money at stake, but it doesn't work at all with poor players who are calling everything.