



A Venture Investor from Bell Labs Channels the Noise and the Knowledge

By John Mauldin | July 5, 2013

Recovery and Home

Investors seek that elusive substance called *alpha*. It is too often remains hidden from them, and instead they find some form of *beta*, or simply what the market gives everyone. Sometimes, in secular bull markets, that can be plenty and investors feel secure. But in the secular bear cycles investing is a difficult task and one that at the end of the day may find you distressingly close to where you started.

Beta, alternative beta (often trying to pass as alpha), and true alpha are the only real sources of returns. Today I am somewhat under the weather and unable to produce an issue of *Thoughts from the Frontline*, but I will offer you the following fascinating essay, sent to me by my good friend [Andy Kessler](#). Our mutual friend George Gilder has written a powerful new book called [*Knowledge and Power*](#), and he asked Andy to hammer out in his wordsmithy a foreword, which he has done to perfection.

Alpha is found on the edges, away from common knowledge. Andy sees it in new technologies, and it can surely be found there, although there are different risks at the edge. But there are other sources of alpha, which can be found not by looking at what has happened but at what is likely to happen, not just in technology but in markets and the actions and reactions of those who would try to move markets.

But for today, let's just look at Andy's essay and enjoy our weekends.

Foreword to *Knowledge and Power*

A Venture Investor from Bell Labs Channels the Noise and the Knowledge

By Andy Kessler

I get off the green Number 5 train at the Wall Street stop as I've done a million times before. It could be this year or years ago. It doesn't matter. I carefully shuffle out with the pack of humanity, half in suits, the other half wearing bike messenger bags, and make my way out through the turnstiles, and shoulder to shoulder with people in a hurry, slip and slide up the litter-strewn stairs onto the Street.

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The sun is bright, piercing. You can see everything, but none of it comes into focus. I'm instead distracted by the racket. Car horns honking, jack hammers rattling away, a guy selling the *New York Post* going on about the latest sensational Twittered sex crime. Trucks roar by me. Subways screech beneath me. An ambulance with sirens blaring goes up on the sidewalk to get around some construction. Bad music – someone rapping "Turn it up! Bring the Noise" – is blaring from a Starbucks that turns out to have no restroom. My head is spinning. I can hardly hear myself think.

But underneath all that noise, I hear a sound, sort of a *thub-dub, thub-dub*, a relentless reggae beat, sometimes loud, sometimes soft, faster, slower, but the pulse is always there. Is it a heartbeat, the predictable rhythm of life? Or does it bear a signal, a difference, a delta of news? The precious modulation of a wave of new creativity in the channels of the economy?

I've got \$500 large of other people's money to invest. "I won't lose any of your capital and I'll find the next Microsoft," I told them in 1995. What the hell was I thinking? It's so loud down here it's hard to make sense of anything. Every story sounds good, every stock looks like a bargain, but there are so many stories, they drown each other out. Too many stories essentially merge into one endless market oscillation, a random motion through time that will deceive most technical analysts who take it for a signal and be left gasping and grasping for handfuls of noise.

I think I'm different. I've got alpha, baby – which in Wall Street-speak means I think I can generate excess returns over the market. I think I can find the profits of surprise, the yield of real knowledge. Everyone says that, of course, but most investors are all beta, just volatility, just the random motion of the surf. When markets go up the beta warriors outperform and when markets go down, they get killed.

To generate alpha, I need help, direction, signposts, analysts, sometimes even brandy-toting salesmen. But about the only pointer in view is George Washington's outstretched arm on Wall and Broad aiming across the street to the New York Stock Exchange, almost as a warning to watch out for those guys in funny colored blazers. On the other corner is 23 Wall Street, the JP Morgan headquarters bombed by anarchists in 1920. Now they blow these banks up from the inside – with combustible illusions of alpha.

I've got to put that money to work, buy stocks that go up 5-10 times and prove the my alpha is real. In this book, and in Claude Shannon's classic model it describes, alpha goes under the name of *entropy*. But it's essentially the same thing. It is the unanticipated signal, the upside surprise, the unexpected return, the messages amongst the noise on the Street. The predictable returns are already in prices, in interest rates. I have to achieve upside surprises that are not implicit in current prices and I have to get them not merely today or tomorrow, but month by month, year by year. And I have to hedge them with shorts of stocks that are overblown and going down faster than the Titanic. Simple enough, right? I wish.

While subway surfing on that 5 train, I was channeled by history, in the form of Larry, a guy in a leisure suit, who ran Go-Go money, as we used to call it, back in 1973. "Ah," he tells me, "those were the days and daze. A White Weld institutional salesman would call me every morning at 9 AM, with the early word on what his analysts were saying on Polaroid or Xerox or Phillip

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Morris. Trading cost 75 cents a share, but who cares, there were only 50 stocks that mattered, the Nifty Fifty, and you just bought 'em, never sold. Maybe I'd get some ideas from the Heard on the Street in the Journal, or maybe Inside Wall Street from Business Week."

Unfortunately, the Nifty Fifty melted into a worthless heap, and Vanguard, John Bogle's pioneering new fund, rose from the ashes. Egged on by a Big Bang of market deregulation, negotiated commissions and lower transaction costs, Vanguard back in 1975 figured that alpha was a myth, that no mere mortals could beat the market, so they indexed the whole damn thing. Buying a Vanguard fund, you merely bought a statistical sample of the market. It was like driving all the knowledge out of prices. Danny Noonan in *Caddy Shack* was told to "be the ball," Vanguard told us to "be the market." But if we are the market, we do not shape it; we are just bounced and dribbled around. Shannon, the ultimate alpha man of investing, as we learn in this book, would not have been amused.

25 years later, much of the market is mindlessly indexed. That means it is all beta. The knowledge is leaching away in the surf of noise and rapid trading. Computers in, humans out, this is classic 1970's sci-fi all too real. A scream from a homeless man playing Angry Bird on his iPhone ends my subway séance with the wisdom of the 1970s.

An index is the market. It's a carrier, a channel, as defined mathematically by Shannon at Bell Labs in his seminal work on Information Theory. An index can only yield the predictable market return, mostly devoid of the profits of creativity and innovation, which largely come from new companies outside the index. I had to beat the indexes – by a lot. That means I needed knowledge. Riding on the channel, knowledge portends deformation of the mean. It is signaled by surprise, upside and downside, but it is not realized until the surprise – the information – is understood.

In that way, at that time, as the information revolution described in this book began to take off, I had an advantage. I started my career at Bell Labs, 35 years after Shannon. On your first day at Bell Labs, you are issued a 9x12 inch brown leatherette bag with a Bell logo in the lower corner. There were guards at every entrance and exit making sure employees didn't, uh, liberate equipment from the Labs. But the rule was that the guards would not search your Bell Bag.

In the days before personal computers, Bell Labs employees – OK, with that I mean me! – tried to take home a Digital Equipment PDP-11 minicomputer by taking it apart and fitting it into their Bag, much as MASH's Radar O'Reilly shipped home a Jeep. Rumor has it that the Bag was the reason Shockley and others invented the transistor, machines made out of vacuum tubes didn't fit – too much material, not enough information. At Bell Labs we were reducing everything to information. Today it is almost all information and you could steal its crown jewels of software in a thumb drive.

Anyway, in a few years I left Bell Labs and moved to Wall Street.

As I strolled down Wall Street, the *thub-dub* was getting louder. It was the market, the pulse of the street. It's what everyone thinks. Every day, you're hit with a fire hose of information, in the *Wall Street Journal*, on Yahoo Finance, via real time stock quotes, in press releases, on Stocktwits.

But I still don't have knowledge, interpreting the surprises that others don't know about, that will drive a new narrative. You have to work and think and stress and fret to surmise the surprises by first fathoming the pulse.

The battle is just filtering out the few tiny gems, the insights that make up the new knowledge. If not, my \$500 large gets returned to the index cesspool. *Thub-dub* this.

Except for a few exceptional periods of a bubble market, if there is no noise, there is no return. If it's so painfully obvious, like the "nifty fifty" of the '70s, if retired couples are talking about buying more Apple shares in the quiet of an airport Admiral's Club, run away until the noise returns.

As an investor, I need to feel the pulse every day, and wade through the drivel in order to pan the gold. The pulse has to reverberate in my veins, but only so I understand what the market is saying *today*. Then I have to resist the calming effect of that *thub-dub* of conventional thinking and venture out into the noise, out on the edge, to find new information, what's next, which can lead to knowledge. It's as elusive as humpback whales but it's there.

Amid the clutter of trends running around the Street, though, it is hard to tell what is real and what is just Synsonic synthesized sound. Reg FD or Regulation Full Disclosure means companies only give "guidance" on how they see business tracking once a quarter, on an earnings release conference call with questions like "Congratulations on the great quarter, uh, what's your tax rate going forward?" That is what Shannon might call zero-entropy communication. It removes information from the market, when I need more and more.

With a beta of 1.0, any sample of the market exactly recapitulates the market averages. It's the insight extracted from the information, that alpha, which separates the winners from the snoozers on Wall Street. Indexing is a waste heap – all info so merged and muffled that it hides knowledge rather than reveals it. All beta, no alpha.

So what do the best modern money managers do? They live for the pulse, in the pulse, but then work out, often by an educated gut, what is different, what is going to change – *where the surprises will come* – where Shannon hid the entropy. That's valuable knowledge. No more leisure suit Nifty Fifty, no more indexing, no more day traders, no momentum investing, no more fooling around.

So I went to Palo Alto in the midst of Silicon Valley. Why Silicon Valley, where a 1500 square foot house runs \$2.5 million? Because it's where the surprises are. Beating the market turned out to have nothing to do with trading or the plumbing of Wall Street, it had to do with understanding and predicting the surprises, the changes, the productivity fabric of the economy. The rest is noise.

Every day in Silicon Valley, someone writes a clever piece of code that changes retail, or uses Information Theory to write a security algorithm or invents a new way to shape Wi-Fi beams. These are all surprises. Getting away from the scopes of stock market trading and into the microscopic detail of how technology is changing and what is its affect on human-machine interfaces and why many existing industries will collapse is the only way to gain real actionable knowledge.

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A day doesn't pass that I'm not surprised. Many years ago I met with a team that could very cheaply jam 5 gigabits per second of information down a couple of meters of cable, unheard of at the time. I didn't know you could do that and, voila, HDMI (High Definition Multimedia Interface) was born. I can almost guarantee it is how you get high def video to your flat screen TV. A game changer, not overnight, but over years. It might not have been the next Microsoft but it was good enough. It went from noise to become the narrative, the pulse, and huge amounts of wealth were created.

No index can capture it. The index is retrospective. The crucial alpha, the entropy, the signal modulating that linear advance – information light enough to stash away in your Bell Bag or thumb drive and shape the future – comes from knowledge of the entrepreneurial surprises harbored on the edge of the noise.

The big narrative of the economy changes daily. That's productivity and progress. It is that high-energy message that the market as medium carries into the future.

Recovery and Home

I picked up some nasty bit of grunge in Europe and find myself quite under the weather. I rarely get sick and am not used to the feeling. For the first time in my life, I have had to cancel a speaking engagement, as I just don't have the strength to get on another airplane. Serendipitously, I now have two weeks at home to recover and expect to do so soon. Rest and liquids are the order of the day. I shall wish you a good week and return next week with final thoughts on the meaning of Cyprus.

Your ready for a new day analyst,



John Mauldin

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