Letter to Clients
April, 2021

Living in the Past

"The past is never dead. It's not even past."

William Faulkner

As promised in our last letter (**Home on the Range**, December 2020), we're ready to take you on a deeper dive into the murky waters of cognitive bias, an ever-present threat to clear and objective thinking. Cognitive biases are intentional (but unconscious) mental shortcuts. They exist for good reason, having proved adaptive for our long-ago counterparts living under constant threat and uncertainty. Today, these reflexive pathways remain part of our daily lives, whether we acknowledge them or not. For example, human beings are hard-wired to think by way of analogy. Given that we cannot possibly know everything we need to, applying what we learned from an analogous situation gives us, however imperfectly the specifics align, a huge leg up on total ignorance. Much of the time, this still works. If we've burned our finger on a candle, we're a lot less likely to touch a hot stove (once burned, twice shy, as they say).[1] The human brain is extremely effective in its application of prior experiences to new ones even if they merely rhyme with the past rather than repeat it. This is certainly efficient, and must have conferred a significant advantage on the first primates to have been blessed with this skill.[2]

But there are ways in which our reliance on the past, courtesy of the hard wiring in our brains, distorts our thinking about the present. What if our prior experiences are not representative? What if circumstances in the present have changed so that the lessons of the past are inapplicable? Analogical reasoning is but one of the many apps in the software suite pre-loaded into our cerebrum by evolution. Yet the mental shortcuts that served us so well in earlier times, when speed of response was at a premium and readily accessible (and pertinent) information thin on the ground, can fail us in particular settings and under particular circumstances. This makes sense too, as these cognitive presets are less about getting things precisely right than they are about getting them approximately correct: there's little time to quibble about details when the sabre- toothed tiger is approaching.

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[1] To call on a recent example: the FA who managed to punk us on April 1 (he knows who he is) has hopefully had his one and only shot.
[2] According to evolutionary psychologist Geoffrey Miller, "Hunter-gatherer life was basically a lifelong camping trip with 30 to 50 of your relatives and in-laws, surrounded by wild animals & competing tribes….Human nature is basically whatever was left standing after a hundred thousand generations of those lifelong camping trips". Miller, Geoffrey [@primalpoly]. (2021, April 5). https://**twitter**.com/primalpoly.

Our ancestral legacy is especially pernicious when it comes to investing. While carefully constructed, intentional mental models can help us be better investors, reflexive obedience to the kinds of constructs our forebears found useful can be downright dangerous. Thinking that you'll make money in Caterpillar simply because you did so in **John Deere**, for example, may make use of the analogy software that saves us from putting our hand in a fire, but it deeply underestimates what we see as critical differences between the two companies. It is therefore extremely important as an investor to identify and neutralize our default settings so they don't taint our decision-making. While the cognitive biases we bring to the table as representatives of our species can help us in certain ways—thinking by analogy can actually be a powerful tool that allows us to recognize patterns when we apply it correctly—they can also hinder our ability to make rational decisions based on the very specific facts at hand to which accumulated knowledge and modern technology afford us access.[3]

Academic types have understood all this for a while now. The field of behavioral economics, born in the second half of the twentieth century, arose as a critique of classical models of rational economic behavior. Researchers such as psychologists Amos Tversky and Daniel Kahneman and economist Richard Thaler sought to apply cognitive psychological models of decision-making under uncertainty to so-called pure economic actors. In doing so, they observed seemingly dysfunctional behaviors that put paid to the ideal of the quirk-free, uber-rational decision-maker of economists' fantasies (the so-called "*homo economicus*", who sought flawlessly to maximize utility). Since those early years, countless cognitive biases have been documented and named, Nobel Prizes won, and overflowing college seminars taught. The great Charlie Munger, Warren Buffett's curmudgeonly sidekick, developed his own cranky list of the sources of human misjudgment and their impact on investing.[4] Notwithstanding the scholarly interest in this subject, however, we find that few investors speak about, much less seem to engage in, active and rigorous efforts to identify and minimize these cognitive glitches.

We won't bore you with an exhaustive list of biases and how we address each of them. Instead, we'll focus on three of the more intrusive of these heuristic bogeymen: **anchoring bias** (attaching excessive importance to the first piece of information we see); **confirmation bias** (giving greater weight to information that reinforces previously held beliefs); and **availability bias** (prioritizing the most easily remembered pieces of data, often the most dramatic or recent). Each of these tricks of the unconscious mind serves to endow past experiences with a degree of influence in excess of their objective contemporary importance.

Anchoring bias is one of the most common and it rears its head when you least expect it. If you're shopping online for a garden rake and you see one for $200, then you see one for $75, the second one looks like a bargain. Sure, in comparison to the first one, but who in their right mind would buy a $75 rake? In some ways, anchoring is a functional

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[3] The reliability of that information and how to sift through massive quantities of it are topics for another day.
[4] See, for example, "The Revised Psychology of Human Misjudgment" as transcribed on fs.blog.

response to inadequate information, though, because it gives people a starting point for developing a reasonable estimate based on what they already know. Yet the results can be downright wacky. In one study, people were asked for the last two digits of their social security number. Then they were shown various goods like bottles of wine and boxes of chocolate and asked if they were willing to pay the amount represented by those two digits. Though there was zero relationship between that number and the goods in question, individuals with higher terminal SSN digits were willing to pay more than those with lower ones.[5]

Anchoring is ubiquitous in investing. The classic example is if we were to begin to buy a stock at, say, $60 per share but for one reason or another couldn't complete our order at that price. Let's further posit that $60 is a really good price, with a nice, comfortable margin of safety baked in. In fact, we'd be willing to pay up to $70 per share to own the stock based on the results of our valuation. But when the stock goes up, even if it's still well within the margin of safety, even seasoned investors have to overcome the urge to pull back based on the emotional cue that it's too expensive now. If we were to succumb to this primal prompt, we would have anchored ourselves by unconsciously pegging our "good buy" to the original $60 price. The effects of anchoring can be quite subtle. Even if investors "know" that they were previously willing to pay up to $70 per share, the temporary availability of the $60 price may prompt them to overemphasize flaws in the company and retroactively "justify" a new $60 limit, when the real reason is simply…anchoring.

It's relatively easy to recognize anchoring when you're attuned to it and have a team of colleagues who (how can we put this nicely?) are happy to point out to you when you've tied yourself too tightly to a prior data point. Anchoring tends to make itself "public", in the sense that it's obvious when someone expresses reservations about paying a price the rest of us know, and he or she previously knew, to be acceptable. But the key thing for each of us is to be aware of the pull and tug of that bias and to see it for what it is: our mind trying to short-circuit reflection by pegging our response to the first (and perhaps most important in a more primitive setting) piece of data. The only way to tame that impulse is to be aware of it.

Confirmation bias is really just a fancy name for the universal human propensity to look for evidence that confirms our preexisting opinions. Look no further than the increased polarization in this country as a result of people selecting news sources that reinforce rather than question their views. This bias rears its head in far-flung places; an interesting example has been identified in medical diagnosis, where, according to one critic:

> "[T]he confirmation bias can couple with the **availability bias** in producing misdiagnosis in a doctor's office. A doctor who has jumped to a particular hypothesis as to what disease a patient has may then ask questions and look for evidence that tends to confirm that diagnosis while overlooking evidence that would tend to disconfirm it."[6]

[5] Ariely, D., Loewenstein, G., & Prelec, D. (2006)
[6] Peter O. Gray, Psychology, 6th ed. Worth Publishers (2011).

To offset these biases, the author suggests that medical training should address the problem directly by including a course in inductive reasoning, as awareness itself (and the search for disconfirming evidence) is an antidote to these kinds of diagnostic errors.

Investing, we would argue, requires precisely the same kind of open mind. For example, new student enrollment at **Strategic Education** has been not only down during the pandemic, but down more than new student enrollment at many peer for-profit institutions. Analysts and investors appear to believe that the difference reflects an unspecified failure to execute well by Strategic Education. The real answer, we believe, is that Strategic Education's student body is more heavily weighted toward people already out working, as opposed to traditional college-age students. When a sharp downturn occurs, especially one that differentially affects folks in the workforce without degrees, it's scary for them to commit money to their education when more immediate needs beckon. It's also, frankly, easier for them to postpone their education than it is for the unencumbered young person, for whom the opportunity cost of pursuing a degree is typically lower. To arrive at the truth, though, it's incumbent upon us to seek both confirming and disconfirming evidence of our initial "diagnosis" before we're satisfied it's correct.

Confirmation bias is a little less obvious than anchoring, as it requires each of us on the research team to be honest with one another and, perhaps more important, with ourselves. One of our number, especially one with a golden tongue, could argue persuasively for a position not supported by a full and impartial review of the facts. We address this concern in part through explicitly asking each other (and ourselves), as part of our "checklist" process, what biases we might be bringing to the table. We also require ourselves to articulate a "bull" and "bear" case for every stock under serious consideration, an exercise that's intended to flush out details that don't fit our thesis. But perhaps more fundamentally, we seek to combat this kind of prejudging of issues through our overarching process, which emphasizes gathering information from many sources, including from competitors, and tasking ourselves throughout this process with identifying anomalies. It helps that our team members have been carefully selected for their combination of curiosity, skepticism, willingness to be found wrong, and just plain bloody-mindedness.

Availability bias (and its close cousins, **recency bias** and **extra-vivid evidence bias**) represents yet another shortcut our minds take when we're trying to solve a problem or suss out a new situation. The key is that what comes to mind first—whether because it's dramatic, like a boat stuck in the Suez Canal, because it requires less active reconstruction, or because it happened only moments ago—assumes an importance in our thinking that may not be consistent with its objective weight. Tversky and Kahneman demonstrated this by asking subjects whether selecting a random word from a typical English language text would more likely yield a word beginning with the letter K or having K as its third letter. Even though about twice as many words have K as their third letter than as their first in a standard passage, most of the respondents predicted otherwise.[7] Because it's simpler for most people to think in terms of the start of a word than three

[7] https://people.umass.edu

letters into it (let's go: kitchen, kidnap, kite), that information was simply more available. Some years ago, an acquaintance of ours worked for a major airline. In setting up the parameters for airing TV news on monitors in the boarding area, he made sure that there was a time delay so that any reports of a plane crash could be suppressed. Travelers who were fine with the theoretical risk of being in a crash were known to cancel trips on the spot if they learned of a new one just prior to boarding, notwithstanding the fact that the vanishingly small odds of experiencing one themselves were unchanged.

This bias manifests itself in investing in ways that can actually help us by giving us occasion to exploit it in others. Though we no longer own it because it dramatically outgrew its valuation, **Chipotle** first became buyable for us (buyable, as in cheap) after it poisoned people in 2015 via several different food-borne illnesses that produced a spate of cases across the country. This created a series of dramatic episodes that—quite literally—turned people off both the food and the stock. Understanding that this was the quintessential "vivid" evidence that was probably fueling an overreaction, we defied our own reflexive bias and dug into the burrito maker. This is not uncommon; most investors are vulnerable to the pull of the striking anecdote, the spicy story, or simply the bright beacon of success emitted by those not-to-be-missed stocks like the FAANGs.[8] Indeed, one could argue that much momentum investing—buying a company because it's gone up recently—is really just a response to availability or recency bias in disguise.

But it also bears saying that we ourselves need to remain alert to the siren song of dramatic or simply more available information. It takes experience and an appreciation for nuance to be able to sort out the difference between something that signals a larger truth about a company versus one that sticks out simply because it drowns out the quieter facts. As we've written about before, a change in CEO is one of the most potentially perilous life cycle events for a company, which is why we spend a fair amount of time analyzing the strengths and weaknesses of a new CEO. Newish **Goldman Sachs** CEO David Solomon, aka D-Sol (pronounced D-Soul), performed as a DJ (his specialty being electronic house music) at a party in the Hamptons last summer during which social distancing rules were said to have been "egregiously" breached.[9] Was this a lapse in judgment that signaled a deeper flaw in Solomon's decision-making or was it simply a high profile example of someone being run-of-the-mill stupid? We actually thought about it rather than knee-jerk reacting to it, and concluded it was the latter (buttressed further by the fact that we had had a conversation with him a couple of months earlier in which his more thoughtful qualities were foremost).

As with the anchoring and confirmation biases, awareness and self-reporting are our first lines of defense. We talked above about needing an open mind to guard against confirmation bias in particular. But in a certain way, side-stepping the availability or extra-vivid evidence bias requires us to close our mind at a certain point. Developing a price list in advance for stocks we'd like to own, and hewing to it regardless of the dramatic events (market crash! food poisoning!) that make a stock buyable, can save us from bending to

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[8] Facebook, Amazon, Apple, Netflix, and Google.

[9] This according to New York's Governor Cuomo, who himself now has some pretty interestingly vivid allegations against him.

the winds of the shocking and new.[10] There are other structural things we've put into place to make it harder to rely on a single attention-grabbing fact. When we conduct our valuations, for example, we're careful to look at many years of sales growth statistics, and the underlying drivers of that sales growth, so that we don't fall prey to the assumption that, say, the last two years of awesome growth will necessarily continue unabated. We also think about longer-term GDP and industry sales growth and how those, in turn, are likely to bound the revenue growth of the company in question.

Each of these cognitive rules of thumb represents a thorn in the side of those of us aspiring to the utility maximization of *homo economicus*—or perhaps simply the neutrality of *homo investor*, that objective reader of 10-Ks and earnings transcripts. The interference with critical thinking represented by these ancient biases can clearly have a profound impact on the kinds of decisions we and others make. And because they don't announce, but rather insinuate themselves into an analysis totally unbidden, they are an ever-present challenge to impartial analysis. While early man no doubt benefited from the "no-brainer" element of these constructs, we now live in an age in which we can stand on the shoulders of giants,[11] with readier access to accumulated knowledge than those who came before us. In addition, we can (and at Marshfield, do) develop our own frameworks for decision-making and algorithmic approaches that serve us more reliably and impartially than cognition 1.0. But unless we take the time and effort to rid ourselves of these vestigial heuristics, they continue to assert their primacy, causing us to undervalue, overestimate, and make too much of DJ D-Sol's weekend gigs. To do otherwise would force us, as the Jethro Tull song goes, to keep living in the past.

Marshfield Associates

[10] So long as the underlying reason as to why we like the company remains unchanged.
[11] An expression most widely associated with Sir Isaac Newton (though likely dating back further), tipping his hat to his intellectual forbears in an uncharacteristic burst of humility.