

Mind Matters

Process not outcomes: gambling, sport and investment!

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Watching the Olympics and listening to several of the successful athletes, one of the inane questions from the interviewers often seemed to be, "what was going through your mind before the event? Were you thinking of the gold?" The response time and again was the competitor was focused on the process, not the outcome. So it should be in investing as well. We have no control over outcomes, but we can control the process. Of course, outcomes matter but by focusing our attention on process we maximise our chances of good outcomes.

■ Paul DePodesta of the San Diego Padres and Moneyball fame relates the following story on playing blackjack. "On one particular hand the player was dealt 17 with his first two cards. The dealer was set to deal the next set of cards and passed right over the player until he stopped her, saying: "Dealer, I want a hit!" She paused, almost feeling sorry for him, and said, "Sir, are you sure?" He said yes, and the dealer dealt the card. Sure enough, it was a four. The place went crazy, high fives all around, everybody hootin' and hollerin', and you know what the dealer said? The dealer looked at the player, and with total sincerity, said: "Nice hit." I thought, "Nice hit? Maybe it was a nice hit for the casino, but it was a terrible hit for the player! The decision isn't justified just because it worked."

■ Psychologists have long documented a tendency known as outcome bias. That is the habit of judging a decision differently depending upon its outcome. For instance, if a doctor performs an operation and the patient survives then the decision is rated as significantly better than if the same operation results in the patient's death. Of course, the correctness of the doctor's decision should not be a function of the outcome, since clearly the doctor couldn't have known the outcome before the event.

■ This emphasis on outcomes and not on process can be highly detrimental. Evidence suggests that holding people accountable for outcomes tends to (i) increase their preference for less ambiguity (even if the risk involved is equal), (ii) increase the collection and use of information, (iii) increase a preference for compromise options, and the selection of products with average features, and (iv) increase the degree of loss aversion. In investment terms, that translates as fund managers avoiding uncertainty, chasing noise, and herding with the consensus. Doesn't sound much like a recipe for good performance to me.

■ The good news is that telling people to focus on the process (and telling them they will be evaluated on the basis of the process, rather than the outcome) leads to much better decision making. Most of the pitfalls mentioned above are mitigated when the decision process is the focal point. In investment, we have no control over the outcomes, the only thing we can control is the process. So it makes sense for us to concentrate on that.

■ During periods of poor performance, the pressure always builds to change your process. However, a sound process can generate poor results, just as a bad process can generate good results. Perhaps we would be well served to remember the words of Sir John Templeton "The time to reflect on your investing methods is when you are most successful, not when you are making the most mistakes."

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BEGINNING ON PAGE 8**

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Process not outcome: gambling, sports and investment!

Not so long ago I came across the following post by Paul DePodesta on his blog from 10 June 2008 ([link](#)). For those who have read Michael Lewis' MoneyBall, DePodesta will need no introduction. For those who haven't, a quick trip to that informational minefield that is wikipedia should give you a flavour of the man (http://en.wikipedia.org/wiki/Paul_DePodesta).

Many years ago I was playing blackjack in Las Vegas on a Saturday night in a packed casino. I was sitting at third base, and the player who was at first base was playing horribly. He was definitely taking advantage of the free drinks, and it seemed as though every twenty minutes he was dipping into his pocket for more cash.

On one particular hand the player was dealt 17 with his first two cards. The dealer was set to deal the next set of cards and passed right over the player until he stopped her, saying: "Dealer, I want a hit!" She paused, almost feeling sorry for him, and said, "Sir, are you sure?" He said yes, and the dealer dealt the card. Sure enough, it was a four.

The place went crazy, high fives all around, everybody hootin' and hollerin', and you know what the dealer said? The dealer looked at the player, and with total sincerity, said: "Nice hit."

I thought, "Nice hit? Maybe it was a nice hit for the casino, but it was a terrible hit for the player! The decision isn't justified just because it worked."

Well, I spent the rest of that weekend wandering around the casino, largely because I had lost all of my money playing blackjack, thinking about all of these different games and how they work. The fact of the matter is that all casino games have a winning process - the odds are stacked in the favor of the house. That doesn't mean they win every single hand or every roll of the dice, but they do win more often than not. Don't misunderstand me - the casino is absolutely concerned about outcomes. However, their approach to securing a good outcome is a laser like focus on process... right down to the ruthless pit boss.

We can view baseball through the same lens. Baseball is certainly an outcome-driven business, as we get charged with a W or an L 162 times a year (or 163 times every once in a while). Furthermore, we know we cannot possibly win every single time. In fact, winning just 60% of the time is a great season, a percentage that far exceeds house odds in most games. Like a casino, it appears as though baseball is all about outcomes, but just think about all of the processes that are in play during the course of just one game or even just one at-bat.

In having this discussion years ago with Michael Mauboussin, who wrote "More Than You Know" (a great book), he showed me a very simple matrix by Russo and Schoemaker in "Winning Decisions" that explains this concept:

	Good Outcome	Bad Outcome
Good Process	Deserved Success	Bad Break
Bad Process	Dumb Luck	Poetic Justice

We all want to be in the upper left box - deserved success resulting from a good process. This is generally where the casino lives. I'd like to think that this is where the Oakland A's and San Diego Padres have been during the regular seasons. The box in the upper right, however, is the tough reality we all face in industries that are dominated by uncertainty. A good process can lead to a bad outcome in the real world. In fact, it happens all the time. This is what happened to the casino when a player hit on 17 and won. I'd like to think this is what happened to the A's and Padres during the post-seasons. :-)

As tough as a good process/bad outcome combination is, nothing compares to the bottom left: bad process/good outcome. This is the wolf in sheep's clothing that allows for one-time success but almost always cripples any chance of sustained success - the player hitting on 17 and getting a four. Here's the rub: it's incredibly difficult to look in the mirror after a victory, any victory, and admit that you were lucky. If you fail to make that admission, however, the bad process will continue and the good outcome that occurred once will elude you in the future. Quite frankly, this is one of the things that makes Billy Beane [General manager of the Oakland A's] as good as he is. He is quick to notice good luck embedded in a good outcome, and he refuses to pat himself on the back for it.

At the Padres, we want to win every game we play at every level and we want to be right on every single player decision we make. We know it's not going to happen, because there is too much uncertainty... too much we cannot control. That said, we can control the process.

Championship teams will occasionally have a bad process and a good outcome. Championship organizations, however, reside exclusively in the upper half of the matrix. Some years it may be on the right-hand side, most years should be on the left. The upper left is where the Atlanta Braves lived for 14 years - possibly the most under appreciated accomplishment by a professional sports organization in our lifetimes. In short, we want to be a Championship organization that results in many Championship teams.

I'll touch on our draft in greater detail in the next day or so, but I will say that we are proud of our process and it was carried out with discipline. Will it lead to a good outcome? We don't know for sure, but we have confidence in the group of picks that were made. I do know, however, that our process gets better every single year, and we expect it to be better again next year.

To me the similarities with investment are blindly obvious. We are an industry that is obsessed with outcomes over which we have no direct control. However, we can and do control the process by which we invest. This is what we should focus upon. The management of return is impossible, the management of risk is illusory, but process is the one thing that we can exert an influence over.

The psychology of process

The need to focus on process rather than outcomes is critical in investing. Outcomes are highly unstable in our world because they involve an integral of time. Effectively, it is perfectly possible to be “right” over a five-year view and “wrong” on a six-month view, and vice versa.

Outcome bias

People often judge a past decision by its ultimate outcome instead of based on the quality of the decision at the time it was made, given what was known at that time. This is outcome bias. For instance, the UK Parliament has decreed that if you kill someone whilst using a mobile phone in a car then you should receive a different sentence from someone who is caught using a mobile phone, but who didn't kill anyone.

Baron and Hershy¹ have documented outcome bias in a wide range of experiments. For example, subjects are asked to rate the soundness of the physician's decision process (not outcome) in the following case:

A 55-year old man had a heart condition. He had to stop working because of chest pain. He enjoyed his work and did not want to stop. His pain also interfered with other things, such as travel and recreation. A type of bypass operation would relieve his pain and increase his life expectancy from age 65 to age 70. However, 8% of the people who have this operation die from the operation itself. His physician decided to go ahead with the operation. The operation succeeded. Evaluate the physician's decision to go ahead with the operation, on the following scale:

3 - clearly correct, and the opposite decision would be inexcusable;

2 - correct, all things considered;

1 - correct, but the opposite would be reasonable too;

0 - the decision and its opposite are equally good;

-1 - incorrect, but not unreasonable;

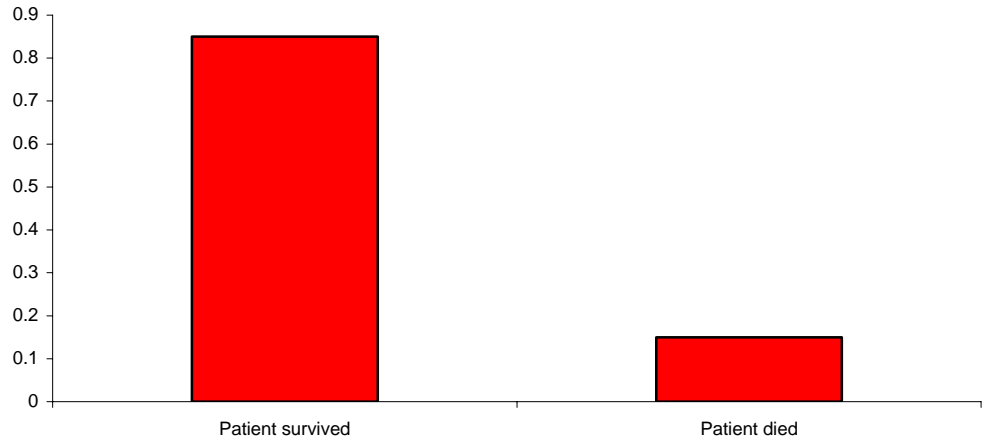
-2 - incorrect, all things considered;

-3 - incorrect and inexcusable.

Subjects were also presented with the same task except that in this alternative setting, the operation was unsuccessful and the patient died. Now, the correctness of the physician's decision should not be a function of the outcome, since clearly the doctor couldn't have known the outcome before the event. However, as the chart below shows the doctor's decision rating was massively impacted by the outcome.

¹ Baron and Hershey (1988) Outcome bias in decision evaluation, Journal of Personality and Social Psychology. 54

Average rating of the soundness of the decision



Source: Baron and Hershey, SG Equity Research

A further example provided by Baron and Hershey concerns a gamble. Consider the following:

A 25-year-old man is unmarried and has a steady job. He receives a letter inviting him to visit Quiet Pond Cottages, where he has been considering buying some property. As a prize for visiting the property, he is given a choice between:

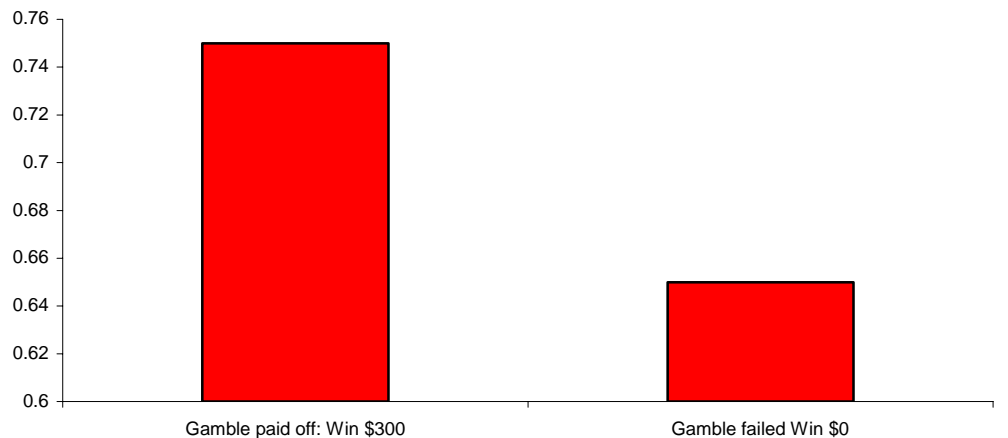
Option 1: \$200.

Option 2: an 80% chance of winning \$300 and a 20% chance of winning nothing.

He must mail in his decision in advance, and he will be told the outcome of Option 2 whether he chooses it or not.

If the subjects are acting rationally then the man should accept the gamble, as it has a higher expected outcome. Of course, the outcome once again should have no impact upon rating the man's decision process. However, as the chart below shows, when the gamble paid off it was rated as a better decision than when it didn't!

Average rating of the decision



Source: Baron and Hershey, SG Equity Research

This obsession with outcomes and the impact of outcome bias are clearly visible in our world.

Outcome accountability

In addition, psychological evidence shows that focusing on outcomes can create all sorts of unwanted actions. For instance, in a world in which short-term performance is everything, fund managers may end up buying stocks they find easy to justify to their clients, rather than those that represent the best opportunity.

In their meta-study on accountability, Lerner and Tetlock² show that holding people accountable for outcomes tends to:

- i) increase ambiguity aversion (increased preference for alternatives with less ambiguity despite equal risk).
- ii) increase the collection and use of all information (both useful and useless).
- iii) increase the preference for compromise options, and increase the selection of products with average features on all measures over a product with mixed features (i.e. average on four traits, preferred to good on two and bad on two).
- iv) increase the degree of loss aversion.

None of these features is likely to serve investors well. Together they suggest that when every decision is measured on outcomes, fund managers are likely to avoid uncertainty, chase noise, and herd with the consensus. Sounds like a pretty good description of much of our industry to me.

Process accountability

However, if we switch the focus from outcomes to process then things begin to change for the better. Simonson and Straw³ provide the classic evidence of a focus on process leading to better decisions than a focus on outcomes.

They asked participants to consider an American brewery that was planning to distribute its nonalcoholic and light beer (as repulsive as those ideas are to me) into Europe. The data they were given showed that both products had done roughly equally well in their test period. Subjects were asked to decide which of the two products should receive an extra \$3m in funding. The instructions made it clear that the decision should be made on the basis of the potential benefit of the additional funding to the product and the company.

Subjects wrote down their decisions and a brief explanation of their decision. They were then given the following statement:

Your recommendation to allocate the additional \$3m to the (which you choose, either the light/nonalcoholic) beer was adopted by the president of the company and implemented. As you will note on the next page, the results have been rather disappointing.

² Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125

³ Simonson and Straw (1992) Deescalation strategies: A comparison of techniques for reducing commitment to losing courses of action, *Journal of Applied Psychology*, 77

The data indicated sales and profits of the product that the subject had selected started OK, and then went down, and finally settled in a low constant pattern of sales. The sales and profits of the alternative product were also shown. They also went up initially, then down, but ended up settling at a higher level than the product chosen by the subjects.

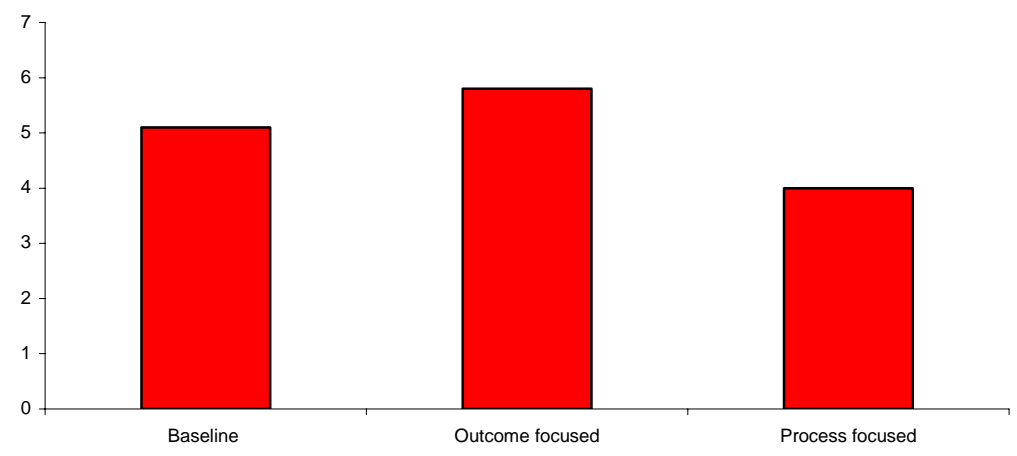
Participants were then told that the company had decided to make an additional \$10m available in funding. However, this time the money could be split between the two beers. The subjects were asked to allocate the \$10m between the two beers.

In addition the subjects were told one of the following: (i) The information they had received was enough for a business school student to make a good decision, (known as the base line). (ii) If they made particularly good or bad choices their performance would be shared with other students and instructors. They were also told that their performance would be based on the outcome of the decision they took. (This was labeled outcome accountability). (iii) Subjects were informed that their evaluation would be based on their effective use of decision strategies rather than the outcomes of those strategies. This group were informed that if they used particularly good or bad decision processes these would be shared with other students and instructors. (This was labeled process accountability).

As the chart below shows, there was a marked difference in the allocations of these groups. The group who were focused on the outcome of their decision decided to allocate an average of \$5.8m to the beer they had originally selected. This is a classic example of the sunk cost fallacy. This is a tendency to allow past unrecoverable expenses to inform current decisions (for more on this bias see Mind Matters, 21 January 2008 [link](#)).

By comparison, the base-line subjects split the money roughly evenly giving their previous choice \$5.1m. However, the group told to focus upon the process of decision making rather than the outcome did much better. They only allocated \$4m to the beer that they had originally chosen, giving the majority of the money to the more popular beer.

\$m amount allocated to the first round beer choice



Source: Straw and Simonson, SG Equity Research

Conclusions

During periods of underperformance (something we value disciples have endured over the last year or so as I have documented – Mind Matters, 30 July 2008 [link](#)) the pressure always builds to change your process. However, a sound process is capable of generating poor results, just as a bad process can generate good results. Perhaps we would all do well to remember the late great Sir John Templeton's words "The time to reflect on your investing methods is when you are most successful, not when you are making the most mistakes", or indeed Ben Graham's exultation "The value approach is inherently sound... devote yourself to that principle. Stick to it, and don't be led astray".

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