# REDUCING WORKPLACE BIAS: HOT HAND FALLACY

#### SHORT DESCRIPTION

#### WHAT:

The Hot Hand fallacy is to overestimate the importance a streak, specifically a "winning streak but can also apply to a "losing streak".

#### PROBLEM:

It's very easy to overestimate streaks of any sort, then make up all sorts of stories why they are happening when for the most part they are simply random events. This can lead to misperceptions that cloud thinking and judgment and lead to false expectations.

#### **SOLUTION:**

The lesson and meditation provide appropriate warnings about hot hand fallacies while increasing awareness and reducing the chance of buying in to misleading impressions.



The hot hand fallacy refers to the fact that we tend to overestimate hot streaks in performance. The hot hand analogy comes mostly from sports where a player can be on a prolonged performance and/or winning streak.

Under these circumstances we tend to overvalue the streak because we forget that an average is determined over a period of time and that performance, like anything else in life, is not evenly distributed.

So, a basketball player with a lifetime 70% free throw success rate, could well miss or make 10 shots in a row – it's the average that is the best guide to likely future success. The hot hand and the cold hand fallacies share the same perception error; extrapolating too much from the short-term present.

Now, this can have an effect on the mindset of the performer, either temporarily increasing confidence or creating anxiety and doubt, especially in sporting performance where mindset is associated with success.



Active management leads to lots of poor investor behavior. It sends people chasing after whoever has the hot hand at the moment.

- Barry Ritholtz



## Reducing Workplace Bias: Hot Hand Fallacy

# THE BEST WAYS OF GETTING A GOOD HANDLE ON THE HOT HAND FALLACY INCLUDE THE FOLLOWING:

- 1.
- Ask yourself: "Is there a possible explanation for an increase in performance?" For example, you may have been working to improve your fitness. Or perhaps you have changed your sleeping patterns and have more energy or just engaged a performance coach? Perhaps your hand really has got hotter and it is not just a fallacy?
- 2.
- If you can't find an obvious reason for improved performance enjoy the exceptional run of positive performance outcomes. However, don't impute magical qualities to this run, but instead put it down to the law of averages. And remember averages don't happen evenly over time. You can toss a coin and get ten heads in a row.
- 3.
- Be careful of overvaluing a run of positive outcomes by you or anyone else. Don't make hasty decisions just because one person seems to be stealing the show. Wait for them to consistently perform at a high level before assuming that this is a new norm.
- 4.
- Don't let a hot streak in one area of performance blind you to other performance dimensions. Okay, so that new point guard seems to be hitting every shot but how is his defense? The new sales guy seems to be racking up the sales but what is his impact on the culture? What about other aspects of his performance? How would it be to have him on the sales team if his sales success drops back to a typical average?
- 5.
- Be mindful not to allow a hot hand fallacy turn into a halo effect. It may seem like the new hire can do no wrong but don't forget that no one is perfect.
- 6.
- Like all relationships, the more time you know someone and the more knowledge you have of them, the more realistic will be your perception and appraisal.

The hot hand fallacy is a bias that comes from overvaluing the performance of someone who is on a hot streak. For example, a basketball player makes all his shots in the first half. The tendency would be to keep giving him the ball in the second half, because the streak is going to continue. However, logic dictates, that his career shooting percentage will ultimately prevail, and that he might actually shoot below that percentage in the second-half because he exceeded it in the first half.



### Reducing Workplace Bias: Hot Hand Fallacy

This is a bit like the gambler's fallacy in which independent events, in this case a basketball shot, are somehow related. If I have tossed a coin six times and each time it has landed on heads, what are the chances that on the seventh time it will be tails? The chances on any toss of the coin are 50%. Over a long period of time one would expect there to be an equal amount of heads and tails reflecting that even distribution in any one event. However, each time you toss a coin, the odds are always 50/50.

However, we can misinterpret momentum or the "hot hand" and be swayed by the perception that someone is "on a roll". More importantly, we fail to see that most of the time the events are fundamentally independent, so what happens one time, has no influence on the next occasion.

For example, a salesman has had recent successes in making three good sales. Perhaps he should be given more deals to work on? After all, he has a hot hand, right? Maybe, but to assume that because he has had three recent successes, the streak will continue, is an example of the *hot hand fallacy*. Now, if the salesman has developed a new approach and it is this new strategy that is responsible for the success, then that's a different matter.

The hot hand fallacy can be seen in advertising, especially for financial services. Joe so-and-so accurately predicted the global economic downturn in 2007 (supposedly) so he must be able to predict every future turn in the economy, right? Is he an absolute genius who can always predict the future or is this just an example of the hot-hand fallacy?



The hot hand fallacy can also be seen in investing. A company seems to be gathering some momentum and has had some recent successes. Does their hot-hand influence the perception of likely future success?

Although the hot hand fallacy is used to describe "winning streaks", similar reasoning can be used for losing streaks. If an experienced salesperson is in a "slump" and hasn't been converting at his usual success rate is this just a passing phase that is predictable based on stats or has something changed?

Managers and leaders need to be aware of this bias of attributing performance trends as a sign of decreasing or increasing ability. Maybe it is, maybe it isn't, but you can't assume it is. You need to do the work of analyzing the situation not making an assumption.

This can occur at almost level of functioning and corporate decision-making. For example, a start-up you have some interest in, has had some setbacks after making good progress. Does that mean that they are now perceived as a poor investment? Has "momentum" swung to their competitors?

It is easy to get caught in the emotion and excitement of "winning streaks". However, there is a real risk that the emotion will lead you to overestimate someone's future performance. Often, there's really no way to estimate or predict someone's future performance, and we have to be careful not to be overly impressed by a hot streak.



### Reducing Workplace Bias: Hot Hand Fallacy

# **MEDITATION**

Human beings are impressed with success and like excitement. As a result, we can be overly impressed with "hot hands" and "momentum" even though those concepts have no predictive value.

The hot hand fallacy is a typical bias in that it can give us a false sense of control, that is we can predict the future. Therein lies the danger of all biases, they can give us a false sense of security.

We must remember not to be overly impressed by hot streaks. Life always has its ups and downs and we should not expect them to be evenly distributed over time. Some days are better than others, some days worse.

Rather than being distributed equally over time, you should rather expect a random distribution of successes and failures. Chances are you and your company will go on "winning streaks" and "losing streaks" and you should not overvalue either.

Great leaders don't overvalue "hot streaks" or "cold streaks". Great leader don't overvalue "winning streaks" or "losing streaks".

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We live in a world that exaggerates success. Success can get you into the newspapers, or on television, or your social media go viral. All of these serve to exaggerate the feat.

The attention amplifies the success and it makes it seem supernatural. Unfortunately, that exaggeration sets up false expectations of what is possible in the future. False expectations in others and in yourself.

Great leaders recognize false expectations. Great leaders don't have false expectations.

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