

Outliers
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Outliers require additional exploration to unearth their stories. More often than not we are placated to accept superficial analyses, and are content to forego deeper understandings of the interrelations between normalized results and their stand-out counterparts. However, sometimes an event's absolute story can only be revealed, seen, understood, and explained through enhanced-quality analysis; analysis that is multi-dimensional rather than linear.

Outliers signify extremities, which through contrasts, highlight natural boundaries. Simply put, seeing where minority outcomes lie in comparison to majority outcomes can show where natural bounds are delineated. In my estimation, outliers can either be evidential of error, distractors, leading indicators, lagging indicators, or causation indicators.

The possibility of statistical error is ever present, and outliers may signal such an existence. Outliers may be present in a sample but not belong to that population. Moreover, distractors can be naturally occurring or artificially interjected deviations of a population. They can be unintentional occurrences that simply offer no valid insights into the real story, or be variables that are intentionally introduced into a population to manipulate outcomes. The importance of recognizing distractors for what they are, is to avoid being deceived or misled. There are many arenas where we should be leery of distractors such as in politics, the media, relationships, in community dealings and the like. Additionally, being able to identify outliers that are actually leading indicators can afford one the advantage of getting ahead of a trend. Conversely, identifying outliers that are lags can confirm that a trend has run its course. Furthermore, outliers may very well represent undisclosed cause and effect relationships between outliers and normalized results. This is the impetus of this article.

Outliers are outcomes that vastly differ from the majority of outcomes, assuming a normal distribution. When analyzing normally distributed data sets, analysts usually set-aside outliers because they presume there to be no correlation between the outliers and an event. With no significant correlation, outliers will skew the analysis of an event and its outcomes. This is because the characteristics of the outlying instances are not likely to be the same characteristics of the normalized instances. Therefore it is usually presumed that outliers will provide no explanation, or will provide an inaccurate interpretation, of true events.

In relation to an independent variable or stimulus, outliers may have no crossings with the stimulus; may not be influenced by the stimulus; or may react differently to that stimulus - either with greater or lesser magnitude than the majority of reactions. Alternatively, outliers may actually be causing an unknown, unmeasurable, undetectable, or unascertainable effect on the stimulus itself or on the population. Technically this would mean that the outliers are the stimuli and the independent variable has been incorrectly christened as such.

I believe that I can surmise that data is usually normalized for the purpose of being able to obtain palatable, predictable, and obvious explanations. These explanations serve valid purposes, yet their absolute accuracy can be subjective; subject to limited understanding and incomplete

comprehension. In other words, we can tend to take the quickest, easiest, and less resistant routes to understanding. Perhaps doing so at the detriment of treasured or shocking enlightenments awaiting discovery. Would you be surprised to learn that introverts can actually make better leaders than extroverts? Or that a person can exponentially increase her effectiveness by improving her strengths instead of her weaknesses? These conclusions may seem counterintuitive, yet in reality they may just be conclusions that oppose other commonly repeated but perhaps unfounded conclusions. How many times have findings from a study been recited so many times that they become common knowledge – regardless if those findings are accurate or not? How many times have rumors taken on lives of their own, likely because those rumors sound plausible?

Let's face it, there are times that we can misconstrue an event, we can get the wrong idea about what is happening or what is not happening. This can inadvertently lead to making poor decisions or taking improper actions. Sometimes the obvious conclusion is the wrong conclusion and an obscure reasoning is more fitting, even if it does not seem to be at first glance. The message here is that sometimes we can benefit from richer efforts, such as taking the time to challenge our logic, stretch our imagination, engage other theories, or perform more in-depth due diligence. As we strive to be better and do better, we can keep these efforts in mind. Perhaps as we seek to unearth the stories of outlying instances, we ourselves can become outliers in our own rights. Perhaps we can distinguish ourselves from our counterparts and influence our environments and our networks in meaningful ways.