

Making Strategic Decisions by Instinct

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Most tools for making decisions use Euclidean Space. But Euclidean Space requires orthonormality on datasets and interval scale, i.e., Euclidean distance with units. When decisions are tactical, they work fine, because in the case of tactics, the goal is clear from the first, i.e., it is problem solving. So, the degrees of freedom are not too large and we can apply mathematical approaches.

But when the decision is strategic, we need to find a goal. So, we have no other choice but to proceed by trial and error. But the degrees of freedom is tremendously large so that the curse of dimensionality comes up and we cannot solve the problem mathematically in a straightforward manner. Therefore, we need to introduce non-Euclidean Space approaches.

Mahalanobis proposed Mahalanobis Distance (MD). His original idea is to remove outliers and to solve design of experiments more effectively by removing these outliers. To do that, he needs to determine the order of removal. So, he introduced ordinal scales. But if we note that it is ordinal scale, we can use it as a prioritization tool for making strategic decisions. This sounds good, but then we cannot satisfy the requirements of the Euclidean Space. But if we introduce patterns, then we can compare patterns based on MD and we can understand it is working good or we need to make more efforts to reduce MD to get better strategies.

In this presentation, Mahalanobis Distance-Pattern approach is presented, which is developed to solve strategic decision making problems in the days of frequent, extensive and unpredictable changes.