



## BOOK REVIEW

### **Ten Tales of Strategy in *The Art of Strategy***

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*Ten Tales of Strategy* is the first chapter in *The Art of Strategy: A Game Theorist's Guide to Success in Business and Life* written by Avinash Dixit and Barry Nalebuff. The ten tales are ten principles in game theory. The authors explain the theory by raising cases that readers are familiar with and in entertaining style.

The first tale is *Pick a Number*. The authors challenge readers to guess a number between 1 and 100 for five times to find a correct number that was chosen by them. They show the most efficient search strategy. They point that both players, the number setter and searcher, know this strategy. The setter also knows that the searcher knows the strategy and so does the searcher. This reflects a principle of perfect information in game theory which often states that I know you and you know me. I know that you know me. You also know that I know you.

The second tale is *Winning by Losing*. It comes from a famous game show *Survivors*. The authors give an example of a moment when a candidate to be a finalist throws his chance to win. The decision is based on a fine calculation of probability to win the game in the end. Eventually, that player really wins. The authors call this the anticipation of situation. By game theory, it is a principle of reaction function. A player takes reaction functions of other players into his or her reaction function to find Cournot-Nash equilibrium in a simultaneous game.

The third tale is *The Hot Hand*. The authors show that sportsmen who improve their weak points will raise the efficiency of their strong points. The story of left and right hands to score in basketball is a good example. Opponents will recalculate the probability that the sportsman will score using each hand then they have to allocate the defense away from the stronger hand. Consequently, the stronger hand scores more. The principle is an action of player always affects the decision of other players.

The fourth tale is *To Lead Or Not To Lead*. It is a case of sailboat racing when a leader imitates the action of the follower even if that action is not good. This is to ensure the winning of the race. In game theory, it is a decision in sequential game. Sometime, the first-mover is advantageous like in Stakelberg model. In contrast, the second-mover can be advantageous like in the product imitation game. Therefore, a player needs to think carefully whether he or she should be the first or second mover in a specific situation.

The fifth tale in *Here I Stand*. The authors raise cases that leaders of nations stand for their strong decisions which may lead to severe conflicts afterward. This reflects the dynamism of game theory. When a player makes a decision, her or she may have to think of the consequence in the long-term rather than only in the short-term to avoid catastrophe.

The sixth tale is *Thinning Strategically*. It is a case where people have to lose their weights by their own consents but forced by external agents. The principle in game theory that this tale wants to deliver is that human respond to incentives. The authors emphasize that when a player can change incentives in the future then he or she can change behaviors of other players. The principle is effective to even his or her own behaviors in case that the player plays the game against himself or herself in the future.

The seventh tale is Buffet's Dilemma. It is a case when a billionaire has a bill passed the congress without spending any money to both the Republicans and the Democrats. This occurs because both parties ensure their advantages by choosing to pass the bill no matter how the other party makes the decision. It represents the principle of dominance strategy in a simultaneous game.

The eighth tale is *Mix Your Plays*. The authors point that a sportsman will be unsure what kind of strategy that the opponent will play next when he or she observes unstable patterns of the opponent's play. Then the defense will be weaker than in a case of stable pattern of the play. This reflects the mixed strategy in game theory. When a game has no Nash equilibrium or more than one equilibrium then the solution of the game needs to be solved by using probability.

The ninth tale is *Never Give A Sucker An Even Bet*. It is a story of bluffing in poker. A poker player may pretend to lose in some games to lure another player to lose even bigger in the next chance. The story applies to any bits that a player offers a deal to another one with an expectation that he or she will win the game by the lost of the other. The authors ask readers whether the player who accepts the bit thinks that he or she is smarter than the player who offers it. Usually, the offering side plans to win the game before hand. In game theory, this refers to a zero-sum game. It is a game where a player earns only if another player loses. Then in the game, the first mover player has to ensure that his or her strategy will surely make him or her win, and of course make the other side unavoidably lose.

The last tale is *Game Theory Can Be Dangerous to Your Health*. It is a joke made by the authors based on real story. One of them went to a conference in Jerusalem and bargained with a taxi driver just for a small amount of money to ensure that the

author would get the fair price of the ride. The bargain ended up with the anger of the driver. He drove the taxi back the same route by the anger and the will to make the author to waste the time. Then the author learnt and summarized that it might be dangerous when an individual think too much by using game theory. It may cause other people to lose something that are important to them especially their dignity which may be unable to calculate precisely in money term. Therefore, a person must be very careful to read and learn other people's minds. This is because the minds include in the reaction functions. Even though reading the minds is hard, it is worth to practice.

The authors emphasize that everything in life is a game. When a person can conceptualize a situation as a model in game theory then the person can solve the situation, always. This is important to life. Sometime people think that there is no way out of trouble. They may commit suicide to escape or retreat away from the problems. However, that is not a good solution to cost the life. Believing and using game theory, then there is always a better solution than losing a life. Just to find it and it is not too difficult to find.

## REFERENCES

Dixit, Avinash K. and Barry J. Nalebuff. 2008. *The Art of Strategy: A Game Theorist's Guide to Success in Business and Life*. New York: W.W. Norton & Company.