The Strategic Leverage of Economic Game Theory

These 4 principles are key to a winning business strategy.

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Game Theory dates back to 1944 with the publication of *Theory of Games and Economic Behavior* by mathematician John von Neumann and economist Oskar Morgenstern. Game Theory can be a useful tool in business situations, especially where the fortunes of players or companies are interdependent and decisions made by one will affect all. This describes virtually every situation encountered in today's healthcare environment. Game Theory was brought to the forefront in a 1995 article, "The Right Game: Use Game Theory to Shape Strategy," written by Adam Brandenburger (a Harvard Business School professor) and Barry Nalebuff (a Yale Business School professor). This article was followed by their 1996 book *Co-opetition* which put forth the concept that a combination of cooperation and competition are inherent in most business situations.

Those playing competitive sports or games such as chess and contract bridge use game theory. Using the type of strategic thinking necessary for game playing can also lead to better business decisions for those employed in today's competitive healthcare environment. Game theory can provide doctors with significant leverage when engaged in a wide variety of strategic and political situations. Rapid changes in healthcare and technology require rapid, strategic responses, and this is where Game Theory excels. This type of thinking helps a "player" to understand what is happening and how to improve a situation strategically. Let us take a closer look at four Game Theory principles that are indispensable tools, ones that will provide you with leverage for sharpening your thought process when making strategic decisions.

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Principle One: Look Forward and Reason Backward

Yogi Berra has been attributed with the saying, "It's hard to make predictions, especially about the future." Business projections are typically made by analyzing historical data and then using a combination of subjective experience and objective tools (such as econometrics and regression analysis) to project forward. This approach is a useful exercise, but it rarely leads to superior decisions—especially when technology and the environment are changing as rapidly as they are for today's healthcare providers. Using historical data to project forward has been compared to having a blindfolded driver be dependent on the eyes of a navigator looking out his car's rear window and telling him when to turn and what direction to go.

A Game Theory approach is often contradictory to one utilizing conventional wisdom. In most games, the future is "forecast" by looking forward to a desired outcome, or goal, and then thinking backwards to determine the moves necessary to reach that goal. For example, a short-term goal in chess might be to remove a bishop that is positioned to interfere with the long-term goal of advancing towards the king. The thinking process is begun at the point where the bishop (the obstacle) is "gone," and from there, the player reasons backwards through the moves needed to reach this goal. Throughout the "backwards thinking" process, the player is forced to consider all moves

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the competitor might make to prevent the removal of the bishop at each step. Moves are predicted, based on the assumption that the opponent is trying to win the game and is also assessing your ability (strengths and weaknesses) in order to more accurately "predict" your moves. The same is true in business. We determine who the decision-makers are and ascertain what we can about their motives and abilities. In business, we also add the assumption that a player "wins the game" by maximizing profit and that s/he makes moves based on reaching this goal.

While this approach may seem obvious, few people in the business world tend to think this way. Those who do so hold a significant advantage, and their decisions improve as they gain more experience and knowledge about their competitors.

Principle Two: Determine the Value That You Bring to the "Game"

This principle is definitely applicable to employed physicians who are negotiating salaries and to practice owners who are determining the value they bring to mergers or acquisition by larger groups. Business is all about meeting the needs of customers and creating value in the process. A practitioner's customers could include an employer, a payer, a hospital, and certainly, a patient. Most business situations require that a "player" has a good understanding of the value s/he brings to these other players. In other words, how does s/he meet the needs of customers and/or contribute to profit?

Business transactions require negotiations, and a critical first step in the negotiating process is determining the value that you bring to the table. In the "old days," some physicians took greater value from the "treatment game" (relative to other doctors) than they brought to it, simply by using higher paying treatment codes. In Game Theory, this strategy does not work. An operative principle of Game Theory is that players cannot take more value from a game than they bring to it. The importance of adopting this principle is that it clearly directs a player towards a strategy intended to actually make him/her a more valuable player.

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The best way to determine the value a player brings to a game is to estimate the impact that would be made on the other players if s/he were removed from the game. Since the real game of business is about creating value, this can be an eye opener for a doctor—making it clear the true value (or lack of value) that he/she as a player actually brings to the "game." Undergoing this process will lead to a better strategy—one directed at finding ways of making oneself a more valuable player.

Principle Three: Develop a Perspective That Focuses on the Positions of the Other Players, Rather Than on Yourself

Unlike typical games where there are winners and losers, "business games" present an opportunity for developing strategies whereby everyone can win. This is the fun of "playing" these games. Finding a move that allows every player to win leads to positive outcomes for all. Synergistic opportunities can be created in which collaboration (such as strategic partnerships or sharing infrastructure) provides leverage that can benefit all participants involved—especially in areas that increase quality, save cost, or accelerate growth.

Game Theory changes the focus from egocentric (What is in this for me?) to allocentric (What is in this for us?). By placing yourself in the "minds" of the other players and assessing your value in terms of what you can bring to others, the game changes from win-lose (or even lose-lose) to win-win. This "strategy" has broad applications to all areas of healthcare delivery and will achieve its optimum results when all players—payers, doctors, and patients alike—win. By applying the principles of game theory, this optimum will be reached much sooner.

Principle Four: Can't Win? Change the Game

"Changing the game" is one of Game Theory's most powerful applications for business strategy—especially when a player recognizes that the game s/he is playing is not one s/he can win. For many, changing the game is the backbone of business strategy and makes "getting there" more fun. This strategy can create opportunities in seemingly impossible situations.

It is important for players to recognize that when the deck is stacked against them, or other players are holding all the "good cards," they don't have to play the game that they find themselves in. You may have faced such a situation when applying for hospital privileges or membership in a managed care panel when negotiating a managed care contract or salary as an associate in a practice, or even when applying for a loan. The only way to enter this kind of game is with a strategy directed at changing the game itself. For example, when I watch the NCAA basketball tournament, I see "underdogs" win using strategies directed at changing the game of the opposing teams. After all, the top seeds have already demonstrated that they will win if allowed to play their own games. This same strategy can work equally well in the game of business.

According to "The Right Game" authors Brandenburger and Nalebuff, changing the game requires changing one or more of a game's five elements—the players, added value, rules, tactics, or scope. Focusing on these five elements will provide a framework and a systematic way for developing a strategy for changing a game. Start by asking the questions: "Who are the players? Who should the players be? How will the other players react to my actions? How much value do I bring? How valuable am I to the other players? What are the boundaries? If the other players are expanding boundaries into my area, how do I expand into theirs?" The most powerful aspect of this process is the fact that simply by entering the game, you change it. Any physician who has been the first to challenge a prevailing "conventional wisdom" understands how significantly his/her entrance into a game changed that game. Knowing that your presence automatically changes the game can build a level of confidence that will take you quickly to the next level. Just be certain to take steps that assure your entry creates a win for other players as well as for yourself.

The strategic options in the "game" of business are far greater than those of board or card games. We use tactics in both types of games; yet, our strategies for the two are very different. Because we cannot change the boundaries or rules in a card or board game, our value remains constant throughout. If we lack the necessary piece to win a game of chess, we are in trouble. In business, however, when we consider a "piece" to be essential to reaching our goal, we can change the game by acquiring that piece through strategic partnerships—or, if we have access to capital, we can purchase it. Without understanding the strategy of Game Theory, it is difficult to recognize which pieces are missing—or why they are necessary to our goal. This, perhaps, is the key difference between the game of business and traditional games: in business, we can change the game. While changing tactics is common to both types of games, in business we are free to change the boundaries, rules, added value, and players. Recognizing this opportunity can lead our thought process in new directions—ones that more consistently arrive at the goal of having everyone win—something we should all be striving for. **PM**

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