**David McAdams**, Professor of Business Administration and Economics, Fuqua School of Business, Duke University is one of our featured speakers at the Nov 5-6, 2014 HSAC meeting. Below are two excerpts from his recently published “Game-Changer” book. [Note: copies of his book will be our gift to you at the meeting]

**Excerpt from the Prologue**

*“The game theory approach to business … has resulted in [many] strategic initiatives, from joint ventures to mergers to new-business development, that would have been unheard of in a traditional planning environment.”*

– Raymond W. Smith, Chairman of Bell Atlantic

Bell Atlantic Chairman Raymond Smith wrote in a 1996 *Fortune* magazine article how “the game theory approach to business” had been the secret to Bell Atlantic’s success under his leadership during the telecommunications shake-up of the 1990s.[[1]](#endnote-1) “Games” are strategic situations and “game theory” is the art and science of strategy, but the game theory approach to business is much more than just being smart and savvy about strategy. Indeed, as Smith explained, the game theory approach to business requires “a different kind of corporate manager: flexible, intellectually rigorous, and highly tolerant of ambiguity” and only thrives in “a special kind of company [that] nurtures a climate of open, frank, and relentlessly objective discussion so that all the variables are scrutinized honestly and without political repercussions.”

My goal in this book is to introduce you to the game theory approach to life, in all its aspects, including business. At the heart of the game-theory mindset is the recognition that *the game can always be changed*. This book will show you how to change the game, so that you can then enjoy a consistent strategic advantage over your competitors. The approach here is unusual, in two ways. First, although there are many different types of games worth knowing about, I will return time and time again to just one, the game known as the “Prisoners’ Dilemma”. The Prisoners’ Dilemma is important, with many wide-ranging applications, but the reason I focus on it is that game theory offers so many different ways to escapethe “dilemma” in this game. As such, the Prisoners’ Dilemma provides a natural showcase of the power and versatility of game theory in practice.

In Part One (“The Game-Changer’s Toolkit”), we will explore six ways to change games (“commitment”, “regulation”, “cartelization”, “retaliation”, “trust”, and “relationships”), five of which allow one to escape the Prisoners’ Dilemma, and three other key game-theory ideas (“timing of moves”, “strategic evolution”, and “equilibrium”). Each game-changing approach will get its own chapter, while each of the other key ideas is the subject of a separate “Game-Theory Focus” section. All together, my hope is that you will finish Part One with a real sense of mastery over the Prisoners’ Dilemma, and with a toolkit of game-theory ideas that can be applied more broadly to many other sorts of strategic situations.

In addition, I put my money where my mouth is and apply the game-theory approach that I preach to real strategic problems. Part Two (“The Game-Changer Files”) presents six tales of pressing strategic problems, varying in urgency and importance from how to keep prices low on the internet (File #1) and how to build trust on eBay (File #5) to, I kid you not, how to save mankind from looming and seemingly unstoppable dread disease (File #6). In each case, I use the game-theory approach to identify the ultimate strategic crux of the problem, and then leverage that “game-awareness” to brainstorm ideas on how to change the game to solve or at least mitigate the underlying problem.

So, get ready for a ride. You’ll emerge a deeper strategic thinker, armed and ready to gain a strategic advantage in all the games you play, in business and in life.

**Introduction**

*“The wise win before they fight, while the ignorant fight to win.”*

– Zhuge Liang, Regent of the Shu Kingdom, who lived 181-234A.D.

“The wise win before they fight.” So wrote Zhuge Liang, the great statesman, scholar, and military commander of China’s Three Kingdoms Period.[[2]](#endnote-2) That may sound like an empty platitude but, actually, it captures an essential truth. The “wise” win before they fight by recognizing all the games that *could* be played, steering the strategic environment in their favor, and then fighting with confidence in their ultimate victory. By contrast, the “ignorant” just play the game that lays before them, their victory or defeat largely out of their control, a matter of luck and fortune.

I refer to the “wisdom” of Zhuge Liang as “game-awareness”, the ability to see the strategic world around you with clarity and open eyes. Game-awareness helps protect you from the many dangers of not knowing what games you are really playing. Moreover, once you are truly aware of the games in your life, you can take steps to change them to your strategic advantage. That’s why, in addition to cultivating your game-awareness, my focus throughout this book is on how the lessons of game theory inform the art of changing games. Mastering this art will allow you to recognize and seize strategic opportunities that others do not see, giving you a significant advantage over your peers.

Over the past forty years, the science of game theory has risen from a fairly obscure branch of applied mathematics to the driving engine behind many of the most important intellectual advances in the social sciences. In the classroom, game theory has now become a mainstay in a wide variety of fields, from economics and political science to business strategy, while making inroads in more disciplines such as law, corporate finance, managerial accounting, and social entrepreneurship, even biology and epidemiology.

Even if you’ve never heard of game theory, its lingo and concepts are in the air you breathe. What does America’s planned troop withdrawal “signal” to the Afghan Taliban? Will a Greek debt default lead to “contagion” and financial crises elsewhere? Did Sprint’s early investment in 4G WiMAX technology give them a “first-mover advantage”? These game-theoretic questions were all in the news in recent years.

**Game Theory in Business**

In 2005, *Fast Company* magazine made a splash with an article claiming that no one uses game theory in business.[[3]](#endnote-3) In their reporting, however, *Fast Company* doesn’t appear to have spoken with any actual business leaders. They tell a different story, how game theory can and does give them and their businesses a strategic advantage.

First, game theory helps businesses plot tactics. The most obvious games in business are those played at the tactical level – how to set prices, how to launch a new product, and so on. Management consultants the world over use game theory when formulating tactical strategic advice on how to “win” such games.[[4]](#endnote-4)

U.S. military planners long ago learned the value of game theory for tactics, of putting yourself in others’ shoes. Before any major mission, they routinely play “war games” in which one group of officers is tasked with playing the enemy and achieving the enemy’s objectives. War gaming is essential, as it exposes weaknesses in one’s initial strategy and leads to a more robust final plan. On the other hand, a McKinsey global survey of over 1,800 business leaders found that about half don’t even consider more than one of their own options when making important business decisions, much less how the competition might respond.[[5]](#endnote-5) Of course, that just gives your firm a leg up if you can deploy game theory in a more meaningful way.

Second, game theory provides actionable insights. We are surrounded by games whose outcomes affect us, including many over which we have little control. Game theory provides conceptual insights that allow one to understand and predict, before others, what is likely to happen in such games. For example, according to Tom Copeland, Chairman Emeritus of Corporate Finance at Monitor: [[6]](#endnote-6) “Game theory can explain why oligopolies tend to be unprofitable, the cycle of overcapacity and overbuilding, and the tendency to execute real options earlier than optimal.”

Finally, and most importantly, game theory can transform the culture of an organization. Firms are not simply “players” in games but also the milieu in which many games are played: among divisions; between workers and managers; between ownership and management; among stockholders and bondholders; and so on. Game theory realizes its greatest business potential when leaders of a firm create the culture and organizational structures needed for everyone to thrive together.

Raymond Smith’s key insight (see Smith’s quote in the Prologue) was that the process of planning business strategy is itself a game played within the firm. This game can often be dysfunctional and unproductive, as employees fear to openly question the status quo, managers defend the parochial interests of their divisions, and so on. To change this game for the better, it’s essential to attract and/or cultivate a different sort of player (“flexible, intellectually rigorous, and highly tolerant of ambiguity”) and to motivate them to contribute meaningfully to the planning process (by creating “a climate of open, frank, and relentlessly objective discussion … without political repercussions”). That’s true, but planning is just the tip of the iceberg. A game-aware management team can transform much more about a firm for the better, from how employees are motivated to how buyer and supplier relationships are nurtured, and so on.

1. “Business as a War Game: A Report from the Battlefront” by Raymond W. Smith, *Fortune*, September 30, 1996. [↑](#endnote-ref-1)
2. Zhuge Liang is widely viewed as the greatest strategist of China’s Three Kingdoms period, distinguishing himself as a brilliant scholar (writing military classics such as “Thirty-Six Stratagems” and “Mastering the Art of War”), inventor (credited with the world’s first landmine *and* with mantou, a steamed bun still enjoyed today), military commander, and statesman. [↑](#endnote-ref-2)
3. “You Got Game Theory!” by Martin Kihn, *Fast Company*, February 1, 2005. [↑](#endnote-ref-3)
4. See [www.gametheory.net/links/consulting.html](http://www.gametheory.net/links/consulting.html) for a (partial) list of business strategy consulting firms that use game theory. (Unless mentioned otherwise, this and all other links in the endnotes were successfully accessed on December 19, 2012.) [↑](#endnote-ref-4)
5. “How Companies Respond to Competitors: A McKinsey Global Survey”, *The McKinsey Quarterly*, May 2008. [↑](#endnote-ref-5)
6. Tom Copeland is author of “Real Options: A Practitioner’s Guide” with Vladimir Antikarov. Monitor is a leading strategy consulting firm. [↑](#endnote-ref-6)