HOW LIFE IMITATES CHESS

Life's a Game.
Play to Win.

From the legendary grandmaster and advisor to Netflix's *The Queen's Gambit*

GARRY KASPAROV

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Garry Kasparov is the greatest chess player of all time, world champion at the age of twenty-two and the top ranked player in the world for two decades. His matches against the IBM supercomputer Deep Blue put chess and artificial intelligence on front pages around the world. Kasparov writes frequently for many major publications on world affairs and AI. He lectures widely to business and academic audiences on decision making and the human-machine relationship. The Kasparov Chess Foundation promotes chess in schools, and he is the chairman of the Human Rights Foundation and the Renew Democracy Initiative. Kasparov's books include *Winter Is Coming: Why Vladimir Putin and the Enemies of the Free World Must Be Stopped* (2015), *Deep Thinking: Where Machine Intelligence Ends and Human Creativity Begins* (2017) and the acclaimed chess series *My Great Predecessors* and *Kasparov on Kasparov*. He lives in New York City.

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by

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with

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To my Mother, for a lifetime of inspiration and support

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FOREWORD TO THE 2021 EDITION

In the fifteen years that have passed since I wrote *How Life Imitates Chess*, there have been three significant global events I would deem most relevant to its content. I've expanded on many of the ideas in the book in lectures and articles, but three sections now feel undersized, and a little anachronistic, naturally, and they could not be more different from each other.

The first is obvious, since it has to do with technology. A wave of powerful, practical artificial intelligence applications is rapidly changing everything it touches. Machine learning came of age thanks to the exponential increase in available data and the computing power to process it. The supercomputer in everyone's pocket today – the first iPhone came out a year after this book – wouldn't be very smart at all if it weren't for the cloud-based algorithms that tie everything together.

The subsection of this book on intelligent machines is just four pages long, but one of those pages turned into a fresh intellectual journey, as well as an entirely new career trajectory for my professional speaking when it was revisited in 2010. I'm referring to my concept of Advanced Chess and the derived principle of 'weak human + machine + superior process' as being greater than more knowledgeable humans and faster machines using an inferior process. After I expanded on the idea in the *New York Review of Books*, I received a flood of invitations to speak about the importance of process and how best to meet the challenge of working together with our increasingly intelligent machines. Tech giants like Google and even my old rival IBM were struck by my concise explanation of the twenty-first-century challenge of keeping humans centred as our machines became ever more powerful.

The value of the interface in working with computers was hardly novel, of course. From the keyboard to the mouse to touch-screens and voice commands, we are forever finding new ways to combine our thoughts and bodies with our technology. It's still woefully inefficient, but smarter software processes are reducing the barriers well in advance of sci-fi tech like direct brain connections becoming viable.

Chess also continued its role as the *drosophila melanogaster* of machine cognition. The humble fruit fly has been the source of many breakthroughs in genetics, and my humble board game has been much the same for research into thinking machines. My loss to IBM's Deep Blue in 1997 was only the end of the human–machine competition chapter of the story.

Today, a free chess app on your phone is stronger than Deep Blue's ten million dollars of custom chips, so a new frontier was required. The program AlphaZero showed the way in 2017, when it defeated a top traditional chess program by generating its own chess knowledge. That is, instead of applying established human expertise faster and faster, as all previous programs had done, AlphaZero played against itself millions of times to figure out its own values. This was a leap not just for chess, but for other areas where virtual data generation is several factors faster – and often better – than collecting and processing human data.

Since this book is about human decisions and performance, my personal history of 'human versus machine' transforming into 'human plus machine' found a home in another book, *Deep Thinking*, in 2017.

The second section of this book that can be seen in a brighter light today is about adaptability, which has long been a centrepiece of my lectures on corporate and individual strategy and success. The ability to adapt to change isn't mere Darwinist survival, but the very definition of how we think and thrive in the modern world where constant change is the only constant.

This importance of agility over consistency becomes apparent in a crisis, and early in 2020 a crisis beyond the memory of anyone alive arrived with a terrible fury: the Covid-19 pandemic. At the time of writing, the war against it is being won, thanks to the remarkable power and speed of new vaccines.

The result was in doubt for a while, and this uncertainty was as destabilizing as the human toll – a toll that included my

mother, Klara Kasparova, and my friend and former coach Yuri Dokhoian. Lockdowns to reduce the spread paralysed travel and emptied offices and public venues of every kind. Manufacturing and supply chains were stretched and disrupted as demand for some items and services skyrocketed while demand for others nearly vanished.

When a crisis hits so hard, you must question nearly everything, from your preparation to every decision that led up to this moment. This is as true in business as it is in a world championship chess match. Was the disaster a result of a fundamental misevaluation or a relatively simple mistake? Is a new strategic framework required, or only greater tactical awareness and better response time?

These questions are an important part of this book, and I would like to emphasize the mantra of adaptability, now more commonly referred to as 'agility' in the business world. A poster on the wall of a school gymnasium will define agility as the ability to redirect motion without losing speed, and that suits our purposes here very well. The ability to change course while keeping momentum is vital to respond to one's competition – or to a pandemic.

Entire workforces shifted to remote work in a matter of days. Millions of service workers had no job to go to, while online retailers and delivery companies boomed. Governments adapted many regulations or lifted them entirely. Hundreds of millions of students, including my kids, abandoned the classroom for a computer screen. Goods that used to go to restaurants and cafeterias had to be repurposed for the home. There were shortages of everything from flour to toilet paper.

Almost from the start, the question was how many of the adaptations that made it possible to get through the pandemic indicated permanent, post-virus shifts. Many places had dabbled in remote work and education for years, but in 2020 it became clear that it wasn't a sci-fi dystopia or utopia; it was a reality, like it or not. Other initiatives like universal basic income and locally grown food supplies got new momentum. Would we go back? Should we?

Many technologies that had been seen as futuristic or questionable were accelerated by necessity. In other cases, we learned that we had been too slow, that our abundance of caution cost us time and lives. The robots and other forms of automation that

would have kept vulnerable people safe had been shunned as job killers. But they would have been life savers in work environments made hazardous by the virus. Our cities had catered to the needs of automobiles and commuting for so long that our living and shared spaces were revealed to be cramped and unhealthy.

It's hard to overestimate how much worse things would have been had the pandemic struck when this book first came out. The internet was still in its infancy, unable to support the billions of loathed videoconferencing calls that have kept companies, schools and families functioning. More subtly, the adaptable software tools and smart devices we rely on were relatively primitive in 2007. Not only have they helped us through the pandemic, but the recovery will be far faster due to our ability to retool and redirect our energies – and then do it again and again.

The last part of the book to come into new relevance was also a 2020 surprise, if a far more pleasant one. In the second chapter, I point out that Hollywood has long found chess an irresistible image and metaphor. Since then, Harry Potter, *Twilight* vampires, and Marvel X-Men have joined the ranks of popular characters frequently found at the chessboard. Even so, who would have guessed that the top television show of 2020 would be about chess? That a show about a woman American chess player from Kentucky would be the most viewed around the world and win award after award?

I'm an optimist by nature and by choice, but the success of *The Queen's Gambit* on Netflix was beyond even my hopes and expectations. When showrunner Scott Frank reached out to me to see if I would be interested in participating in the show, even as an actor, I was sceptical. It would take a lot of time and energy, and how popular could it really be? I was familiar with Walter Tevis's book but hadn't read it. After I rectified that, I proposed I could help as a consultant, to make sure the chess and the chess players themselves felt authentic.

Choosing and modifying the key games of the lead character Beth Harmon, played by the amazing Anya Taylor-Joy, was part of my role. It's terrible when you see a game in a movie and the position on the board is random garbage. It's insulting, even if few people notice. And in a prestige show all about chess, it had to be real – and as brilliant as Beth if possible. Tevis's descriptions of the games in the book are amateurish, but I tried to follow

his general descriptions as much as possible. It was an enjoyable challenge.

I also thought it was important for the actors to look and behave like real players. If they tossed the pieces around like toys, they wouldn't be convincing and they wouldn't take it seriously themselves. I also helped make the Soviet element as realistic as possible. This was the environment I grew up in, with the KGB agents watching your every step when you travelled. And of course, they would monitor Beth very closely while she was in Moscow.

I'm delighted to have played a small part in making such a great show, especially since I'm asked about it everywhere I go! No matter the topic of my appearance, from politics to AI, my hosts have to get in a few questions about *The Queen's Gambit*. It's been wonderful for chess. I would wager that the fictional Beth Harmon has done more to promote chess than all the real world champions combined, especially with girls! Partly that's because Beth feels like a real person, not a cheap caricature like so many chess players in literature.

I also appreciated that the story is honest about what it takes to reach the top, and here I can speak with an authority few have. Beth Harmon has tremendous natural talent, clear at a very young age at the orphanage. But it isn't until she understands that she also has to do a lot of hard work, to discipline herself and her talent, that she breaks through the clouds to the peak.

At one of my first appearances to promote this book, the first question was natural. 'So, Mr Kasparov, how does life imitate chess?' I did not hesitate to answer, 'It doesn't!' This got a round of laughter, but I was making a serious point. While I do believe chess has many benefits, especially for the young, this book is not about how learning chess or playing chess can make you a better decision-maker. Most of my life had been dedicated to the game, and so it became the lens through which I observed the world and the workings of my own mind. The book, as I endeavoured to explain to the audience, is about the tools chess gave me to analyse and improve my evaluations and my decisions in all situations. The goal is for everyone to find a lens that works for them.

Other feedback was predictable. Chess fans wanted more chess, and the audiences for business and decision-making wanted more of those things. And, despite my disclaimer at the very start

of the book, many of the questions I received were essentially requests for tips, for effortless tricks to improve results. I tried to tell these people that I was not writing a 'Dear Garry' advice column! Promises of quick solutions and an easy road to improvement might sell more books, but such a book would not be very honest or useful.

I like to ask my audiences to think of the last time they made a bad decision. A simple question, but most admit that they cannot think of anything recent. Many go back years, even decades! If only that were true, but the reality is that we discard our decisions almost as soon as we make them. Too often we just live with the results and move on, repeating the same flawed process with the same flawed results. I avoided a 'how-to' methodology in the book, but if you cannot think of a bad decision you made in the last few days, or month at the most, you are either incredibly lucky or could really benefit from paying more attention to your decisions.

I began working on *How Life Imitates Chess* almost immediately after I retired from professional chess in 2005. I wanted to share my insights from a life of hard work and peak achievement, to promote the game that had given me so much, and help others make better decisions in any aspect of their lives.

Since then, I have followed my own advice by leaving my comfort zone of chess for new challenges in human rights, business speaking, and advocating about what I call the human–machine relationship, especially artificial intelligence and the intersection of rights and tech innovation. I was forced to leave Russia for Croatia and New York City, where I divide my time.

These new professional perspectives have been joined by new personal ones, as I began a new family almost simultaneously with this book. My wife Daria and our children, Aida and Nickolas, have taught me more about decision-making and cognition than I could fit into ten volumes. Explainability in artificial intelligence is difficult, but its complexity pales in comparison to that of toddlers and teens! However, my family life has confirmed one of this book's principles: what matters most in making good decisions is knowing what really matters most.

New York City
July 2021

INTRODUCTION

The secret of success

As a teenage chess star in the chess-mad Soviet Union I became used to interviews and public speaking at a very young age. Apart from occasional questions about hobbies and girls, these early interviews focused solely on my chess career. Then in 1985 I became world champion at the age of twenty-two, the youngest ever, and from then on the type of questions I received changed dramatically. Instead of wanting to know about games and tournaments, people wanted to know how I had achieved my unprecedented success. How did I come to work so hard? How many moves ahead did I see? What went on in my mind during a game? Did I have a photographic memory? What did I eat? What did I do every night before going to sleep? In short, what were the secrets of my success?

It didn't take long for me to realize that my audiences were disappointed with my answers. I worked hard because my mother taught me to. How many moves ahead I saw depended on the position. During a game I tried to recall my preparation and to calculate variations. My memory was good, but not photographic. I usually ate a heavy lunch of smoked salmon, steak and tonic water before each game. (Sadly, when I hit my late thirties my physical trainer mandated this 'diet' to become a thing of the past.) Every night before going to bed I brushed my teeth. Not exactly inspiring material.

Everyone seemed to be looking for a precise method, a universal recipe they could follow to achieve great results every time. Famous writers are asked about what type of paper and pen they use, as if their tools were responsible for their writing. Such questions of course miss the point that we are all one of a kind, the result of millions of elements and transformations running from

our DNA to this afternoon. We each build our own unique formula for making decisions. Our goal is to make the best of this formula, to identify it, evaluate its performance and find ways to improve it.

This book describes how my own formula developed, both how I viewed the process at the time and now looking back with the benefit of hindsight. Along the way I will look back at the many people who contributed to that development, directly and indirectly. The inspirational games of Alexander Alekhine, my first chess hero, find a place alongside Sir Winston Churchill, whose words and books I still turn to regularly.

From these and other examples I hope you will gain insight into your own development as a decision-maker and into how to encourage further growth. This will require great honesty in your evaluation of yourself and of how well you have fulfilled your potential. There are no quick fixes and this is not a book of tips and tricks. This is a book about self-awareness and challenge, about how to challenge ourselves and others so we can learn how to make the best possible decisions.

The idea for this book came when I realized that instead of coming up with clever answers for the eternal 'What's going on in your head?' questions it would be more interesting for me to actually find out. But the life of a chess professional, with its rigorous calendar of travel, play and preparation, did not allow me much time for philosophical – as opposed to practical – introspection. When I retired from chess in March 2005 I finally gained the time and perspective to look back on my experiences and attempt to share them in a useful way.

This would be a very different book had I completed it before my dramatic career shift from chess to politics. First, I needed time to absorb the lessons my life in chess had taught me. Second, my new experiences are forcing me to look at who I am and what I am capable of. Being passionate about advocating for democracy isn't enough. To build coalitions and organize conferences requires me to apply my strategic vision and other chess skills in entirely new ways. After twenty-five years in a comfort zone of expertise I have to analyse my abilities in order to build and rebuild myself for these new challenges.

A map of the mind

On my sixth birthday I woke up to find the best present I have ever received. Next to my bed was an enormous globe – I had to rub my eyes to make sure it was real! I had always been fascinated by maps and geography, and my favourite childhood stories were those in which my father would recount the voyages of Marco Polo, Columbus and Magellan. It started with my father reading to me from Stefan Zweig's *Conqueror of the Seas: The Story of Magellan*. Now our favourite game became tracing the journeys of these great explorers across the globe.

It wasn't long before I knew the capitals of all the world's countries, their populations, and everything else I could find out. These real-life tales of adventure fascinated me more than any fairy tale could. While we didn't focus on the terrible hardships sea travel involved in the past, I knew it must have taken incredible courage to be the first to make such a journey. These stories fired my own sense of pioneer spirit. I wanted to blaze new trails, even if at that point in my life that meant little more than taking a new route on the walk home. And throughout my chess career I sought out new challenges, looking for things no one had done before.

The time of great explorers and emperors has passed, but there are still a few precious territories to discover. We can explore our own boundaries and the boundaries of our lives. We can also help others do the same, perhaps by giving a child a globe, or the digital age equivalent, for his birthday.

Having a personalized map is essential, and this book can only roughly chart the stages of observation and analysis that go into drawing that map. To exaggerate only slightly, the lowest common denominator is useless. No advantage, no improvement, can be found in what is obvious, or identical, for everyone. We must look higher and dig deeper, move beyond the basic and universal. In theory, anyone can learn to play chess in half an hour and the rules are of course the same for every man, woman and child. When we first step beyond the rules, however, leaving that initial level where we are concerned only with making legal moves, we begin to form the patterns that distinguish us from everyone else who has ever pushed a pawn.

Acquired patterns and the logic to employ them combine with our inherent qualities to create a unique decision-maker. Experience and knowledge are focused through the prism of talent,

which itself can be pushed, pulled and cultivated. This mix is the source of intuition, an absolutely unique tool for each of us. Here we begin to see the influence of individual psychology and our emotional make-up expressed in our decisions – what we call style in a chess player. Chess is an ideal instrument for examining these influences because to excel at the game we are forced to analyse the decisions we make and how we arrived at those decisions. This is what my questioners really needed instead of information about my trivial habits: self-investigation.

We cannot pick and choose which style we would prefer for ourselves. It's not generic software we download and install. We must instead recognize what works best for us and then, through challenge and trial, develop our own method. What am I lacking? What are my strengths? What type of challenges do I tend to avoid and why? The method for success is a secret because it can only be discovered by analysing our own decisions. Better decision-making cannot be taught, but it can be self-taught.

There is what at first appears to be a contradiction in what I have described. We must become conscious of our decision-making processes and with practice they will improve our intuitive – unconscious – performance. This unnatural behaviour is required because as adults we have already formed our patterns, good and bad. To correct the bad and enhance the good we must take an active role in becoming more self-aware.

This book attempts to use anecdotes and analysis to open the doors to that awareness. Part I looks at the fundamental ingredients, the essential abilities and skills that go into making a decision. Strategy, calculation, preparation – we must understand these essentials and see them in ourselves. Part II is the evaluation and analysis phase. What changes are needed and why? Here we see the methods and benefits of our self-investigation. Part III examines the subtle ways we combine all of these things to improve our performance. Psychology and intuition affect every aspect of our decisions and our results. We must develop our ability to see the big picture and deal with, and learn from, crises.

Such decisive moments are turning points – every time we select a fork in the road knowing we won't be able to backtrack. We live for these moments and in turn they define our lives. We learn who we are and what truly matters to us. The 'secret' then is to pursue these challenges instead of avoiding them. This is the only way to discover and to exploit all our gifts. Developing our

own personal blueprint allows us to make better decisions, to have the confidence to trust our instincts, and to know that no matter what the result, we will come out stronger. That, for each of us, is our unique secret of success.

PART I

1
THE LESSON

Personal lessons from the world champion

When I first played for the chess world championship in 1984 I was playing the role of young challenger against a champion who had held the title for almost ten years. I was twenty-one years old and had risen to the top of the chess world with such speed that I couldn't imagine this last hurdle blocking my way. It was therefore quite a shock when I quickly found myself down four losses without a win, only two defeats away from a humiliating rout.

If ever there was a time for a change in strategy, this was it. Instead of giving in to my feelings of desperation, I forced myself to prepare for a long war of attrition. I switched to guerrilla warfare in game after game, reducing risk, waiting for my chance. My opponent, fellow Soviet Anatoly Karpov, fell in with my plan for his own purposes. He wanted to teach the upstart a lesson by scoring a perfect 6–0 score, so he also played cautiously instead of pressing his advantage and going in for the kill.

Karpov was also inspired by the shadow of his predecessor as champion, Bobby Fischer. En route to the title he claimed in 1972, the American had scored two perfect 6–0 wins against world-class opponents, both times without ceding even a draw. Karpov had it in mind to in some measure imitate this legendary feat when he altered his strategy against me. But adding Fischer's ghost to his opposition turned out to be a serious mistake.

An incredible seventeen games followed without a decisive result. These draws weren't without interest, but it appeared my new strategy was working. The match dragged on month after month, breaking every record for the duration of a world championship match. My team and I spent so much time thinking about how Karpov played, which strategies he would employ, that I uncannily felt as if I were becoming Karpov.

During the hundreds of hours of play and preparation I also got a very good look at my own play, and at my own mind. Up until that point in my career everything had come easily for me; winning had simply become the natural state of things. Now I had to focus on how I made my own decisions so I could fix whatever was going wrong. It was working, but when I lost game 27 to go down 0–5 it looked as though I wasn't learning fast enough to save the match. One more loss and it would be three long years before I could even hope for another shot at the title.

I stayed in my defensive crouch as the match entered its third month. The change in style had made things much tougher for Karpov. I felt I was getting closer to solving the puzzle while at the same time my opponent was becoming more frustrated and tired.

At last the dam broke. After surviving game 31, when Karpov failed to land a decisive blow, I won game 32 and went on the offensive. Another five weeks of drawn games followed, but the difference was that now I was creating more winning chances than my opponent. Meanwhile, the world began to wonder if the match would ever end. No championship match had ever gone beyond three months and here we were entering the fifth. Karpov looked exhausted and I started to press harder. After coming close to winning game 46 I won game 47 in crushing style. Could there be a miracle? Exactly at that moment the organizers decided the players needed a break and the next game was postponed for several days. Despite this unprecedented decision I also won the next game. Suddenly it was 3–5 and all the momentum was on my side.

Then, in a bizarre twist, on 15 February 1985, in Moscow, the president of the international chess federation (FIDE), Florencio Campomanes, responding to pressure from the Soviet sport authorities, called a press conference to declare that the match was cancelled. After five months, forty-eight games, and thousands of hours of play and study, the match was over without a winner. We would have to return six months later to do battle again, and next time there would be a limit of twenty-four games. Karpov was removed from immediate danger and could be content that he would hold on to his title a while longer. The official press release stated that Karpov 'accepted' the decision and Kasparov 'abided' it. A curious but accurate semantic distinction. (The Hotel Sport, where the infamous press conference took place, has since been demolished. Its totalitarian spirit, however, lives on in my memory and, increasingly, in Moscow itself.)

Along with this bitter insight into Soviet and chess politics, I had learned a huge amount during the match. The world champion had been my personal trainer for five gruelling months. Not only had I learnt the way he played, I was now deeply in touch with my own thought processes. I was increasingly able to identify my mistakes and why I made them and had learned how best to avoid them, how to improve the decision-making process itself. This was my first real experience at questioning myself instead of relying on my instincts.

When the second match got under way in Moscow I didn't have to wait months for my first win; I won the very first game. The match was still a very tough fight – I trailed for most of the early stages – but this time I wasn't the same innocent twenty-one-year-old. I had patched the holes Karpov had exploited so effectively at the start of the first match. Now a savvy veteran at twenty-two, I became world champion and went on to hold the title for fifteen years. When I retired in 2005 I was still the highest-rated player in the world, but for a chess player forty-one is old for remaining at the summit, when many of my opponents were in their teens.

Becoming aware of the process

It wouldn't have been possible for me to stay at the top for so long without the education Karpov gave me about my own game and my own weaknesses. Not just revealing to me the weaknesses, but the importance of finding them for myself. I didn't fully realize it at the time, but the notorious 'Marathon Match' showed me the key to success. It's not enough to be talented. It's not enough to work hard and to study late into the night. You must also become intimately aware of the methods you use to reach your decisions.

Self-awareness is essential to being able to combine your knowledge, experience and talent to reach your peak performance. Few people ever take the opportunity to perform this sort of analysis. Every decision stems from an internal process, whether at the chessboard, in the White House or the boardroom or at the kitchen table. The subject matter of those decisions will be different, but the process can be very similar.

With chess having been the focus of my life from such an early age it is no wonder that I tend to see the rest of the world in

chess terms. I find that the game is usually accorded either too much or too little respect by those looking in on its sixty-four-square world from the outside. It is neither a trivial pursuit nor an exercise to be left only to geniuses and supercomputers. In order for us better to grasp our principal themes the next chapter will first take a quick look at some of the concepts and misconceptions of the 'Royal Game'.