

BEN JOHNSON



# PERPETUAL CHESS IMPROVEMENT

PRACTICAL CHESS ADVICE FROM  
WORLD-CLASS PLAYERS AND DEDICATED  
AMATEURS *Foreword by GM Ben Finegold*

NEW  IN CHESS

# **Perpetual Chess Improvement**

**Ben Johnson**

# **Perpetual Chess Improvement**

**Practical Chess Advice from World-Class Players and  
Dedicated Amateurs**

**New In Chess 2023**

© 2023 New In Chess  
Published by New In Chess, Alkmaar, The Netherlands  
[www.newinchess.com](http://www.newinchess.com)

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission from the publisher.

Every effort has been made to trace copyright holders and to obtain their permission for the use of copyright material. The publisher apologizes for any errors or omissions in the above list and would be grateful if notified of any corrections that should be incorporated in future reprints or editions of this book.

Cover design: rouwhorst + van roon  
Supervision: Peter Boel  
Editing, typesetting: Jan van de Mortel  
Proofreading: Mariska de Mie  
Production: Sandra Keetman  
Photo credits: Archive Ben Johnson, New In Chess Archives  
Illustrations: Alan de Geus, Cees Andriessen (pages 55, 109 and 169)

Have you found any errors in this book?

Please send your remarks to [editors@newinchess.com](mailto:editors@newinchess.com). We will collect all relevant corrections on the Errata page of our website [www.newinchess.com](http://www.newinchess.com) and implement them in a possible next edition.

ISBN: 978-90-833365-4-1

# Contents

Foreword by Ben Finegold

Preface

## **Part I            The four pillars of chess improvement**

**Chapter 1** Tournament games and their substitutes

**Chapter 2** Game analysis

**Chapter 3** Calculation and pattern recognition

**Chapter 4** Coaches, chess friends and mentors

## **Part II            Other aspects of chess you may want to work on**

**Chapter 5** Do amateurs overemphasize opening study?

**Chapter 6** Must you know endgames?

**Chapter 7** Mimicking the masters

**Chapter 8** Board visualization and blindfold chess

**Chapter 9** How to approach speed chess

**Chapter 10** Tactics redux

## **Part III           Working on your game away from the board**

**Chapter 11** Status and titles

**Chapter 12** Chess checklists

**Chapter 13** Habits and identity

**Chapter 14** Plateaus

**Chapter 15** Deliberate practice and chess study

**Chapter 16** Over-the-board tournament routines

**Chapter 17** Playing against children

**Chapter 18** Rest, fitness and mindfulness

## **Part IV            Tools of improvement**

**Chapter 19** Chess books

**Chapter 20** How to use the chess sites

**Chapter 21** Chessbase and Lichess studies

**Chapter 22** Extracting lessons from Stockfish and Leela

**Chapter 23** Optimizing Chessable

**Chapter 24** Chess YouTube

## **Part V            Final thoughts on incorporating chess study into your life**

**Chapter 25** Quantity vs quality

**Chapter 26** Parting advice and reminders

**Chapter 27** Games

Index of names

Explanation of symbols

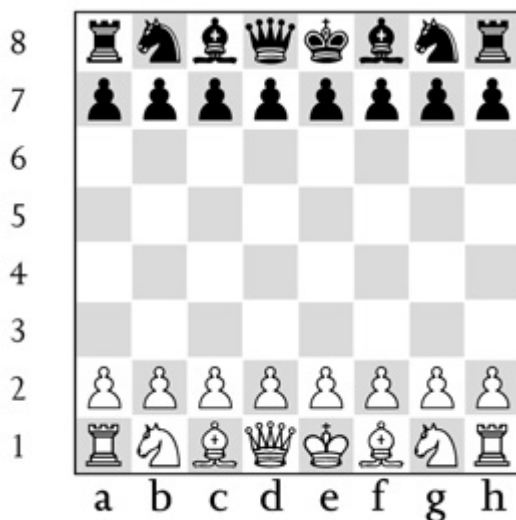
Acknowledgements

Bibliography

About the author

# Explanation of symbols

The chessboard with its coordinates:



□ White to move

■ Black to move

King

Queen

Rook

Bishop

Knight

± White stands slightly better

∓ Black stands slightly better

± White stands better

∓ Black stands better

+− White has a decisive advantage

−+ Black has a decisive advantage

= balanced position

! good move

!! excellent move

? bad move

?? blunder

!? interesting move

?! dubious move

# mate

ch championship

ct candidates tournament

tt team tournament

ol olympiad

m match

# Foreword by Ben Finegold

Ben Johnson is a master of getting as much information as possible from his guests on the *Perpetual Chess Podcast*. The journey to chess improvement never ends, and Ben has spoken to so many over the years in his quest to find answers.

When I was teaching private lessons, I actually encouraged my students, if they could afford it, to seek advice from other chess coaches as well. One point of view isn't going to get you to the holy chess grail, but sometimes even one comment from a coach can stick out in your mind and let loose some epiphany that will allow you to improve at a faster rate.

I never tried to force my students to play openings I liked, but instead to find positions that speak to them and encourage them to try new things. Ben asks all his guests many questions about chess improvement, so, as a whole, if you listen to *The Perpetual Chess Podcast*, you can see the ideas of a whole bunch of chess aficionados, including GMs, IMs, authors, chess coaches, and chess historians, as well as adult improvers, who share their journey with Ben.

The main ideas I try to endear to my students are the following:

- 1) No matter the time control, use about 80% of your time;
- 2) Always figure out what the opponent's last move does to the position;
- 3) Look for loose pieces, especially on the fourth and fifth ranks;
- 4) Never be intimidated – never offer or accept a draw.

Some of my students followed those rules, but most broke them often!

This book should lead the reader to a bevy of new ideas and thoughts about the challenges and rewards of chess improvement. Chess is a lifelong passion, and improvement is always possible. One just needs to work, work, work, and the results will follow.

*Ben Finegold*

*Atlanta, GA*

*July 1, 2023*

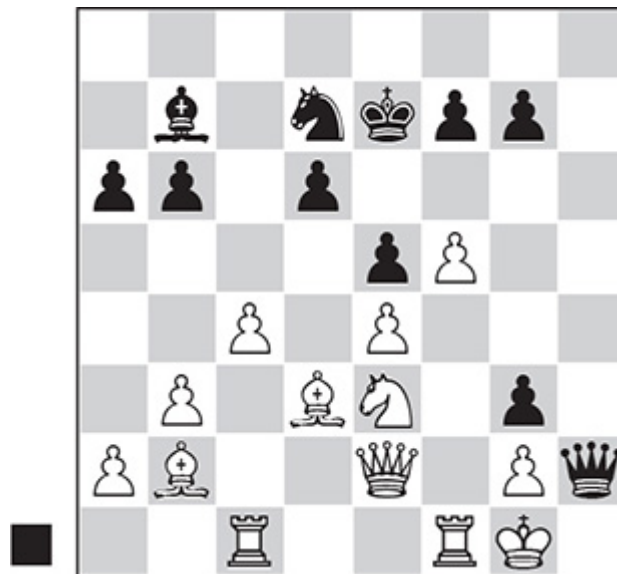
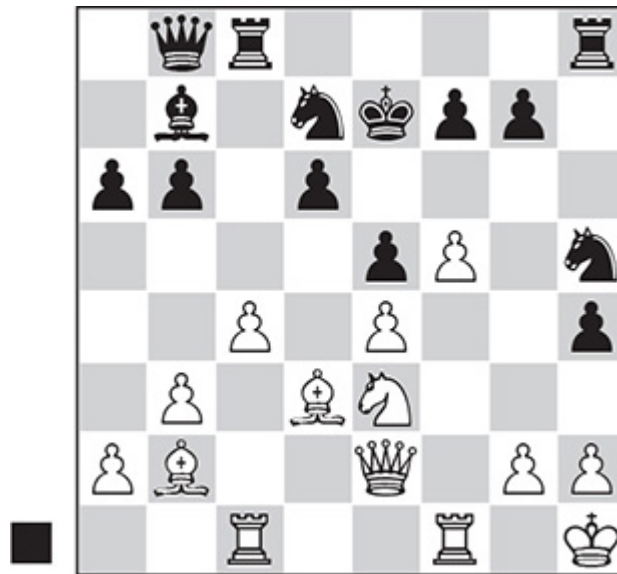
# Preface

## **The incidental origins of the ‘Adult Improver Series’**

‘Three years ago, when my rating dropped dangerously close to below 2100, I decided to do something about it.’ So began a Chess Reddit post that altered the course of the *Perpetual Chess Podcast* and, in a sense, my life.

Those words were written by CM Andrzej Krzywda, a then 38-year-old husband, dad, chess lover, and computer programmer who lives in Poland with his wife and kids. In that post, Andrzej described reaching a point of extreme frustration at his lack of chess improvement. Andrzej now realized that if he wanted different results, he needed to get serious about chess study. I relate to this feeling, and I suspect that many of you do as well.

Andrzej took drastic action. He ramped up his work with his coach and developed a consistent fitness routine despite disliking exercise. Shortly thereafter, Andrzej achieved a 2579 performance rating in a tournament and gained over a hundred FIDE points in mere months!



Banasik-Krzywda, Zlota Wieza 2018

After getting serious about his chess study and doing regimented calculation training, Andrzej Krzywda had some great tournament results. In this position (left diagram), he was prepared to sacrifice a knight and two rooks for a classic checkmate, but his opponent resigned after **19... ♖g3+!!**. Play could have continued with **20. hxg3 hxg3+ 21. ♔g1 ♜h1+ 22. ♔xh1 ♜h8+ 23. ♔g1 ♜h1+ 24. ♔xh1 ♜h8+ 25. ♔g1 ♜h2#** (right diagram).

In 2017, at the time I saw Andrzej's post, the *Perpetual Chess Podcast* had been around for about a year and was starting to find an audience of hard-core chess fans. At the time, I primarily interviewed titled players, authors, and content creators, and it had not occurred to me to feature the stories of amateurs. Nonetheless, when I saw what Andrzej had achieved, I felt I had to talk to him. When I emailed Andrzej, it turned out he was a regular listener to the podcast. His first message to me said, 'It was my dream to be a *Perpetual* guest one day, but I thought it would happen three years from now at the earliest.' Because my listeners were primarily adults, and since this interview would be less about 'chess culture' and more about tips for chess improvement, I decided to name this nascent series the *Adult Improver Series*.

To be honest, even though I loved Andrzej's story, when I reached out to interview him I was unsure how much listeners would enjoy hearing the interview compared to the more typical interviews with Super GMs. But listeners loved Andrzej's story. The *Adult Improver Series* was a hit! It is not shocking in hindsight, but it turned out that amateur chess players found other non-professionals more relatable than Super GMs. Chess can be a lonely pursuit at times, and listeners loved to hear the stories of their kindred spirits with helpful advice to share.

Furthermore, raising your rating as a working adult can be challenging, so listeners enjoyed hearing from people who showed that chess improvement as a working adult was possible. And as the *Adult Improver Series* continued, I eventually found out that while an 1800-rated dad who gained two hundred rating points in a year may not be able to beat a 2700 Super GM at chess, more people may listen to his interview!

### **Bringing it forward**

These days, the *Adult Improver* episodes have become among the most popular episodes of *Perpetual Chess*, and for better or worse, the term 'adult improver' has become a part of the chess lexicon. While I was initially somewhat reluctant to discuss chess improvement in almost every weekly episode, I have come to

appreciate the wide variety of approaches people take to improve their chess skills. As I type this, in May 2023, I have conducted forty-one *Adult Improver* interviews with people with a wide range of chess backgrounds. My guests included a fast-improving young woman who recently discovered chess via the hit show *The Queen's Gambit*, as well as a grandmaster who spent more than a decade chasing chess's highest title while working full time.

Speaking of grandmasters, in addition to the *Adult Improver Series*, I have also picked the brains of some of the chess world's best players and most accomplished trainers about improving at this often fascinating and confounding game. If we take Malcolm Gladwell and K. Anders Ericsson's famed '10,000-hour rule' and multiply it over the a hundred plus people I have interviewed (some of them multiple times), we are potentially drawing on more than one million hours of collective chess experience! So much great advice has been shared on *Perpetual Chess*, that the sheer volume can be overwhelming.

And let's be real; my guests don't always agree on best practice methods. NM Vinesh Ravuri reached 2200 while barely studying openings. On the other hand, acclaimed author and IM Willy Hendriks argues convincingly that studying openings is actually underrated for club players! Where does that leave you, the reader? Should you study openings or not? Debates such as this permeate the chess discourse, and we will share multiple views on them throughout the book while also endeavoring to land on some shared truths. In addition to insights shared by dedicated amateurs, throughout the book, you will find advice shared by YouTube presenters like IM Levy Rozman, elite players like GM Judit Polgar, and world-class trainers like GM Jacob Aagaard.

## **My own chess story**

I want to be clear before we take the journey through this book together: I am not a super-improver. In fact, when I launched *Perpetual Chess*, I had nearly given up on my own chess improvement. I loved (and continue to love) chess, but my original goal for the podcast was to hear some fun stories and learn more

about the personalities behind the famous chess moves. Podcasts are an excellent medium for connecting people, and I felt that they would be a good format to share some of chess's vast folklore.

And I am proud to say that the podcast has succeeded in this regard. For example, it has been a privilege to hear first-hand reports from those who attended the 'Match of the Century' between Bobby Fischer and Boris Spassky in 1972. Future grandmaster and World Championship Candidate GM Johann Hjartarson described what it was like to attend the match as a nine-year-old boy who was starting to gain interest in chess. He grew up in Reykjavik, Iceland, which saw an explosion in the popularity of chess after the city hosted the match. Dr. Frank Brady, the renowned Fischer biographer, attended the match as a reporter and excitedly told me (Episode 202):

*The place was incredible. There were hundreds of journalists and reporters. There were so many [press] conferences and interviews; it was like being in Lisbon during World War II.*

Some of my favorite stories on the podcast have been tales of emigration. With its global popularity, chess can be a vehicle to start a new life, especially for those who fled Communist regimes. GM Vlastimil Hort, a world-class player at his peak, memorably recounted escaping Czechoslovakia and gaining entry into Germany in 1985 (en route back from the 1985 Tunis Interzonal tournament) by inserting a \$200 bribe into his passport before he handed it to a border agent. GM Alex Yermolinsky and GM Gregory Kaidanov also each told memorable tales of moving to the U.S. and relying on chess players to make connections, get acclimatized, and eventually form permanent homes here. I wanted to share these types of stories when I started *Perpetual Chess*, and they are still among my favorites. But it is also fun to get chess improvement tips from so many legends, and it fascinates me how many different perspectives on chess improvement one can hear from pros and amateurs alike.

Bringing it back to my own game, the *Perpetual Chess* community has inspired me to resume working on my own chess. I do a little bit of chess every day, work with a coach, and in total I spend five to seven hours per week working to improve my own game. For a

working dad with many interests outside of chess, this feels like a big commitment, so I am constantly amazed at the many chess enthusiasts putting in significantly more hours than I do. I think it's important to have reasonable goals, and mine remain fairly modest, but I enjoy keeping chess improvement as a part of my daily routine.

And for every Andrzej Krzywdą, there are ten folks like me. We are chess amateurs who work hard but struggle to improve. In fact, Andrzej himself has periodically struggled to maintain the regimen he showcased around the time of our interview, and at times family and work have taken priority for him again. This book aims to instruct and inspire, but the fact of the matter is that reading it won't automatically boost your rating. Hard work does not guarantee rating gains in today's competitive chess climate. 'The truth hurts,' as GM Ben Finegold likes to say.

Since I do not consider myself a chess improvement exemplar, I look at my role in this book as a conduit to convey the best advice shared on the podcast. Consider me a tour guide who can take you to the star attractions, such as sharing what former World Champion GM Viswanathan Anand said about getting nervous during tournament games. But I also want to take you to the dark alleys of chess improvement discourse and give an unfiltered perspective on the challenges of making progress. Trees do not grow to the sky, and sooner or later all of our ratings will peak. Sometimes they will do so despite our studying chess for hours a day. And, of course, we are all busy. We've got jobs, kids, bills, relationships, and many things to prioritize over chess.

But luckily, there is so much to love about chess besides chess improvement. The game's 1600+ year history bridges generations, continents, and conflicts. The feeling of seeing a beautiful, unexpected move or tactical motif cannot be measured by rating. My wife, kids, and dog don't care what my rating is, but it helps my mental health to have a hobby that I love and that I know I will enjoy playing into my fast-approaching golden years.

Over the six-plus years of doing *Perpetual Chess*, I have been privileged to speak to legendary players, trainers, and chess authors

alike. It's about time someone compiled all of the great advice from the podcast! Of course, the improvement tips alone won't make you a better player, but if you can put into practice all of the advice in this book about competing, reviewing games, studying tactics, openings, and much more, then, to paraphrase Jim Carrey in *Dumb and Dumber*, I am saying you've got a chance!

This book consists mainly of four sections. Part I covers what I call the 'four pillars of chess improvement'. They are: 1) playing serious games, 2) reviewing them, 3) doing tactics, and 4) finding a community. In Part II, I wade into murkier waters and discuss the many other ways you can spend your chess study time. Topics include working on visualization, different philosophies about studying openings, the pros and cons of playing speed chess, and more. Part III is devoted to how to approach the game away from the board. In that section, we discuss goal-setting, principles of deliberate practice, tournament routines, and some of those pesky healthy habits that are hard to maintain. Part IV gives you a quick tour of the major tools for chess improvement. You might be familiar with some of them, but I hope there are some fun stories and helpful recommendations in that section. Feel free to skip around the book and read what grabs you.

Thanks for checking out *Perpetual Chess Improvement*, and I hope you will find it helpful.

*Ben Johnson*  
*Lawrence Township, NJ,*  
*September 2023*

# How to read this book

## How to read the words

Before we get to the main event, I thought it might be helpful to share a few words about how *Perpetual Chess Improvement* is structured, with special attention to how the chess diagrams are presented.

This book is written both for avid listeners of *Perpetual Chess* and for those who have never heard a *Perpetual* word. For longtime listeners, the book is intended to help distill a lot of the advice you have heard and to help you recall a few insights that you may have forgotten.

For those who are not regular listeners of the podcast, I forgive you. In fact, this book may save you a lot of listening because it is intended as a TLDL ('too long didn't listen') summary of some of the best chess improvement advice that has been given on the podcast. Many insights are quoted verbatim from the podcast interviews, but I also relied on independent research and reading at times. And, of course, the many quotes are cleaned up of filler words, and I occasionally altered a word or two in a quote to more clearly express what I believed to be the intent of the speaker.

The book is written as if you will read it cover to cover, although I have heard a rumor that not everyone finishes reading every chess book that they purchase. That's okay. In fact, I encourage you to buy as many unread copies of this book as you like. Failing that, feel free to jump around to the sections of the book that interest you most. Chess, and even chess improvement, is a dazzlingly rich subject. In the course of trying to improve at this silly game, one often learns about topics such as neuroscience, health and mindfulness, and other topics that are even farther afield.

Despite the wide array of subjects that chess improvement touches, you may occasionally find some overlap of topics within

chapters. I try not to outright repeat myself, but you will find mentions of game analysis in the tournament section (in addition to the game analysis section) and mentions of Chessable in the ‘openings’ section, and, of course, in the Chessable section. Apologies for any repetitions, but do know that I aim for brevity in this book. After all, I know you also have other chess books to read!

The book is also written primarily to be consumed as that rare chess book that can be read in bed or even listened to in the car if you have purchased the audiobook. Think of the diagrams as a bonus feature that augment the book. They also can be skimmed through if desired. The primary value of the book is envisioned to come from the stories and lessons shared rather than the chess demonstrated. But I was pleased with the quality of the positions I discovered, as well as those that were shared by players whose stories I discuss.

### **How the diagrams are presented**

The chess positions that are presented throughout the book are largely either related to the material presented or from the games of the guests I am quoting. Sometimes they clearly illustrate a concept that was discussed, but in other cases, they are mainly used to help you associate a story being told with the chess game it references. Rather than presenting the positions as puzzles, I have revealed the many excellent moves on display right away. I considered sharing the puzzles, or the solutions, as separate sections but ultimately decided I did not want to distract the reader too much from the chess improvement advice shared in the book, which I hope provide the primary value. Although the positions in the book are presented as excerpts, one can find the complete games on page 220.

### **A word on rating guidelines**

The two largest chess sites, Chess.com and Lichess.org, use fairly different rating scales, both for playing and within the ‘puzzle ratings’ which are on their own generous scales. In chess discourse, this has led to a fair amount of confusion about which rating system someone is referring to when giving a rating-based recommendation. **When I**

**give a rating guideline in the book, such as ‘Those rated below 1500 should not spend more than 20% of their study time on openings,’ I am referring to the 1500 rating for Chess.com Rapid/US Chess/FIDE before 2024.** I realize that these rating systems are not identical, but they are reasonably close, and no rating guideline that I give in the book is exact in any case.

### **A few words on the recommendations given in this book**

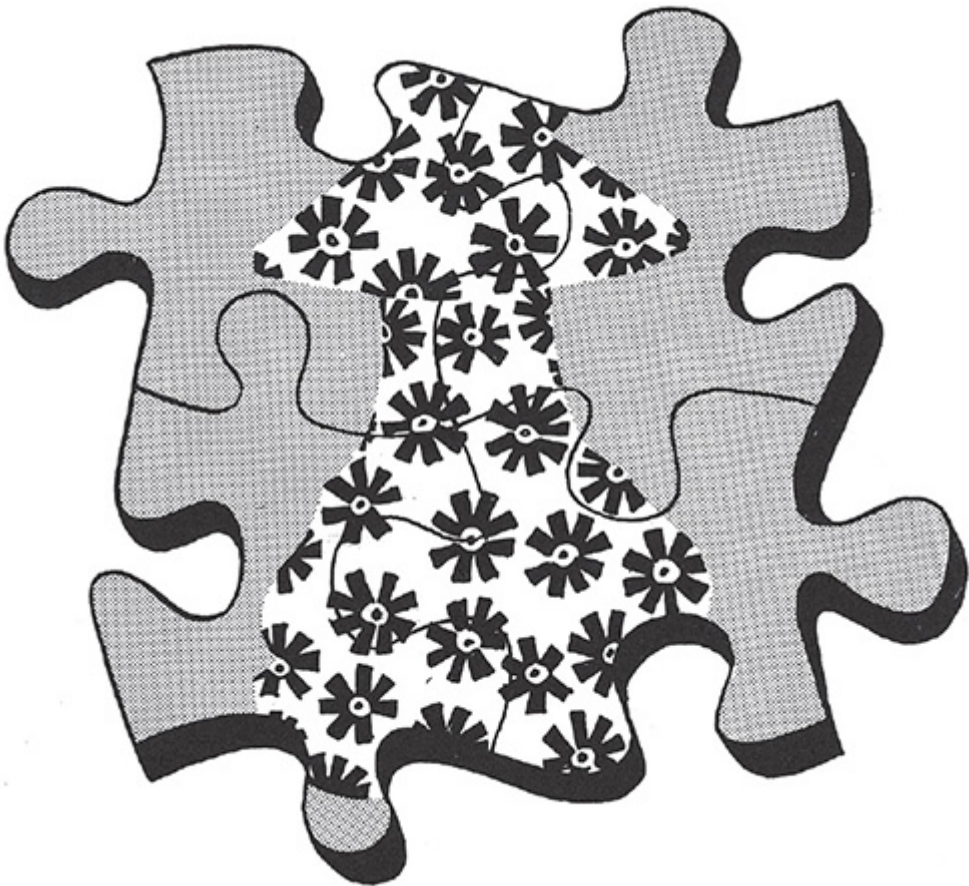
The attentive reader may note that Chessable is a longtime sponsor of *The Perpetual Chess Podcast* and that I recommend some Chessable courses in the course of this book. I also recommend some books produced by my publisher, New in Chess (as well as many books by other publishers). Both of these companies are now owned by Chess.com, a site whose features I also discuss at some points in the book. I am aware that some may see a potential conflict of interest in my giving recommendations, but ultimately I should only be judged on the quality of the recommendations themselves. If I recommend bad books, courses, and website features based on financial interest, I do not expect to have an audience for long. But I acknowledge that conflicts of interest are difficult to avoid entirely in the small chess world, and I leave it to the reader to judge whether I am ‘captured’.

With this preamble nearing its conclusion, I think you are ready to turn this page and read this actual book. As a staunch chess bibliophile myself, I am quite honored that New in Chess considered this worthy of publication and that you (presumably) thought this book might be worthwhile. I hope you will find the insights, the stories, and, of course, the chess valuable. Here it comes!

*Ben Johnson*  
*Lawrence Township, NJ,*  
*September 2023*

**PART I**

# **The four pillars of chess improvement**



# Introduction to Part I

The only thing that enthusiastic amateurs like to do more than work on their chess games is to talk about improving their chess games. As a primary enabler of this talk, I have observed that there is very little chess improvement advice on which nearly everyone agrees.

It can be frustrating for a dedicated amateur to receive conflicting advice, but the reality is that there is still a bit of 'dark art' to chess improvement. Luckily, a few study methods have fairly wide approval amongst the chess cognoscenti. Of course, there can be differences of opinion about specific study methods or the degree of importance of each technique, but I have never interviewed anyone who says that solving tactical puzzles is detrimental to your chess.

In a similar vein, there are a few other shared truths when it comes to chess improvement. If you focus on these four factors in your approach to chess study, you will have a solid foundation. Here they are:

**Chapter 1** – Playing tournament games or, failing that, 'online games with real stakes', as author and blogger FM Nate Solon has written. Games that matter to you help you learn in a way that casual games simply don't.

**Chapter 2** – After the serious games, the real work begins. Figure out what you could have done better by analyzing your games.

**Chapter 3** – The rumors are true! Tactics are good for chess improvement. But it is significantly more complicated than that. When we are working on chess, it is helpful to differentiate between calculation and pattern recognition and to adjust which aspect of tactics we prioritize based on our rating level.

**Chapter 4** – It is vital to have a community to sustain an interest in chess. It can consist of some combinations of coaches, sparring partners, and study buddies. But you simply can't do it alone, even in the online age.

Despite these being the least and possibly the only areas of chess improvement consensus, there is much more to be said about how to approach each improvement method. So let's turn the page and dig in!

# You've got to play! Tournament games and their substitutes

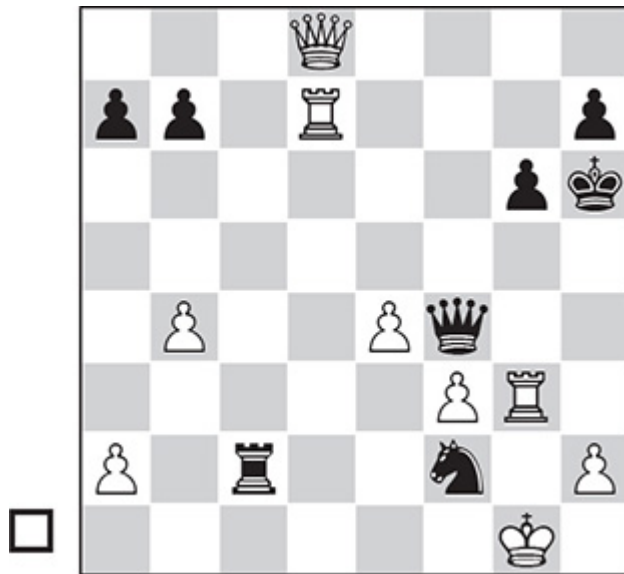
*One can see more over the board than in the quiet of one's study... I am convinced that one cannot become a strong player just by studying books.*

– GM Nikolai Krogius, *Psychology in Chess*

## Get in the arena

In the past six years, I have likely asked more than a hundred chess professionals some variant of the question, 'What is the best way to improve at chess?' Of all the answers I heard, I found that of IM John Donaldson to be among the most incisive. This is no surprise because John has seen chess from every angle as an accomplished player, acclaimed author/chess historian, and frequent captain of the U.S. Olympiad team. John began by simply saying, 'You've got to play.' John is an old-school chess lifer, so by 'play' he did not mean fire up a bullet game on Lichess on your phone. He meant that you must compete in over-the-board tournaments (often referred to as 'OTB') regularly. Here is precisely what Donaldson said:

*You've got to play. If your goal is to be a stronger tournament player, at some point in there, you have to play. And I would say a minimum of about five games a month is about right. That's still about sixty games a year. And that could be one weekend tournament per month, or it could be playing a tournament at your local chess club with one game per week. And that should allow even someone with a busy schedule to get that game in, which I would say should be at least a three- to four-hour playing session.*



Donaldson-Benjamin, Seattle 1986

John Donaldson tells me he played 110 rated games in 1986, and the regular practice appears to have paid tactical dividends. His game against GM Joel Benjamin had a pretty finish with **36. ♖xg6+!!**. Black resigned in view of the following variations: 36... ♔xg6 37. ♕g8+ ♔f6 38. ♕g7+ ♔e6 39. ♕e7#, or 36...hxg6 37. ♗h8+ ♔g5 38. ♖d5+ (winning the queen).

There is immense wisdom in John's advice, and while others are not always as specific about the target number of games, many other top trainers and authors have voiced similar sentiments. There is something ineffable about the effect that tournament chess has on one's brain. Actually, it's effable – the act of traveling, often for hours, to play someone assigned to you in a slow game invites a level of seriousness that is difficult to mimic at home. Hard lessons learned are rarely forgotten. As Peter Brown, Henry Roediger and Mark McDaniel write in *Make it Stick: The Science of Successful Learning*, 'Learning is stronger when it matters, when the abstract is made concrete and personal.' As anyone who has endured a devastating loss can attest, tournaments can feel extremely personal.

If you drove three hours and spent hundreds of dollars to compete in a tournament, you are not likely to forget an opening trap that

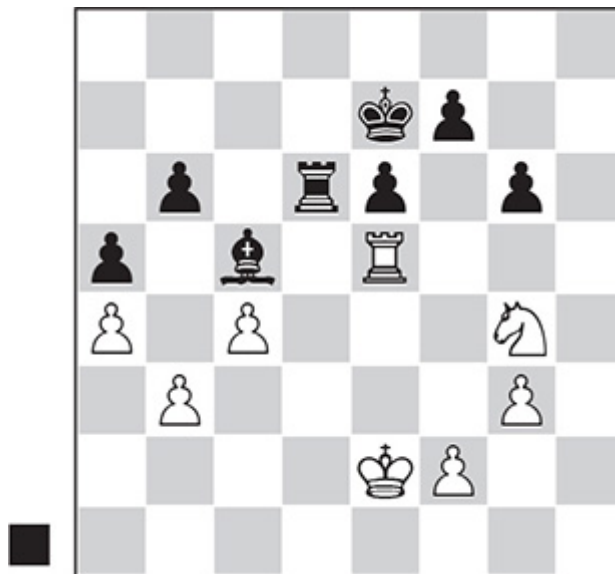
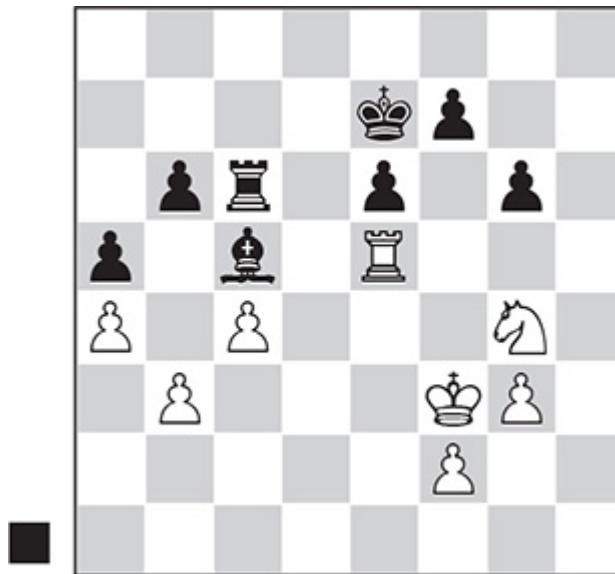
snared you. And, while you may or may not enjoy working on tactics at home, if you've made a personal sacrifice and spent significant money to play in a tournament, you'd better work hard at the board and calculate! Tournaments also offer the opportunity to practice skills which can be challenging to develop away from the board. The skills include learning to manage your time allotment under stressful conditions and sensing and trying to capitalize on your opponent's shifting mood or energy level. Studying chess at home can feel like an academic exercise, but tournament games unquestionably feel like a competition.

While few trainers would argue against Donaldson's fundamental point about the value of competitive chess, the problem, of course, is that competing in tournaments has many challenges, especially for adults. They are expensive and time-consuming, and you will often find yourself competing against fast-improving kids. Furthermore, for those who have only played online, playing on a three-dimensional chess set can be an adjustment. Alex Crompton, a dedicated adult learner and blogger who I interviewed (Episode 256) had such an experience. He wrote, 'In my first OTB tournament, I found that having learned chess entirely on a two-dimensional plane with two-dimensional pieces meant that my tactical fluency was dramatically worse in real life.'

There is also an opportunity cost to playing over the board. When I travel to tournaments, it can mean missing my son's Little League games or my daughter's ballet classes, and it is an added responsibility for my wife to manage the kids and their activities on her own.

But despite any excuses, the fact remains that most of the most successful improvers that I interviewed found a way to compete in tournaments regularly, and nearly all of the titled players I have interviewed have dedicated ample time to tournament chess. Given his famously fast mouse, you might not expect it, but even online bullet wizard and popular Twitch streamer GM Andrew Tang told me (Episode 244), 'Playing over the board is the best form of practice, by far.'

In the realm of the accomplished amateurs I have interviewed for 'The Adult Improver Series', many of the interviewees competed in tournaments regularly. Take JJ Lang, for example. JJ was a Stanford grad student with a paid gig in the chess mecca, New York City, and some free time. So after some years away from competitive chess, he decided it was time to get back into tournaments. In Episode 151, JJ told me, 'Since I was in New York, I was playing two, sometimes three tournaments a week at the Marshall Chess Club.' JJ gained hundreds of points in less than two years to achieve a rating over USCF 2100. He went on to say: 'The opportunity to compete regularly in New York showed me that it's not that adult minds are bad at improving or learning, but just that the reality of being an adult is that you often don't have the mental and financial resources to dedicate to chess that you do that some people do when they're kids.'



Chernin-Lang, New York 2018

Only a few months into a comeback and a relentless tournament schedule had helped JJ Lang go from a USCF rating of 1798 to 2005. In this game, he smoothly beat a National Master to gain even more points. In the left diagram, JJ had an edge in the endgame due to better piece coordination and the weakness of the white b-pawn and capitalized with **40... ♖d6!**, activating the rook. **41. ♔e2?** (right diagram) appears to be a natural way to prevent 41... ♖d3+, but it

allows the cunning **41...f6!** and after the forced **42. ♖e4**, **42...f5** wins a piece. JJ's opponent resigned a handful of moves later.

Andrew Zinn, another accomplished adult improver I interviewed, told a similar story to JJ. He quit chess in his early teens, and resumed when he was at law school in, wait for it... New York City. Andrew had participated in many extracurriculars as a kid and didn't feel like he always 'had agency' in his activities. But now he was ready to pursue chess seriously. And his game blossomed! Andrew brought his USCF rating from the 1500s to nearly 2000 USCF while attending N.Y.U. law school. Andrew said: 'I was playing a lot. I was playing... probably an average of a game per week.' Both Andrew and JJ played the number of games prescribed by Donaldson, a feat that is much more challenging and expensive if you do not live in a chess mecca like New York City. (Of course, while playing OTB chess in New York is not prohibitively expensive, paying the rent is another matter!)

While living in a chess hub like New York can help one compete regularly, others are able to do so in smaller chess communities. For example, Philemon Thomas (Episode 173) highlighted a fourteen-year journey to becoming a USCF master in Albany, NY, not known as a chess hotbed. In addition to his perseverance, Philemon gave a lot of credit to the frequent regular tournaments of one local organizer, Dave Finn. In smaller towns, it often takes a dedicated amateur to facilitate tournaments, and the possibility to compete regularly can make or break your ability to improve.

The counterpoint to the experience of players like these is that we all know adults who find time to play tournaments regularly and do not improve. Age may be a factor, as we will explore later, but there could also be other issues, such as a lax approach to game review, inability to play with full focus due to life/work circumstances, or, in some cases, a lack of talent.

Another important factor to consider in playing tournaments is that playing against stronger competition is vital. In my first interview with popular commentator and Twitch streamer, GM Ben Finegold (Episode 9), he summarized the issue succinctly: '**To me, the two**

**main prescriptions for getting good at chess are: 1) Play people who are better than you, and 2) Analyze your games, either with your opponent, with a chess coach, with your engine, or all three, and see what you need to improve on and play better the next time.** Many people are playing in tournaments where they're not getting enough competition.' Depending on what types of tournaments you can play in, you won't always be able to control the level of competition you face. Still, if possible, it's ideal to ignore tournament prizes and to look to consistently face opponents who are 200-400 points higher rated than you.

Frequent tournament chess is often an accelerant to chess improvement, and, for my money, is the single best way to improve at chess. But the inescapable fact is that sometimes it won't be feasible to compete over the board.

### **What about the online arena?**

I am from a generation that is biased toward in-person tournament chess. Chess improvement aside, some of my fondest chess memories come from tournaments. But in the 2020s, there is infinite opportunity to play online. Online chess offers immense learning opportunities without having to leave the house or spend money. The challenge becomes to make sure that the games feel important and, of course, to review the games with rigor. In his indispensable chess improvement blog, *Zwischenzug*, Data Scientist and FIDE Master Nate Solon made a similar concession to allow for serious online games to supplement tournament games. Nate wrote:

*What really counts is not being there in person or slower time controls in and of themselves, but intensity and focus. The key thing about OTB [over-the-board] tournaments is they allow you to access a level of focus and intensity you can't otherwise.*

*It's similar to the idea of the testing effect in learning research. Studies have shown that tests aren't just good for evaluation; if done properly, they enhance learning as well. It seems that being forced to consolidate and use knowledge can be very good for learning. Some people might be able to get this out of online rapid games, but honestly, for most, OTB is on a different level. If you've never played an OTB tournament, I suggest you try it at least once if only to see what it feels like. You might be surprised at the level of focus you're capable of.*

I strongly agree with Nate's sentiments and echo his recommendation that anyone who has not done so should try tournament chess. Admittedly, some might find the intensity, frenetic schedule, and financial or logistical cost of tournament chess too much to bear, but others will find it exhilarating. There is only one way to draw your own opinion.

If you do decide to eschew OTB chess or to supplement it with serious online play, you can be secure in the knowledge that others have shown significant progress while practicing on their computers. For example, Braden Laughlin (Episode 231) found himself in a unique situation in which some health challenges left him with a lot of time for chess but little ability to compete in tournaments. So Braden learned a ton by watching videos from his favorite content creators and playing online, sometimes spending twelve hours a day on chess. Stories like Braden's show that with enough dedication, one can improve online even without OTB chess's 'test-like' conditions.

Another accomplished improver I interviewed, Michael Franco, also made massive strides primarily by playing online, but Michael found another way to play games that were not tournament games but felt differentiated from a relatively meaningless online game. As he discussed in Episode 247, while a grad student at the University of California –Berkeley, Michael attended weekly chess club gatherings and got to play against stronger players regularly. The social element of playing and then analyzing with the stronger players gave him more incentive to learn from his games than a casual online game might.

Another way to bridge the gap between the seriousness of tournament chess and casual online games is to play in online leagues or arrange slower training games. Lichess offers free online leagues like the '45/45' team league and the individually-based 'Lone Wolf league'. We will discuss these leagues in detail in a separate chapter devoted to the chess websites. In addition, ChessDojo, an online training community, does a great job enabling players to find training partners for slower time control games. The mere act of scheduling a game with a peer can make an online game feel slightly more consequential than a game with a random opponent.

Nate Solon has gone so far as to hire an elite coach and player, GM Le Quang Liem, to play online training games with him. Hiring someone to play a training game can be pretty affordable for lower-rated players, but of course all the better if you find a (free) friendly rival or sparring partner.

Whatever mix of OTB tournament and 'serious online game' play you settle on, playing the games is only half of the battle. From there, your job is to extract maximum instructive value from your games by reviewing them. We will discuss how to do that in the next chapter.

### **In summation**

- Playing (and later reviewing) serious games is the single best way to get better at chess.
- As IM John Donaldson says, ideally, these would be tournament games that last three hours or more, and take place an average of four to five times per month.
- It is tough to replicate the heightened tension of tournament chess, but one can try to substitute online games, particularly if these games feel differentiated and important. Online league games have been decent substitutes for many.
- Once the game is done, the real work of game analysis begins!

## Game analysis: post-mortems then and now

*Anyone who wishes to become an outstanding chess player must aim at perfection in the realm of analysis. – GM Mikhail Botvinnik, One Hundred Selected Games*

### A requiem for post-mortem game analysis

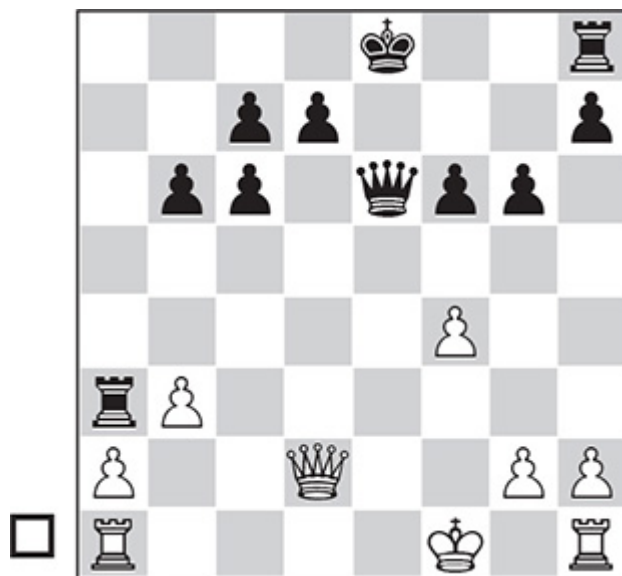
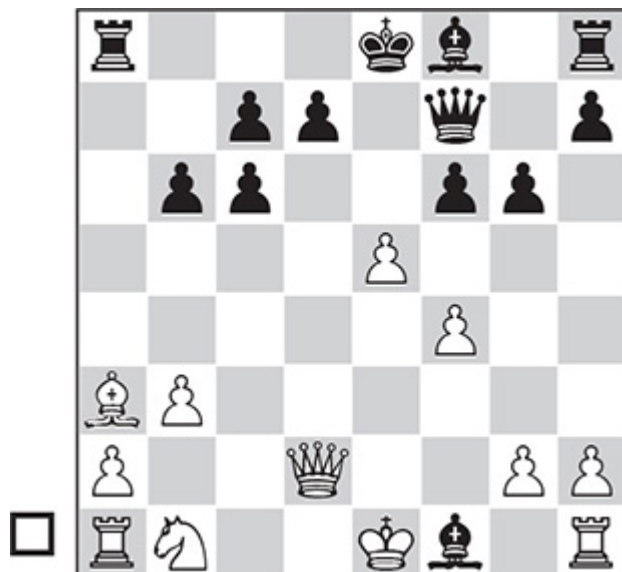
The always amusing Ben Finegold told many memorable stories in his five appearances on *Perpetual Chess*, but my favorite one involves two legends of the game and the tradition of so-called ‘post-mortem’ game analysis. In 1991, Finegold attended a high-level tournament in Tilburg, a mid-sized city in the Netherlands. Garry Kasparov and Anatoly Karpov, the two most prominent legends of the era, were facing off, and as the conclusion of Kasparov’s win appeared on the horizon, Ben devised a plan in order to witness these legendary analytical minds discuss their game once it concluded. Here is what happened next, according to Finegold:

*I decided to go to the ‘skittles room’ [a room at a tournament for game analysis and casual play] where they would likely go to analyze, and to sit next to them. It turned out there were two skittles rooms, so I went to one of them, and I destroyed it. I threw all the pieces on the ground, and I closed the door. Then I went to the other skittles room, where there were only two chess sets set up... and I hid one of the chess sets on the ground and sat next to the other set. Five minutes later, Karpov and Kasparov walked in. They looked around, sat next to me to analyze, and about eighty people followed them in.*

Finegold jokingly called this cunning maneuver his ‘greatest chess accomplishment.’

Of course, Finegold’s maneuver was only possible because even famously bitter rivals like Kasparov and Karpov would predictably do a post-mortem together. In *Mortal Games*, Fred Waitzkin’s chronicle of Kasparov’s reign, Kasparov explained why: ‘Who else can I talk about with these games besides Karpov? I wouldn’t go to a restaurant with him, but Karpov is the (only) man who understands chess at the same level that I do.’ And thus, a young and ambitious

GM (then IM), Ben Finegold knew that this was a once-in-a-lifetime opportunity to see their minds at work, especially in the pre-YouTube age.

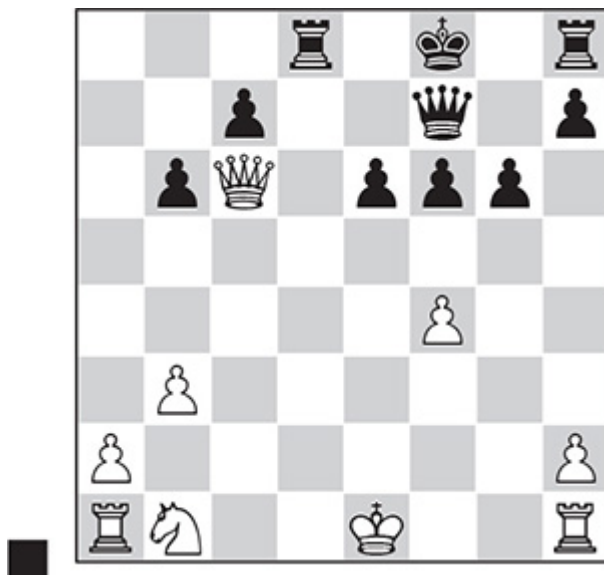


Kasparov-Karpov, Tilburg 1991

The Kasparov-Karpov game that Ben Finegold speaks of began with a main line in the Scotch Opening (left diagram). Other than a dazzling post-mortem, what Ben Finegold remembers best about this game is the originality and accuracy of Kasparov's **15.e6!**. The depth

of Kasparov's genius is beyond the ability of a lowly chess podcaster to explain in full, but suffice to say that 32 years later 15.e6 is still the top choice of engines. The main idea is that if 15... ♖xe6+ 16. ♔xf1 ♕xa3 17. ♗xa3 Black can't play 17... ♖xa3 (right diagram) due to 18. ♖e1 (winning the queen), and if Black instead plays 17...0-0 White can play 18. ♗c2 and keep an extra piece.

In the game, Karpov instead went for 15...dxe6 and after 16. ♗xf8 ♖d8 17. ♖b2 ♗xg2 18. ♖xg2 ♕xf8 19. ♖xc6



Kasparov-Karpov, Tilburg 1991

... Kasparov went on to consolidate his tenuous material advantage in clinical fashion.

On the topic of post-mortems of yore, Swedish GM Ulf Andersson also shared some fond memories in our 2022 conversation. In 1971, a nineteen-year-old Ulf made a splash by beating the legendary GM Viktor Korchnoi in the landmark tournament in Wijk aan Zee. Ulf described doing a lengthy post-mortem analysis with Korchnoi after the game. The great Viktor was the number three player in the world at the time, and Ulf reported that the former World Champion Tigran Petrosian even joined the post-game analysis! Korchnoi was known to be prickly after losses, but in this case, Ulf said Korchnoi was

pleasant and ‘very objective’ in his post-mortem analysis of a tough loss. ‘I miss those days,’ Ulf said wistfully (Episode 300).

Ulf has plenty of company in lamenting the decline of this tradition – post-mortems showcase time-honored traditions of sportsmanship and the search for truth in a chess position. These days, not only do the world elites often cut short their post-game analyses (although you will often see them briefly discuss some key moments at the board immediately after a game concludes), but amateur weekend warriors must also often make concessions to busy schedules. Many tournaments have multiple games per day, and we must often choose between post-mortems and essentials like eating and sleeping. Plus, let’s face it, whether rightly or wrongly, when we know we can access 3500-level engines for insights, there is not as much urgency to exchange chess thoughts with another human. In my own tournaments, if I don’t have time to look at a game with an opponent immediately afterward, I will occasionally exchange contact information after a game so that we can discuss the game via Zoom after the tournament.

### **To engine or not to engine?**

Many guests have lamented the demise of the post-mortem with an opponent, but the tradition of analyzing one’s games is alive and well. In fact, extracting lessons from one’s own games is another of the rare, ‘non-controversial’ chess improvement tips. All trainers agree that it’s important!

What is less clear is the manner in which one should go about the game review. Old school purists, like GM Jesse Kraai of the ChessDojo training cohort, suggested that one should leave the engine off and take notes about their games with an actual notebook. Jesse, somewhat famously, likes to write many pages of thoughts per tournament game, only stopping when the proverbial wrist is bleeding from so much writing.

Jesse had made some great YouTube videos for his chess education cohort on the topic, and here is what he told me in our second *Perpetual Chess* interview (Episode 175):

*What I knew from an early age, but found very difficult to put into practice, was that I had to get a notebook, and I had to really write out my thoughts and the variations that were happening in a given game, and I had to do it with some depth. If you just play blitz or you do the same old things, you are just going to spin around the same circles, and your ideas are going to become more and more stale, and you're going to make the same mistakes. And it's only when you realize the dynamic sources within your own positions that you're going to have to rethink and renew your sense of the depth and beauty of the game... that's when you really spend some work on your own thought process... my take is fairly similar to GM Alex Yermolinsky's book, The Road to Chess Improvement, which has an old-school Russian sense of reviewing your games as the core of chess improvement.*

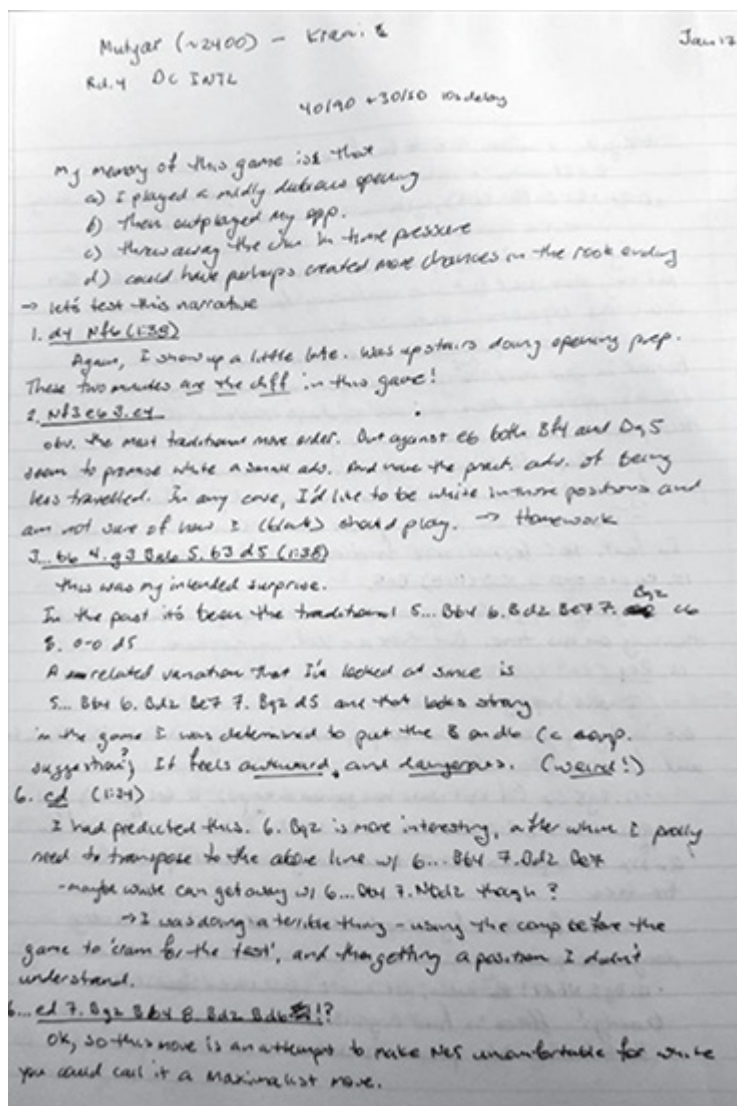
I love the purity of Jesse's approach, but Jesse himself would concede that his experience as a 51-year-old Philosophy Ph.D. may give him an extra analog outlook on chess improvement. And many trainers disagree about Jesse's insistence on eschewing the engine in initial game analysis.

On the 'new school' side of this debate, we have my old friend, IM Greg Shahade. Although his faux rival, commentator IM Lawrence Trent, might joke that Greg's crowning achievement is being two-time US Women's Champion WGM Jennifer Shahade's brother, Greg is actually an incredibly accomplished chess player, trainer, and organizer. Greg was a many-time scholastic champion and is the founder of the US Chess School and co-founder of the Pro Chess League. Greg is retired from OTB chess but remains a fierce speed chess player.

Greg says that when it comes to the analysis of your games, no matter what modern top players say that one *should* do, they *actually* go straight to the engine after a game if only to adjudicate the quality of their choices in critical moments. And with so many top young talents ascending quickly, Greg asked me, 'Do you really think those kids are looking at their games without an engine?' A few may, but with apologies to Jesse Kraai, I find it hard to picture top young talents like GM Alireza Firouzja or GM Arjun Erigaisi writing five pages of notes per game!

As with so many chess improvement debates, Jesse's advice of keeping analog notes is clearly good for your chess, but it comes down to evaluating the opportunity cost of doing so when there are so many other ways to study. However, it was an effective strategy

for grandmasters Jesse Kraai and Alex Yermolinsky, so one cannot say it doesn't work. Jesse himself recently clarified to me that he no longer insists on making hand-written notes, but he still advocates avoiding the engine on your first review of your game.



One page of Jesse Kraai's reams of handwritten chess game reviews. (source: Chessbase India)

But one can just as easily point out that many digital wunderkinds today do everything, including chess, primarily on computers. So I conclude that there is no 'correct answer' to whether and how much one uses an engine to do post-mortems. As IM Willy Hendriks wrote

in his excellent and provocative book, *Move First, Think Later*, ‘Struggling with positions and then finding out what the truth was seems to be an effective way of learning.’ Echoing this point, highlighting your initial struggle with the position may be more important than a second struggle in subsequent analysis. It is more important that you extract and retain the correct lessons from your games than how the lessons were extracted.

In our 2019 interview, GM Mauricio Flores Ríos, author of the modern classic book *Chess Structures*, described a game review process in which he used an engine but also borrowed elements of Jesse Kraai’s painstaking analog analysis. (Episode 109): ‘I analyzed my games with an engine, move-by-move. Some people only look at what they think are the three most important moves or their blunders. I analyze my games with an engine, and I check every single technical truth on the computer.’ Again, as a grandmaster, Flores Ríos may have used a more rigorous approach than is practical for some of us, but the principle of seeking to extract the most lessons from our faulty thought processes is one that is almost universally agreed upon. So the question becomes, how best to do that?

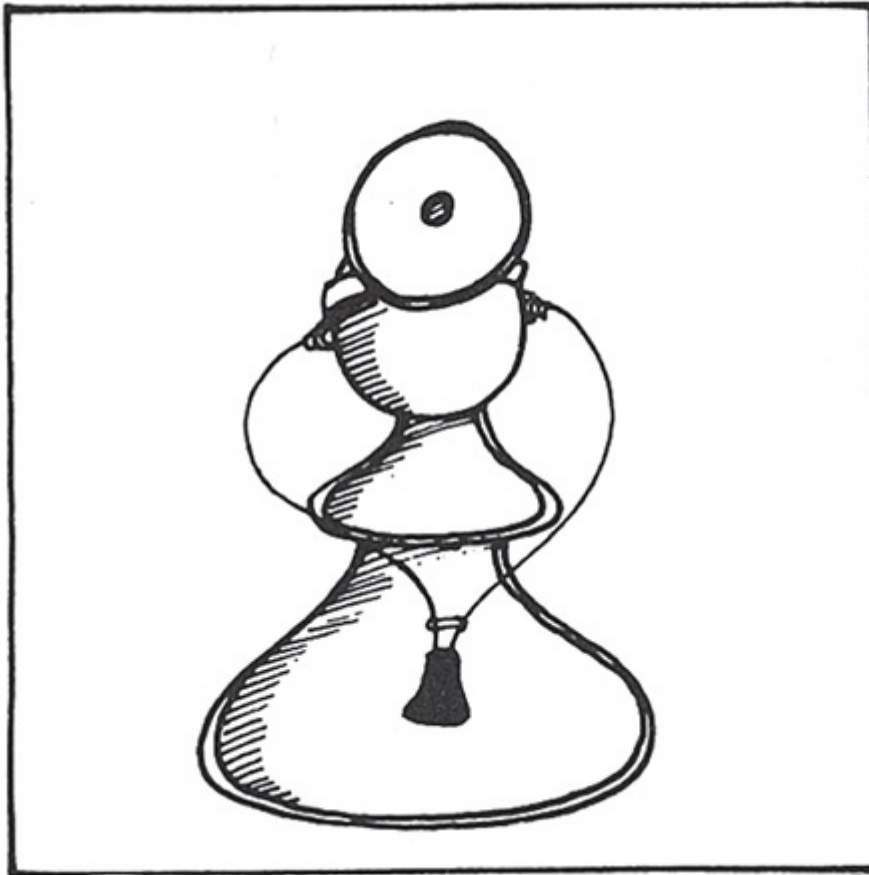
### **How to analyze your games – the micro**

I will describe below a step-by-step, ‘perfect world’ approach to individual game analysis, with the caveat that you may need to make concessions, due to time constraints, regarding how to actually analyze your games.

- 1) **‘The brain dump’** – GM Noël Studer, who is the 2019 Swiss National Champion and the author of an insightful chess improvement blog, has suggested that even if you don’t have time to review your game properly on the day of a game, you should make note of as many thoughts as you recall about your thought process during the game. Noël points out that chess is a psychological battle, so you should write down your feelings during the game in addition to key variations. When did you start

to feel that the game was getting away from you? Did it impact your play? The purpose of this routine is not yet to analyze the game but to have it there to refer to later. Noël suggests that this routine can be completed in as little as fifteen minutes per game, and writes, 'If you do that only some days (later) after a game, I promise you it will be nearly impossible to remember your thought process or exact calculation during the game.' As someone who doesn't always remember my thought processes during a game if I return to it later, I have found this to be a very helpful tip.

**2) The analog analysis** – Once the tournament is over, one ideally would first review the game without an engine. Make note of the first opening move you didn't know, moments where you didn't feel like you had a plan, ideas of your opponents that you missed, your time management, and, most importantly, of the moments in which you think the trend and/or evaluation of the game changed markedly. As John Donaldson said, you may realize that you 'saw some ghosts' during this process. Did you fear a threat that wasn't there? Why do you think this happened?



**3) The engine analysis** – Now we get to find out all of the tactics we missed! Rather than merely to self-flagellate, you should consider why you missed them. Were you focusing on your attack at the expense of your opponent? Were you too focused on one plan? Did you forget to look at forcing moves? If you missed tactics, it is important to hone in on the appropriate tactics for your level. The engine will point out all kinds of fanciful lines, but if you are a 1200 and missed a mate in 12, I would not lose sleep.

**4) Look at the game with a stronger player** – If you have a regular coach, they will be eager to see your games and give feedback. They may help uncover faulty thinking processes and help you avoid them in the future. John Donaldson pointed out that if you have done your own analysis prior to the discussion,

you can come to the teacher/mentor with specific questions you could not answer independently.

**5) Compile the lessons** – When you put it all together, what was the single biggest factor that contributed to the result you got? Note that if you blundered because you were low on time, the cause might have been time management rather than tactics. If you made what you consider to be a bad blunder, think about what may have caused it. Tunnel vision (ignoring your opponent's threats)? Carelessness? Did you forget that a recent move by your opponent had changed the character of the position? Make a note of the type of blunder because we will be looking for patterns in your play. In fact, we will discuss that now...

### **How to analyze your games – the macro**

Aside from the 'micro' picture of analyzing a single game, there are also vital macro observations to draw from a 'meta'-analysis of one's games. Here are some questions on which one could reflect.

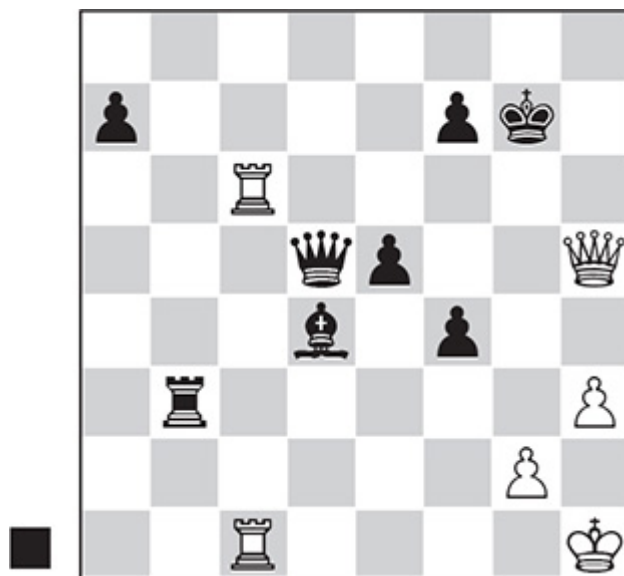
Whenever possible, one should strive for quantitative rather than qualitative judgments (i.e. to have a concrete benchmark for evaluating your position out of the opening, your time management, etc). Every twenty-five tournament/serious games or so, one should compile all of the games played and ask questions such as these:

- a) Do I usually come out of the opening okay with White?
- b) Do I usually come out of the opening okay with Black?
- c) Are there certain openings after which I feel particularly lost or perform particularly poorly? One observation I have made from my own games is that I often feel as if I don't know the opening as well as I should, but if I look at an average evaluation of my positions after 15 moves, I am doing fine. This thought pattern might still suggest that I could use some work on learning opening plans in order to gain confidence and manage my time better.
- d) Do I manage my time well? (Am I usually ahead or behind on the clock? Am I pacing myself according to the time control?)

e) Am I overlooking tactics I should see?

f) Am I playing endgames well?

Your games will give you many ideas for areas of the game on which you need to work but try to key in on the biggest contributors to your results. One might notice that these sorts of questions are often tackled by online algorithms like Aimchess.com or 'Lichess insights', so feeding the games to one of these tools can also be helpful in drawing 'big picture' conclusions or in confirming or debunking your own suspicions. Michael Franco told a memorable story where after extensive game review, he was able to break through a rating plateau when he and his chess mentor, IM Andras Toth, realized that he was 'playing scared' and that he needed to push himself to play a more aggressive repertoire.



Bondalapati-Franco, Chicago 2023

At Toth's urging, Michael Franco switched to the Sicilian and, in 2023, he won a nice game culminating in **42... ♟xc6!!**. If 43. ♜xc6, the game would have concluded 43... ♜b1+ 44. ♚h2 ♞g1+ 45. ♚h2 ♞f2+ 46. ♚h2 ♞g3#.

Although analyzing a tough loss can be an agonizing experience, I have observed that many chess players, including myself, enjoy doing 'big picture' analyses of losses. Discovering new areas to work on or previously hidden strengths and weaknesses from the analysis of our games can be invigorating, and enjoyment of the process of constantly working to improve ourselves is often one of the reasons we love chess in the first place.

### **In summation**

- Nearly all trainers agree that analyzing your own serious games is a cornerstone of chess improvement.
- Unfortunately, 'post-mortems' with an opponent are becoming a lost art, but it is just as vital as ever to review our serious games in painstaking detail.
- Opinions differ on how thorough the review must be and on what role an engine should play. Ideally, one should review first without an engine and later with an engine.
- Try to identify recurring thought patterns and mistake types rather than only focusing on individual games.
- Your games will point you toward the areas of your game that need attention most urgently.

## Calculation and pattern recognition: the two tentacles of tactics

*Everybody wants to be a bodybuilder, but nobody wants to lift no heavy-ass weights.* – Ronnie Coleman, professional bodybuilder

### What's a chess tactic?

When the topic of chess improvement comes up, the subject of tactics is usually quick to surface. A chess tactic is a 'forced' sequence where a capture, threat, or string of threats leads to material gain or, better yet, to checkmate. The saying goes that 'chess is 99% tactics'. While this is an exaggeration, the gift and curse of chess is that a significant tactical misstep can always render a beautiful strategic game completely irrelevant. So you might say that some tactical vision is necessary but not sufficient for becoming a strong chess player.

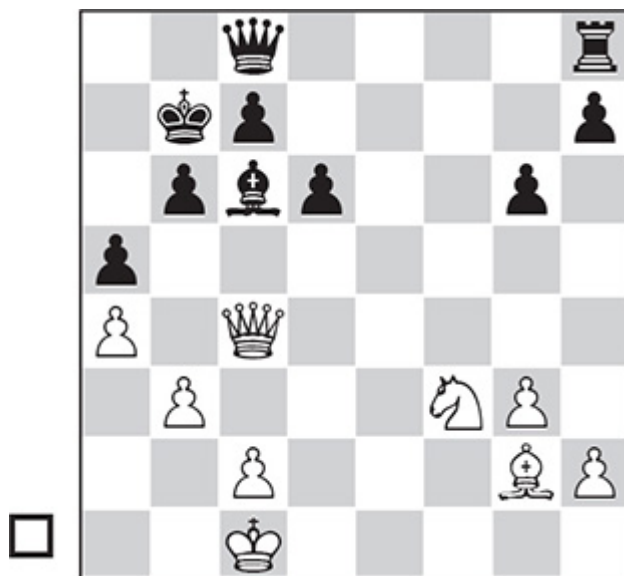
As you progress in chess, what you think of as tactical vision will change. At the 600 level, the player who hangs fewer pieces will likely win. As you advance in chess, the nature of the tactics changes, but they continue to be important. For newer players, a tactic can be a basic knight fork or even the simple oversight of placing a piece where it can be captured 'for free'. Grandmasters occasionally overlook basic tactics, but more often it will take something more complex or original to trick them. As U.S. Champion and Killerchesstraining.com co-founder GM Sam Shankland told me (Episode 329): 'Up to the 2500 level if you calculate better than your opponent, you are just going to do better.' You won't create a lot of chess drama by suggesting that an ambitious chess student should do a lot of chess tactics.

Nonetheless, there are differences in types of chess tactics, and opinions vary on how to approach them, so we do need to dig a bit



2020. It took him a mere eight seconds, suggesting that pattern recognition likely played a role in spotting it. Whether Black captures the queen or not, ♖a8# will be unavoidable.

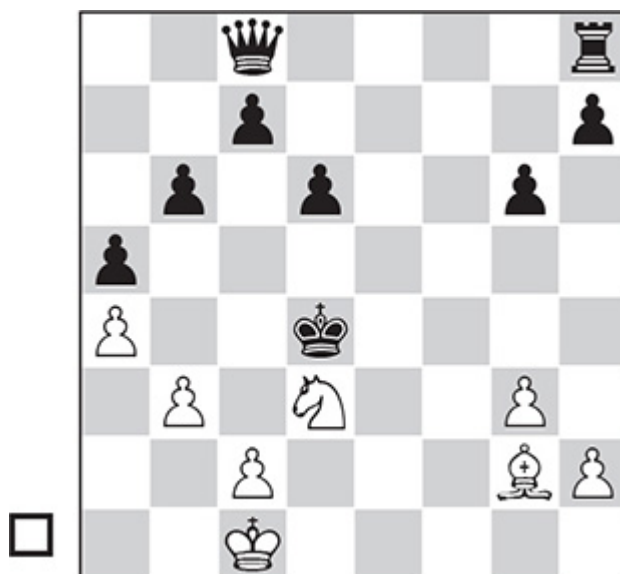
**2) Calculation** – When you calculate, you are saying to yourself, ‘If I go here, she will go there,’ and repeating this process as you look more deeply into the position. In the landmark but possibly outdated book *Think Like a Grandmaster*, GM Alexander Kotov famously called the potential moves you can make ‘candidate moves’ and the multiple possible responses a ‘tree of analysis.’ Chess trainers have varying opinions on the tree metaphor and have been arguing about its efficacy ever since. When calculating, you are not relying on patterns you have internalized but digging deep into the exact position in front of you. Daniel Kahneman would call chess calculation ‘System 2’ type thinking. Unlike System 1 thinking, he defines System 2 thinking as ‘slow and effortful’.



Kasparyan-Manvelyan, Erevan ch-ARM 1939

Can you find the famous mate in 4 played in a game by legendary endgame composer Genrikh Kasparyan after **28. ♖xc6+ ♚xc6?**

Straightforward calculation (and a quiet move) will get you there.  
After 29. ♖e5+ ♔c5 30. ♖d3+ ♔d4

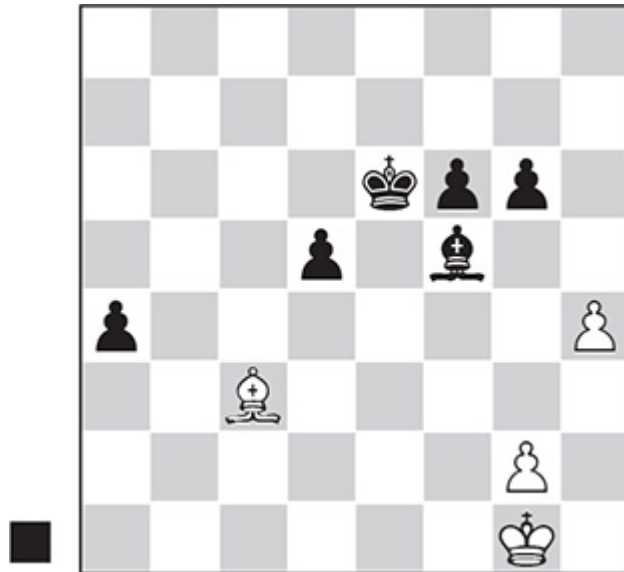


Kasparyan-Manvelyan, Erevan ch-ARM 1939

31. ♔d2!, Black doesn't even have a spite check, and 32.c3# is unstoppable.

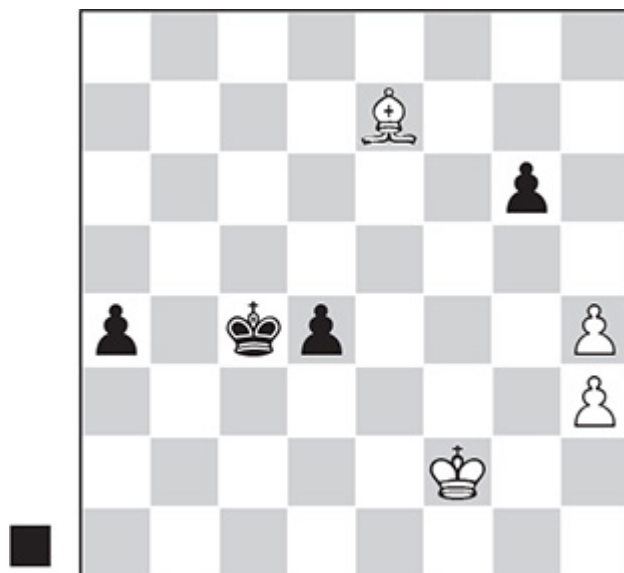
When it comes to chess improvement, the only thing that is black and white is the board, so there is some natural overlap between calculation and pattern recognition. For example, a sense of intuition built on pattern recognition might help point you in the right direction of which moves to calculate, or you might have a situation where you calculate an endgame to the point where you see a pattern that you recognize as a known win.

The intersection of pattern recognition and calculation is evident in one of the most famous combinations of all time by legendary Latvian-born GM Alexei Shirov. Many of you might be familiar with Alexei's stunning idea, 47... ♗h3!! . As Alexei details in his entertaining book *Fire on Board: Shirov's Best Games Part 2*, he relied on a recollection of a prior game (where a similar idea was played against him) for inspiration.



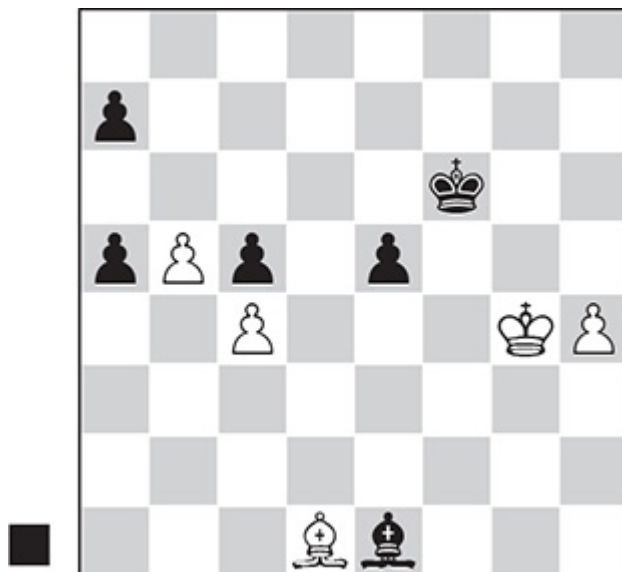
Topalov-Shirov, Linares 1998

Shirov's legendary **47...♗h3!!** sacrifice was based on a pattern from an earlier game of his. (If you are not familiar with this fragment, there are numerous YouTube videos detailing its brilliance, but the idea is that White's capture of the bishop frees the f5-square and gives Black's king a crucial tempo to invade White's position and support the passed pawns.) After **48.gxh3 ♖f5 49.♔f2 ♜e4 50.♗xf6 d4 51.♗e7 ♜d3 52.♗c5 ♜c4 53.♗e7**



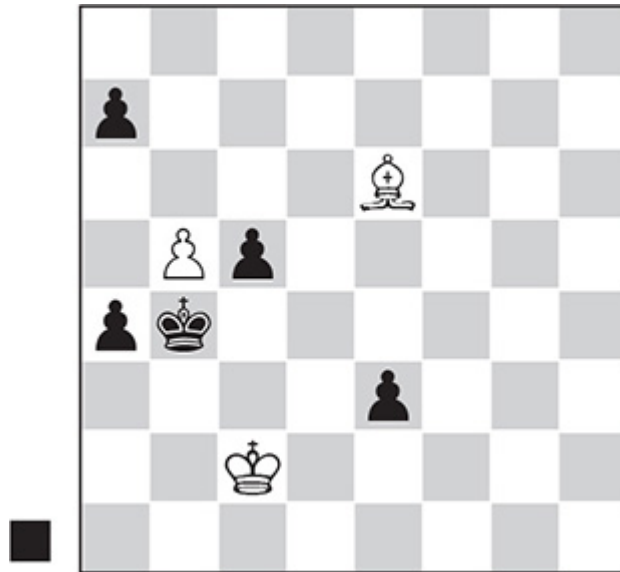
Topalov-Shirov, Linares 1998

and **53...♔b3**, Veselin Topalov resigned, as he cannot stop both pawns, e.g. 54. ♔e2 ♔c2 55. ♕b4 d3+ 56. ♔e1 a3 57. ♕xa3 d2+ and Black will queen.



Shirov-Andersson, Biel 1991

Alexei's inspiration/pattern recognition came from this game. Ulf Andersson's **44...♕xh4!!** deflects White's king to give Black's king access to the f5-square, the same exact square as in Topalov-Shirov years later!, This allows it to subsequently clean up White's pawns and win by force: **45. ♔xh4 ♔f5 46. ♔g3 ♔e4 47. ♔f2 ♔d3 48. ♔e1 ♔xc4 49. ♔d2 ♔b4 50. ♔c2 e4 51. ♕g4 a4 52. ♕f5 e3 53. ♕e6**



Shirov-Andersson, Biel 1991

**53...c4** The Black pawns are too much and White resigned. Shirov wrote:

*I believe that real creativity comes when you master the ability to connect different parts of your experience and perception, sometimes even small chaotic pieces of it, which at first sight don't seem to be directly related... It is sometimes necessary to expand the dimensions of your brain-work from logic to the 'associative level' ... [During the Topalov game] the position against Ulf Andersson suddenly came into mind.*

The ingrained pattern helped Shirov come up with the idea, but then he had to bring his legendary calculating prowess to bear to make sure that the move actually worked. Despite the overlap between pattern recognition and calculation, awareness of the two types of tactics is helpful as a basic framework when contemplating your approach to studying tactics.

### **Going deeper on calculation**

FM Peter Giannatos had quite unusual chess gains in his twenties, going from about 2100 to 2390 USCF, all while building the Charlotte Chess Center, which is an award-winning chess club and a hotbed of tournament activity. My Adult Improver Series interview with Peter was one of the most popular *Perpetual Chess* interviews ever due to Peter's unusual improvement success and his penchant for tough

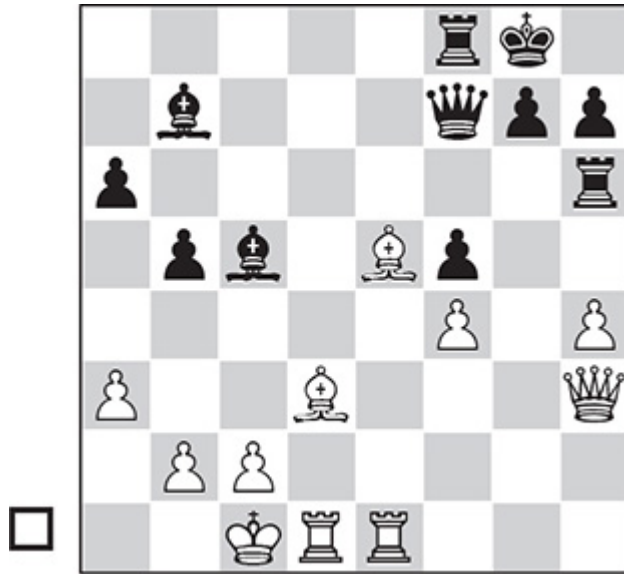
talk to amateur chess players. One could summarize our two-hour, wide-ranging interview in five words: 'No excuses, do the work.'

According to Peter, the ideal form of calculation exercise will take you five to ten minutes to solve. If you are solving exercises appropriate for your level, you will get about 70% of them right. Peter said: 'I think that's the perfect way to improve, even for a lower rated player, because what that is doing is it's pushing you to look beyond the surface, to the next level.' Peter highlighted a crucial period where he and his friend NM Dominique Myers would regularly meet, set up a chess puzzle on a set, write down their answers, and solve challenging exercises from the excellent, master-level chess book *Perfect Your Chess* by GM Andrei Volokitin and Vladimir Grabinsky. Between the use of physical sets (rather than digital) and the social component of meeting a friend who will hold you accountable, this was a great way to work hard on chess.

Knowingly or not, by writing down their answers Peter and Dominique followed the advice of GM Jacob Aagaard, who said (Episode 166):

*When you study puzzles, write down your answer. Don't just write the first move. Write everything you have seen. At training camps, I'm very strict and can force people to write it down, but most don't do it on their own at home. But it is really very valuable to write down your solution because then when you read the solution in the book you cannot tell yourself, 'I think I saw that.' If it's not there [where you wrote your answer], it's not there.*

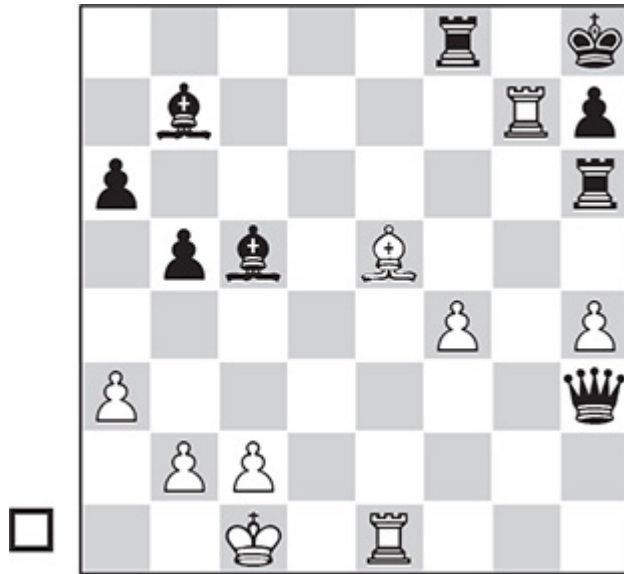
To further Jacob's point, many respected trainers suggest solving exercises from a book rather than an online tactical trainer. IM Kostya Kavutskiy of the ChessDojo highlighted this point in a discussion on the merits of puzzle books, saying, 'In my opinion, most online tactics trainers have a huge defect where the puzzles are computer generated, and they often don't even ask you for the most critical lines.' To prove Kostya's point, I have found that I am much more likely to take my time on a puzzle when using a book and that when using online trainers I am prone to a 'click and guess' approach.



A. Muzychuk-Kobo, Gibraltar 2020

In Episode 243, Ukrainian chess star GM Anna Muzychuk told me that what separates grandmasters 'is not the length of the lines we can calculate, but the precision of the lines, because sometimes we calculate only two or three moves ahead, but these two or three moves will be much more precise than those of a 2000 player.'

Anna's amazing **23. ♖xf5!** illustrates this theme, as after **23... ♗xf5** Anna had the creativity to envision **24. ♕d7!!**, and suddenly Black's house is on fire, with the b7 bishop and the g7 pawn both under attack. Taking the queen with **24... ♗xh3** would have led to a picturesque finish: **25. ♖xg7+ ♔h8**



A. Muzychuk-Kobo, Gibraltar 2020 (analysis diagram)

26. ♖g6+! ♜f6 27. ♙xf6#. Instead, Anna kept the extra pawn and later won the game easily.

In our 2023 interview (Episode 330), top Polish trainer, player, and author GM Wojciech Moranda also spoke about the importance of differentiating between the study of calculation and pattern recognition. I was so struck by it that I followed up with him via email. Here is what Wojciech said:

*There can be a position that requires a lot of calculation without any tactics involved or one that is rich in tactical possibilities but without the need to rely on anything other than pattern recognition to have it solved. And this is not a purely theoretical dispute, because I often meet students who claim that solving large numbers of tactical puzzles will help their calculation skills improve. It will surely help their tactical vision, but calculation, in my personal opinion, requires a more dedicated type of training.*

If you are wondering what type of training, three-time British Champion David Howell summed it up well. He told me (Episode 176):

*When I was really young, my earliest coaches would sit me down with a couple of positions and force me to calculate variations up to five to ten moves with just a board in front of me. And I wouldn't be allowed to touch the pieces. That really helped me develop my visualization skills. Nowadays players also do these Puzzle Rush type tactics. But I think with calculation in general, it helps to just sit down with the board, pretend it's a game*

*situation, and just force yourself to practice those trains of thoughts that you would have during a game... it's hard work and it takes a lot of discipline not to move the pieces about or not to just go online and do short and superficial stuff like Puzzle Rush.*

Because this type of training is so demanding, many chess players will eschew it and will get their best calculation practice from over-the-board or serious games. Tournament games are excellent as calculation 'practice' because, unlike in most chess tactic books, there often isn't a clean and correct answer at the end of your calculation efforts. In addition, they feel important enough to us that we will dig deep for energy to try harder than we might in a practice session. But it is challenging to play enough tournament chess to continuously sharpen these skills, so we often look for substitutes at home.

### **What about endgame studies?**

Aside from competitive games and books of calculation exercises, endgame studies are often the most beautiful and sometimes diabolical form of calculation practice. For this reason, many strong players recommend them. Endgame studies are composed rather than taken from real games, and they often contain difficult-to-find solutions that illustrate a chess theme. When struggling to break through a plateau, CM Andrzej Krzywda (whom we met in the Preface), at the behest of his coach, GM Bartosz Socko, turned his attention to endgame studies. Success ensued. Many stronger players consider them foundational in their chess growth, including GM Judit Polgar herself. In her outstanding book, *How I Beat Fischer's Record*, which chronicles Judit's rise to the grandmaster ranks, Judit wrote:

*Under the guidance of my father, I spent many hours each day solving studies, problems, and tactical positions. My father considered solving to be very important because it requires concentration and accurate calculation, precisely what you need most during a practical game.*

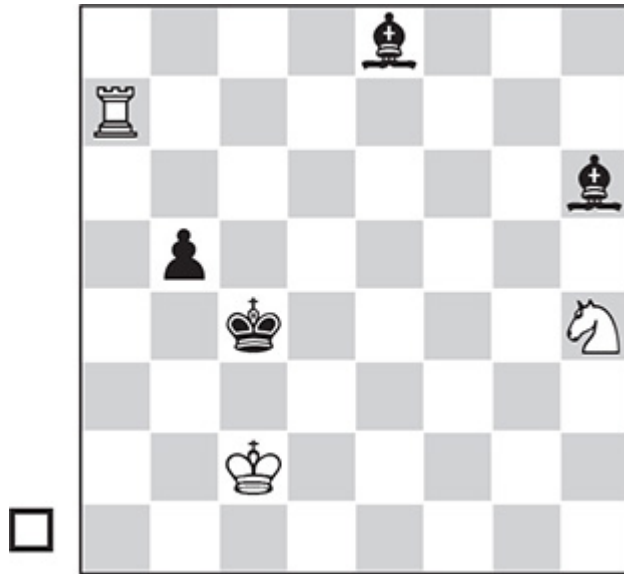
Nonetheless, even with endgame studies, there are a couple of potential downsides. One is that they often require intense focus, even compared to other forms of chess study. In other words, they

often feel like work! Finding the focus for this type of exercise can be challenging as we get older and busier. As Judit said, they require deep concentration and thus are often incompatible with multitasking. Speaking as a dad, I assure you that this means it often feels like they are incompatible with having young children!

GM Wojciech Moranda is also the rare grandmaster who has reservations about working on calculation via endgame studies. Wojciech told me:

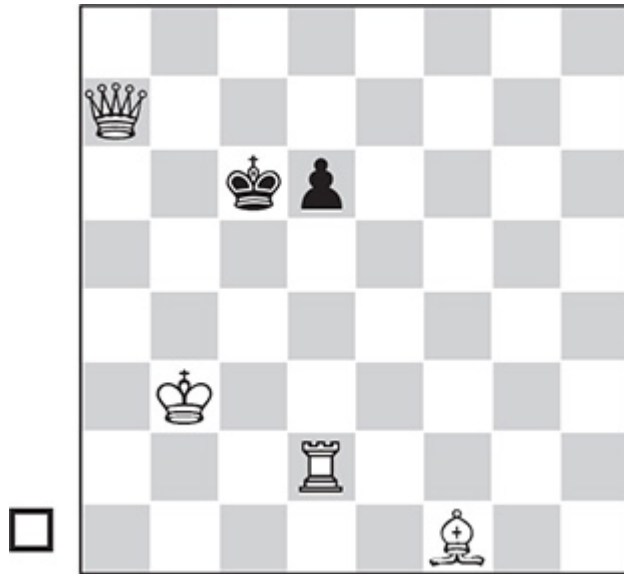
*Solving endgame studies is a great way to train calculation or to improve one's feel for coordination of the pieces... at the same time, in my humble opinion, endgame studies represent probably the most overhyped training method known to the chess community. Because they are artificially constructed by composers, such puzzles often have very little in common with positions to be found in over-the-board games, which might diminish their practical training value at times. What is more, unlike calculation in a real game, they are always exceptionally aesthetically rewarding, giving the solver a type of dopamine rush not achievable otherwise.*

Despite his valid reservations, Moranda does find some endgame studies to be useful. He prefers ones that are practical (and could realistically have occurred in a game) and instructive. Conversely, he is not a fan of far-fetched studies, for example ones with strange piece configurations (i.e. quadrupled pawns) or lots of underpromotions.



Gorgiev, 1929: White to move and win material

Moranda sent me this endgame study as an example of a 'good' one. He likes that it is a practical position, in the sense that it is a realistic piece configuration, and that whether or not you could successfully win a bishop here would determine the outcome of the game. The answer, by the way begins with **1. ♖a6!**. See if you can win a bishop against all of Black's potential replies. If you would like to try to work out the solution, the most challenging response is **1... ♕g5** (see page 222 for the solution).



Wurzburg, 1932: White to move and mate in two

On the other hand, Moranda would likely not approve of this composed Mate in Two puzzle. White is up massive amounts of material, and any move on the board would win. Why spend ten minutes looking specifically for the mate in two?

Are you ready for the answer? It's **1. ♖e2 ♔d5 2. ♗g2#** or **1...d5 2. ♖e6#** or **1...♚b5 2. ♖c2#**.

So as with so many study methods, there are benefits and potential downsides when it comes to endgame studies. Nonetheless, not all trainers share Wojciech's mixed opinion, and I certainly have interviewed many endgame study enthusiasts over the years, including the aforementioned GM David Howell and renowned trainer, GM Melikset Khachiyan. If you do decide to try endgame studies out as a method for calculation practice, I recommend Kostya Kavutskiy's *Endgame Studies 101* Chessable course for getting your feet wet, and then IM Cyrus Lakdawala's *Rewire Your Chess Brain* if you then want to get your feet soaked.

Due to the difficulty of the work required, and the challenges of finding the right conditions to work hard on tactics, many adults gravitate toward an 'anything but calculation' study routine instead. You might even call it the 'anything but hard work' approach! Let's

just say that I am no stranger to this approach. For this reason, as David Howell mentioned, many may settle on an approach focusing more on 'blitz tactics' or pattern recognition work.

### **Pattern recognition to lay the foundation**

If you are early in your chess journey, you can save yourself hundreds of future hours of chess study by laying a firm foundation in your pattern recognition. The 'recommendations' section will come later, but the book and Chessable course, *The Checkmate Patterns Manual* by Raf Mesotten is a fantastic place to start, especially if you are rated below 1500. As you climb the rating ladder, the patterns you will need will become more specific and may have more to do with pawn breaks or which pieces to trade in an opening rather than a basic tactical pattern. In recent years, a new way to work on pattern recognition has burst onto the chess scene.

Chess.com launched its Puzzle Rush feature in 2018 to rave reviews and many instantly addicted chess players. Puzzle Rush is a gamified series of tactics that starts with very basic puzzles and gives you increasingly difficult ones in a set amount of time. It is highly addictive as one tries to beat their high score. Puzzle Rush enables the Hikaru Nakamuras and Ray Robsons of the world to showcase breathtaking tactical acumen on YouTube.

Although it is a relatively new invention, Puzzle Rush has quickly found many adherents. As he detailed in our interview (Episode 181), NM Elijah Logozar made Puzzle Rush a part of his daily routine and became a fierce blitz player. Elijah ascended to the USCF Master title and gained some 900+ online blitz points in a few years, with a Chess.com rating peak of over 2600. Part of the fun of Puzzle Rush is that it can be easy to measure progress as you attempt to achieve a new high score. The ability to spot short tactics quickly is undoubtedly good for your blitz game, but it's harder to know if this skill is worth developing if your goal is to improve at slower time controls. And even Elijah was often working ten hours per day on chess (that's not a typo) while making his ascent, and Puzzle Rush was only part of the regimen, so it is difficult to know which study methods contributed most to his gain.

When I asked Sam Shankland (Episode 329) whether he was a Puzzle Rush believer, he hinted at potential diminishing returns in studying them too frequently. Sam pointed out that repeated practice may help you recognize a pattern fractionally faster, but that slight difference in speed won't help much in time controls slower than five-minute chess. GM Moranda also raised some valid reservations about Puzzle Rush. He wrote:

*The inconvenient truth is that Puzzle Rush works wonderfully to sharpen up your basic tactical instincts but usually has little to do with tactics or, especially, calculation. The first thirty-something positions usually feature solutions that are simply too primitive to be called 'tactical motifs', while the scarce time left on the clock remaining for the ones coming up next does not allow the process of finding the proper solution to be called 'empirical' in any way – it is more like guessing as compared to concrete verification of the elected move[s]. This is also why Puzzle Rush should serve merely as yet another way to have fun with chess, or maybe as a pre-training warm-up at best. And if my students insist on using it once in a while, I say sure, just do not consider the time spent doing so as 'training'.*

As a 2600-level GM, Wojciech may overstate the easiness of the first 30 puzzles of Puzzle Rush for many players, but I also think he is wise to warn against chess students 'over-indexing' on Puzzle Rush.

### **Which one should you focus on?**

So should you focus on calculation or pattern recognition? The answer, of course, is 'both'. The newer you are to chess, the more foundational work you want to do to build your base of chess patterns, especially checkmate patterns. As you move to the intermediate and advanced levels, your pattern recognition work can become more targeted, such as focusing on motifs in your particular openings. At this point, you can start to work more on calculation. There are many worthwhile calculation books and courses at the advanced level, but not as many for 1400-1800 level players. Two of my favorites for players at this level are the Chessable course *Calculation: A Complete Guide for Tournament Players* by CM Azel Chua, and the book *Chess Tactics from Scratch* by FM Martin Weteschnik.

As for Puzzle Rush, if you are looking to be an online blitz beast, a heavy dose of Puzzle Rush is a good start. On the other hand, if

slower games are your emphasis and you are an ambitious player, calculation work (possibly with a sprinkling of endgame studies) along with frequent OTB play (which in itself is a form of calculation practice), and review should be a considerable part of your study regimen.

### **In summation**

- If improvement is a primary goal of your chess time, you cannot go wrong by spending a lot of time doing tactics.
- ‘Doing tactics’ can mean many things, and one should differentiate between focusing on pattern recognition and calculation practice.
- To know which type of tactics to pursue, it could be helpful to clarify whether your priority is to improve at faster chess or classical chess.
- Once you have acquired some basic patterns, calculation work is better for your slow chess than doing ‘blitz-like’ tactics such as Puzzle Rush.
- To improve your calculation, strive for challenging but not impossible puzzles. According to FM Peter Giannatos, puzzles that you get right about 70% of the time are the ‘sweet spot’.
- The best way of all to ‘practice’ calculation is to frequently play in slow tournaments. It is slow and effortful, easier to channel energy to work hard, and you get more variety in positions than you get from most tactics books.

## **There are no lone wolves: coaches, chess friends and mentors**

*Community was a key to the success of Grandmaster Simen Agdestein's school... you cannot become a good player without working hard. And what happens when you have a good community is that everyone pushes themselves, partially because they want to be better than their friends, but they also want to learn from their friends.*

– GM Jon Ludvig Hammer on what was special about Norges Toppidrettsgymnas, the Norwegian Youth Chess Academy he attended with GM Magnus Carlsen (Episode 7)

### **The communities of the world champions**

When it comes to chess improvement, there is no such thing as a 'lone wolf'. Many of the game's greatest champions are products of the vaunted 'Soviet School of Chess'. Examples include Garry Kasparov, Anatoly Karpov, Viktor Korchnoi, and countless others. But as distinguished Soviet-era players such as GM Evgeny Bareev and GM Alex Yermolinsky have explained in interviews on *Perpetual Chess*, the Soviet school was more about culture than curriculum. Underwritten by the government, 'Pioneer Palaces' were located all over the Soviet Union and provided free chess lessons for kids and employment opportunities for Soviet trainers. This system created a virtuous cycle of interest in chess across the generations.

Leningrad native Evgeny Bareev spoke glowingly of his trainer, Boris Postovsky, who has written a book devoted to his colleague, legendary Soviet trainer GM Yury Razuvaev. Bareev told me (Episode 126):

*Boris Postovsky was the head of the Smyslov School, and he even gave us homework and checked it; he did everything. We never saw former World Champion Smyslov [despite the*

*school being named for him], who was busy with his career, but we had a good time without him.*

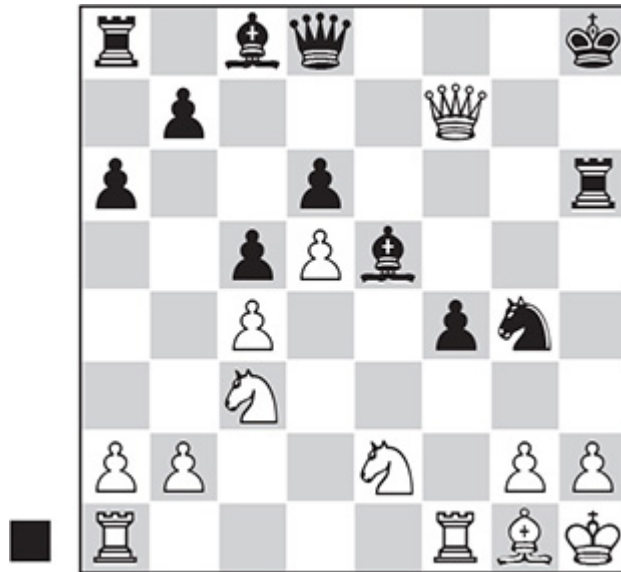
But the Pioneer Palaces and chess schools offered more than a curriculum. They helped foster communities of chess enthusiasts. Leningrad native and eventual U.S. Champion, GM Alex Yermolinsky, told me (Episode 15), 'I prefer the term Soviet Culture [to 'Soviet School of Chess'] because chess kind of permeated the atmosphere.'

Outside the Soviet Union, even relative chess outsiders have relied on coaches, friends, and mentors. As an elite player from Norway, Magnus Carlsen, in a sense, was *sui generis*. But Magnus had plenty of crucial help along the way. Carlsen's comet-like rise was helped by GM Simen Agdestein, who was Norway's first grandmaster and whose chess academy was gaining a footing just as Magnus came on the scene. Magnus also benefitted from having a very supportive and proactive family. In the wake of Magnus's incandescent success, the one-time chess 'coldbed' of Norway has become a global hotbed where Magnus's matches are appointment viewing on national television.

India tells a similar story. Future World Champion Viswanathan Anand grew up in the right time and place in what had previously been the wrong country for chess. As Vishy tells it in his excellent autobiography *Mind Master*, he was fortunate to attend the Tal School of Chess with trainer IM Manuel Aaron. At the time, Manuel was the only International Master in India, and the modern chess powerhouse, believe it or not, did not yet have any grandmasters. Vishy wrote:

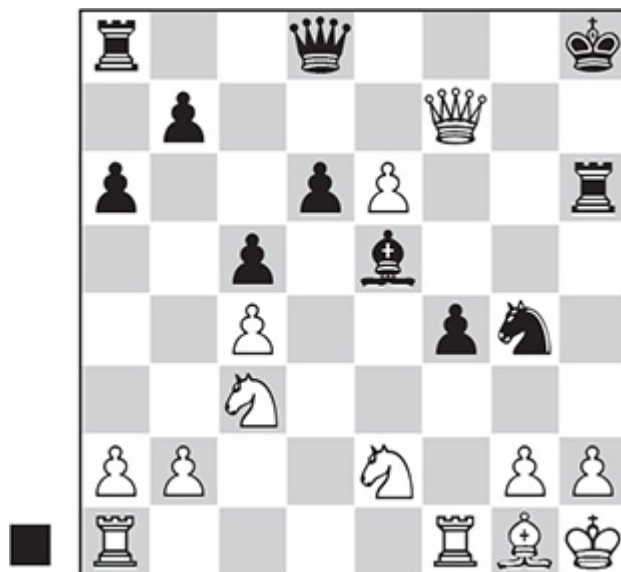
*One day, my sister happened to notice a sign that said 'chess club' outside a building on her way back home from college, and told us about it... Soon I was hanging around the Tal Chess Club, awkward, fidgety, and sheepish, watching older people play.*

The chess world is richer because Anand's sister spotted that sign, and soon enough, Vishy was crushing those older people at the Tal Chess Club!



Sridhar-Anand, Tamil Nadu 1982

In one of his earliest games on public record, an adolescent Anand uncorks **23...♙e6!?** in order to clear the bank rank and cover future queen checks. Today's engines say that **24.♘xe6** would have led to a complex but relatively balanced position, but the move nonetheless shows young Vishy's creativity. Anand's opponent understandably took the bait with **24.dxe6**.



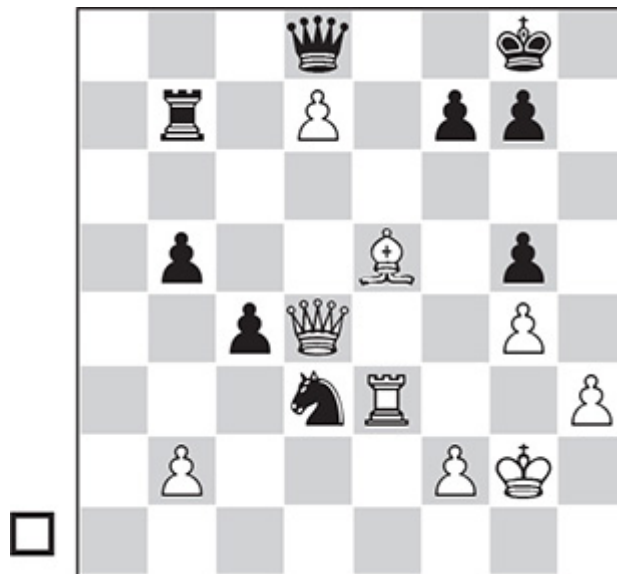
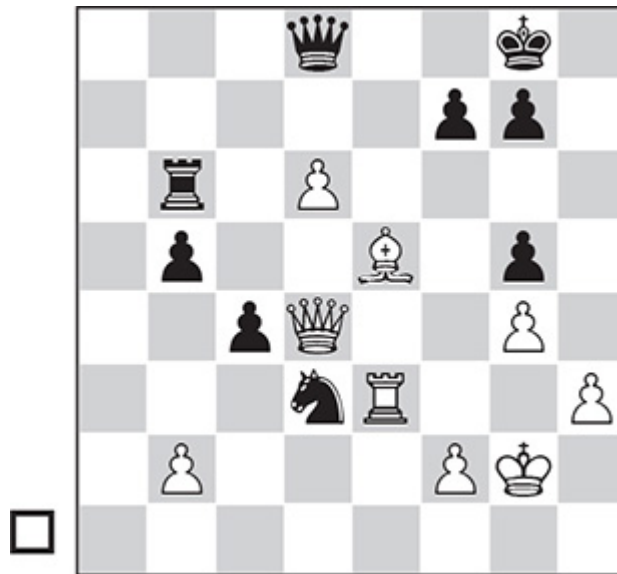
Sridhar-Anand, Tamil Nadu 1982

After 24... ♖xh2+ 25. ♗xh2 ♕h4!, since Black's a8-rook now prevents back rank checks, checkmate is unavoidable. Beware young Vishy bearing gifts!

Legendary GM Bobby Fischer is frequently mentioned as a lone wolf within the chess world. This misconception is primarily attributable to two factors: 1) Fischer famously took on the aforementioned Soviet machine and was often the lone U.S. representative against a cadre of world-class Soviet players who were sometimes instructed to collude against him in tournaments; 2) The 'lone wolf' image is magnified by Fischer's reclusive later years. His mental illness, misogyny, and anti-semitism also did not project an image of communal achievement.

But in the years when young Bobby Fischer was ascendant, he was far from a lone wolf. Fischer grew up in the chess cauldron of New York City and quickly found access to many of its strongest players and trainers. Fischer bristled at the notion of calling Jack Collins his coach, but as his biographer, John Donaldson, told me, he benefited immensely from a friendship with this legendary teacher. Collins taught American stalwarts like Robert and Donald Byrne and numerous scholastic champions, but Fischer was the strongest player to pass through his apartment. Fischer attended Erasmus Hall High School near Collins's home and would spend countless hours at his house to be surrounded by chess. Donaldson explained:

*There were a lot of strong players that were constantly coming through the Collins home. He had a huge library. There were correspondence players, there were tournament players. People would be showing games, studies, and looking at opening lines. It was just constant chess in a way that chess players today, most of whom don't have access to a brick and mortar club, would find hard to believe. I think in some ways Fisher just opened the door to Collins's apartment, and he would just breathe in the air and get stronger.*



Fischer-Di Camillo, Washington DC 1956

Fischer played his famed ‘Game of the Century’ against Donald Byrne some months after he became a regular at Jack Collins’s apartment. Here is another tactic Fischer played around the same time, the month after the famous Byrne game. In the left diagram, Fischer played **39.d7**, which appeared to blunder a pawn to **39... ♖b7** (right diagram)... until Fischer uncorked **40. ♕c7!!** which wins instantly.

## **Now we are all Bobby Fischer**

As Donaldson suggests, it is unlikely that Fischer would have reached the levels that he did if he had grown up in any other city in the U.S. But these days, we all have access to the high-level chess that Fischer did. We may not become world champions, but we can watch champions give chess lectures merely by opening YouTube or Twitch. We can get world-class move suggestions simply by turning on our free engines. We can access countless free courses on Chessable to turbo-charge our opening repertoires.

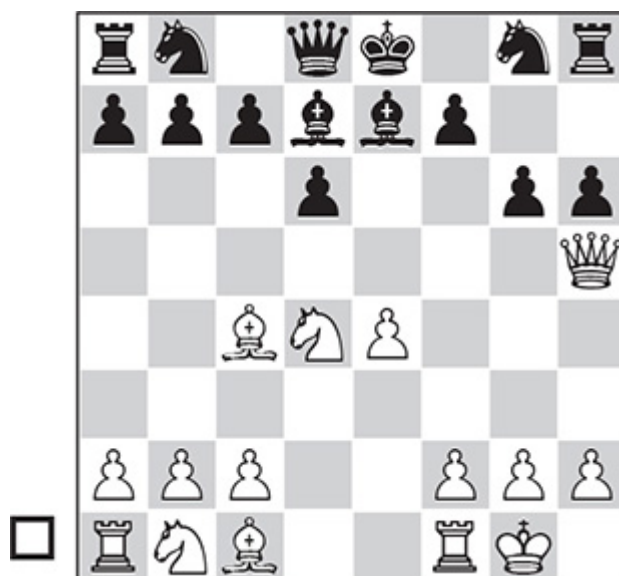
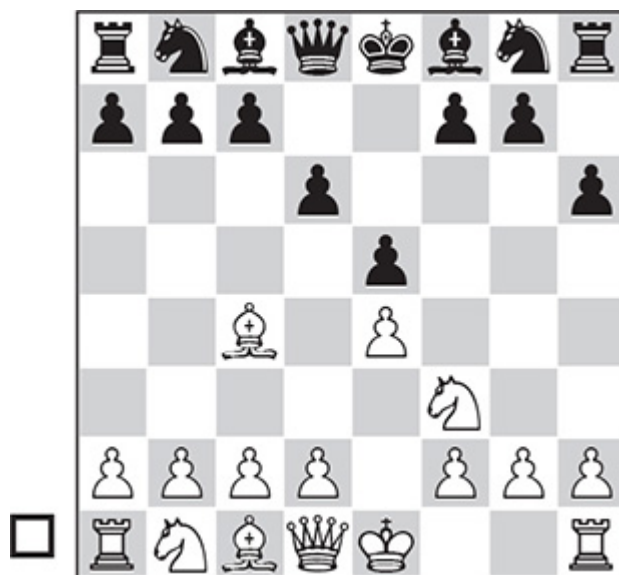
But we people still need other people. Studying chess online without friends, peers, and mentors will only take you so far. An aging and frail Bobby Fischer famously said, 'Nothing soothes as much as the human touch.' This truth also applies to our study of chess. Playing or discussing chess with another person is a more effective way to learn a technique or correct a bad habit than reading about it, and it's almost always more fun. Two-way human interaction is still indispensable when it comes to chess improvement.

This interaction can come in many forms: post-mortems with opponents, game reviews with coaches, or blitz battles over beers against chess peers. But with the ability to review games on Zoom with coaches worldwide, human feedback on games has never been easier to get. In an age where so many chess fans discover the game via a screen, it's more important than ever to reach out and speak to another chess enthusiast. To emulate the atmosphere that Carlsen, Anand, Fischer, and so many lesser-known local legends have had, we need both mentors and peers. So let's start by discussing mentors or coaches.

## **Finding a coach**

There are countless stories of vital lessons imparted by coaches and mentors, but Dr. Courtney Frey described a lesson that is particularly common for adult learners, who often lack the fearless playing style of talented kids. Courtney began working with IM Yuriy Krykun after he 'got bored during the pandemic'. At Yuriy's suggestion, Courtney spiced up his opening repertoire, and he soon noticed a difference in his game. Courtney said (Episode 236):

*I noticed I would get these positions where I had a little bit of a lead in development as White, for example. But then, instead of putting pressure on my opponent, I would make a passive move, and all of the advantage would evaporate. But once I could focus on keeping the pressure on my opponent and forcing them to make mistakes, all of a sudden, not only were my games way more exciting to play, but I was also getting better results.*



Frey-Stjerneanis, Lichess Rapid, June 2023

Frey explained, 'With White to play, I would consistently make a passive move like 4.d3. My coach, IM Yuriy Krykun, would always say, "There's nothing wrong with 4.d3, but why aren't you playing 4.d4 ! Black just wasted an entire tempo with 3...h6. Open up the

center and try to punish him!” Courtney eventually learned to take Yuriy’s advice and in an online game where he played **4.d4** he soon had the opportunity to deliver a knockout blow. In the diagram on the right, Courtney had gone **7. ♖h5** and after **7...g6** (diagram), he went **8. ♖d5!** and White is already winning due to the dual threats of **9. ♖xf7#** and **9. ♖xb7**.

It is easier and more affordable than it has ever been to find a chess coach. If you are a tournament player, you might ask some of the stronger local players for recommendations of coaches you can meet in person. Online coaches are also plentiful, and many are pretty affordable. Using the Lichess or Chess.com ‘coaches’ page, you can find master-level remote teachers who give lessons for as little as \$15 per hour. Investing in a coach is a very high return on investment if you can afford it.

If you decide to hire a coach, here are a few tips to remember:

- 1) Personal rapport is more important than chess strength, especially if you are rated below 1600 or so.** There are so many coaches to choose from that it is best to find someone with whom you get along well. Often it will be someone with a life experience similar in some ways to yours or who is of comparable age.
- 2) Don’t be afraid to try different coaches.** If you aren’t connecting with someone, or feel like they aren’t prepared for your lessons, don’t be afraid to try someone else.
- 3) Make sure your goals are aligned.** If you are working with a grandmaster coach, they may be accustomed to working with strong young talents and expect you to put in more time than you find feasible. Make sure you find a coach who does not expect too much or too little of you based on your ambitions.
- 4) Hiring a coach is not a substitute for doing the work!** Coaches can save you time by cutting through the fog of a position or an opening and giving you an unbiased perspective

on your strengths and weaknesses, but you will still need to do plenty of study on your own!

And for those who cannot afford or do not want a coach, there are potential workarounds. For example, accomplished improver Vishnu Sreekumar regularly attended Jesse Kraai's Twitch streams and submitted games to him when Jesse was looking for amateur games to review for broadcast. In 2021 (Episode 215), Vishnu told me, 'I haven't really spent money on coaching so far, but I've tried to make use of these free opportunities.' Similarly, a mentor relationship does not need to be as formal or expensive as hiring a coach might be. If you can befriend someone a few hundred points higher rated than you, you can learn a lot from them and might find them more relatable than a grandmaster.

### **How to find your own 'in real life' community**

Aside from learning from a coach, it is even more important to find a community. In describing his time at former World Champion Mikhail Botvinnik's chess school, Garry Kasparov said, 'Botvinnik believed that the best way to help young players to advance was not just to analyze games with them and give professional advice but also to socialize.' While this has been true of future champions, it is just as important for enthusiastic amateurs to find a community. Here is what FM Alex King said in looking back on his improvement (Episode 97):

*One of the biggest factors for my improvement was that I was friends with two stronger players than me, IM Kostya Kavutskiy and IM Zhanibek Amanov. I would hang out with the two of them. We would study and go to tournaments together, talk about chess and stuff like that. That was a big influence on me at the time. Having that mini-community really motivated me.*

Plenty of people have stories similar to Alex's, and as you begin to pursue tournaments, finding a community of friends becomes even more critical. Tournaments can be expensive, grueling, and stressful, so it is beneficial to find peers, both for moral support and to learn from, as you immerse yourselves in chess. In addition, for all of the brilliance of grandmasters, they often have risen through the ranks

quickly as scholastic players, and thus they may not have the best perspective on how to get from 1200 to 1400. On the other hand, a local tournament regular or an online chess friend who has just made that jump might have plenty of helpful advice.

Adult improver guests like Cody Smith and Kamryn Hellman are among those who have found their local chess communities to be indispensable. In Episode 314, Kamryn described a typical experience as she tentatively approached the chess world from the outside. First, she found a mention of a meetup online but ‘wasn’t even sure if it was happening because the website was a bit out of date.’ But Kamryn got to know some locals and soon enough was playing tournaments and even teaching classes within her community. As of this writing, in addition to local outreach, Kamryn is expanding her community to the online world, as her YouTube channel detailing her fast chess rise is quickly finding a sizable audience.

Like Kamryn, Cody Smith (Episode 270) got into chess via the Internet but only felt truly connected when he began competing locally. He said:

*I live in Alabama, which is not necessarily a big chess community. Most of my friends and family in real life aren't really into chess at the level that tournament players are. So it's been really nice to get to meet some people who have a shared passion for chess.*

## **Finding online communities**

Online communities are the next best thing if you can't make it to a local chess club or live in a sparsely populated area. And they are plentiful. There are discord groups like ChessGoals and ChessDojo, online forums on Chess.com, social media groups like the Twitter #chesspunks, and many more options for finding like-minded chess hobbyists. Lichess is well known for a '45/45 league' which lets amateurs play team games against other amateurs, and combatants will sometimes even discuss the game together afterward via Zoom. Online communities can be so compelling that their constant availability can lead to your spending more time talking about chess than actually playing or studying. But hey, if it turns out that talking

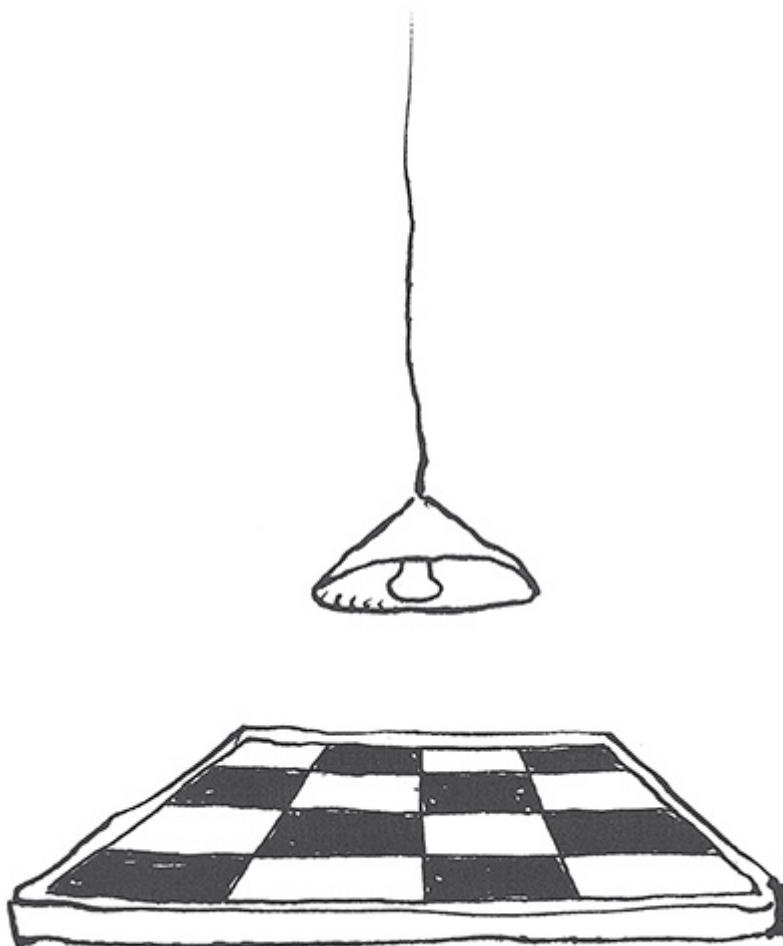
chess is your preference, it's better to speak to others than to talk to yourself!

### **In summation**

- Contrary to what you may see depicted in film, chess has no lone wolves.
- It is vital to find coaches, mentors, and peers to make you feel more connected to the chess world, keep you motivated, and to hear others' experiences about climbing to the next level.
- Hiring a coach to review your games and help pinpoint weaknesses is highly recommended if within your budget.
- Online chess communities are great, but connecting with people in real life is even better.

## PART II

**Other aspects of chess you may also want to work on (with your abundance of free time)**



## Introduction to Part II

Well, we knew that agreements on methods to improve wouldn't last. Here in Part II, we get to the fun stuff. Disagreement! Let's argue and throw some chess pieces at each other! Alas, the differing opinions about improvement methods are often unspoken, and I don't make it a habit to argue with guests on the podcast. Guests have shared a wide range of advice regarding how people improved their chess games. It is not unheard of to hear one strong player recommend a particular study method on *Perpetual Chess*, and then for a subsequent guest to unknowingly suggest the opposite. Let's delve into some implicit debates that have simmered beneath the surface of six years of chess talk on *Perpetual Chess*.

**Chapter 5** – 'I love openings, but my coach keeps telling me to spend less time on them.' Let's settle this once and for all, is studying openings overrated?

**Chapter 6** – Former World Champion Magnus Carlsen made endgame study a point of emphasis from a young age and developed legendary endgame acumen, but other grandmasters never prioritized them and relied more on learning experientially. Must you know endgames?

**Chapter 7** – I know people used to read many chess books and will wax nostalgic about them at any opportunity, but with all of these modern tools, do we still have to 'study the classics?'

**Chapter 8** – While we are talking tactics, in addition to solving 'traditional tactics', do I need to work specifically on 'visualization' and board recognition? What about endgame studies? Judit Polgar loves them, and she seems to be good at chess!

**Chapter 9** – I love to stay up until five a.m. playing blitz chess online. I know that this nasty habit could lead to mood swings, job loss, divorce, and, worst of all, possible loss of rating points. But does blitz chess help my chess?

**Chapter 10** – I read Chapter 3, so I know I am supposed to do tactics, but should I be repeating the same tactics, à la the famed Woodpecker Method, or should I move on to new ones?

Honestly, I could include a few more debates, but let's turn the page and get to the essential ones.

## The perpetual debate: do amateurs overemphasize opening study?

*Opening understanding comes before memorization.*  
– GM Surya Ganguly, *Perpetual Chess*, Episode 242

### The terms of the argument

When it comes to chess improvement for amateurs, there is no subject as contentious as that of the proper role of opening study in one's training plan. The debate centers around whether or not 'openings are overrated', as has been stated by many a trainer, seemingly since the invention of chess. Note that the whole debate primarily applies to amateurs, especially those below the rating of 1500 or so, and that openings are unequivocally important as your rating ascends into the 2000s and beyond. By the time one becomes a Super GM, opening work often rightfully takes up the bulk of one's study.

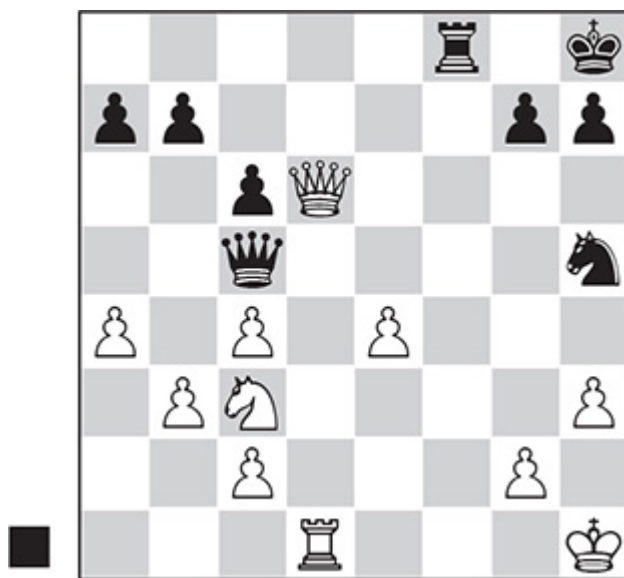
The reason that many trainers warn novice students not to overemphasize openings is that they see so many newer players obsess over them. And an advantage or disadvantage obtained in the opening by a player rated 1200 is unlikely to determine the outcome of the game. More likely, the game will be decided by a mistake or several mistakes later in the game.

Nonetheless, many newer players love to study openings and often devote an outsized percentage of their chess time to studying them. In a reaction to the overemphasis by newer players, many trainers preach that one should refrain from studying openings. Long-time listeners of *Perpetual Chess* may recall that I was once strongly in the 'openings for amateurs are overrated' camp, but over time I have realized that the debate is more nuanced, and I have softened my stance.

In addition to the strong arguments advanced both in favor and against amateurs studying lots of openings, I have interviewed improvers who have had success with wildly varying approaches to opening study. That is why this topic makes for a timeless debate!

### **Succeeding with minimalist opening repertoires**

USCF National Master Vinesh Ravuri could be the poster boy for demonstrating that one can achieve a rating of 2000 USCF with minimal opening study. In Episode 106, Vinesh espoused a tactics-heavy approach and mentioned that he did not study openings very frequently while climbing the rating ladder. Vinesh advised, 'if you are below 1600, you could play whatever you feel like... just don't get blown to pieces in the opening.' For Vinesh, this meant emphasizing so-called 'system openings' like the Colle, where you often put your pieces on the same squares, almost regardless of your opponent's setup. Vinesh felt that playing such an opening freed him to spend his study time in chess on other aspects of his game, like tactics. 'It was just everyday tactics. I didn't even do that much endgame and absolutely no opening. Just tactics.'



Mitkov-Ravuri, Pro Chess League 2018

Vinesh Ravuri's unique hyper-focus on tactics was an effective approach for him. He pulled quite a few upsets in the 2018 and 2019 Pro Chess League. In this case, GM Nikola Mitkov overlooked a deflection tactic when he went pawn-grabbing with **23. ♖xd6** (diagram). After **23... ♜f1+!**, Nikola had to play **24. ♜xf1** and surrender his queen to avoid checkmate on g1. Vinesh went on to win the game.

Adult improver Philemon Thomas had a longer road to the USCF Master title than Ravuri, but took a somewhat similar approach to openings. He approached openings differently depending on whether he played White or Black. When playing White, Philemon generally just tries to keep things 'solid and flexible' and is not 'engrossed with the theory' (Episode 173). 'I just want to get to a playable position where I don't have any weaknesses, and then... we can battle in the middlegame.'

With Black, Philemon conceded that he does take a more theoretical approach. After all, by the time you reach the level of USCF Master, the advantage of moving first as White starts to play a more significant role: 'I do know some theory. I know nearly every line of the French, and then, as Black against d4, I play the Slav Defense. I keep it very solid, try to equalize, and then I'll start my "boa constrictor".' In reading these insights, I hope one can appreciate Philemon's palpable enthusiasm for chess.



A prodigy's rating graph will often look like a Bitcoin chart circa 2017. It goes straight up very quickly. But I am more inspired by the story that a rating graph like that of Philemon Thomas tells. He eclipsed a 2200 rating (and earned the USCF Master title) 14+ years after his first tournament!

### Wait, is studying openings actually underrated?

Counter to Philemon, Vinesh, and the advice of many chess trainers, there are some people who think studying openings as a way to improve is *underrated*. One such example is IM Willy Hendriks. Willy is a chess trainer, historian, and iconoclastic thinker who has written a few fantastic chess books. In his second book, *On the Origin of Good Moves*, Willy espouses the possibly heretical viewpoint that openings are a great thing to study, even for club-level players. So naturally, when I got the opportunity to interview Willy, I asked him about it. Willy mentioned that openings have always been an important point to study, going back to the days of Gioacchini Greco in the 17th century. Willy also pointed out that studying openings is easier than ever these days. In episode 182, Willy explained why this is the case:

*It has to do with today's opportunities to play online, which make studying openings very rewarding. When I was growing up, you might have two opening books, and you would study them completely, and then you had to wait maybe half a year for the opportunity to play it. But today, with so many opportunities to play online, you can study an opening, play*

*it in your online games, look at the games, and see how well you did. So there is a feedback relationship between studying and playing. And I think that's a big difference compared to earlier times.*

Willy raises a valid point about the increased opportunity to practice an opening. And it is through such practice that one can learn the typical themes of an opening.

IM Greg Shahade is another proponent of extensive opening study. Greg points out that a key difference between trying to improve calculation and trying to memorize openings is that when he attempts to learn an opening, he *will* learn that opening. 'I am just going to learn it!', Greg exclaimed. On the other hand, Greg conceded that improving other facets of the game can be quite challenging! 'It's just hard. It's hard to get better at chess! But openings are great because it's easy to get better at openings. It's like the easiest thing you can do. You just have to memorize stuff.'

One thing that struck me about Greg's opening philosophy was his long-range view. Chess players can often feel like they should rush to learn everything, or they approach an upcoming tournament as if one is cramming for a test. But as he explained in Episode 213, Greg was not in a hurry:

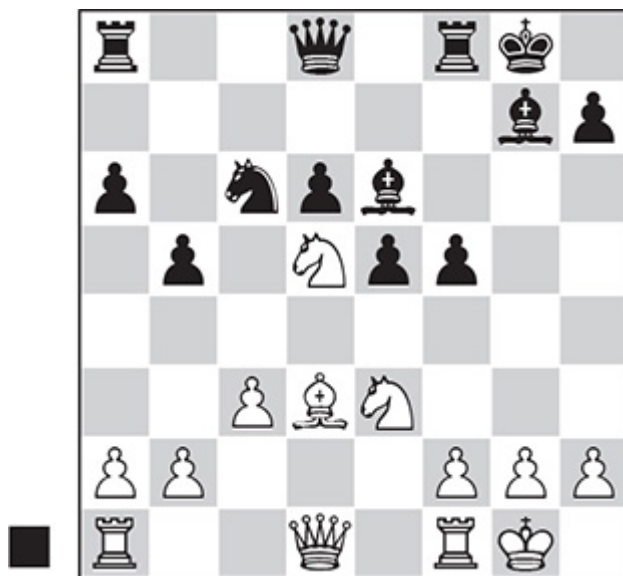
*If you learn a good opening and stick with it, there's no reason you ever have to stop playing it. So it's important to be patient. Understand that it's a long journey, and the more you play, the more experience you will get. And that's a good feeling. It's such a good feeling when somebody plays something against you. You learn it. You study it. And then the next time somebody plays against you, you know what to do.*

As a very strong player, Greg does have some advantages over most amateurs. Greg has a very good memory and also will naturally understand most of the moves he memorizes, For those of us who are not International Masters, one should *not* memorize moves if they don't know why the moves are played.

GM Surya Ganguly is an accomplished player and popular Chessable author who has worked both as a trainer of amateurs and on the preparation team of former World Champion, Viswanathan Anand. Surya has called memorizing a move without understanding

why it is recommended 'a cardinal sin'. In the Chessable age, committing this sin is easier than ever. When I interviewed Ganguly in 2021, he drew on his own experience working with Anand to explain his thinking (Episode 242):

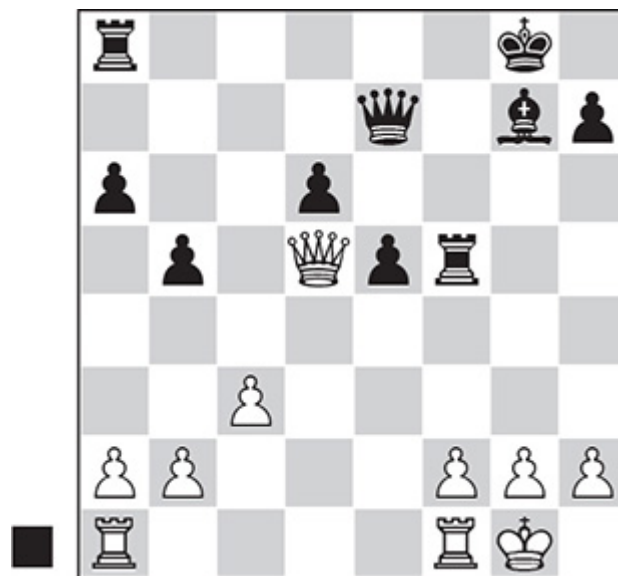
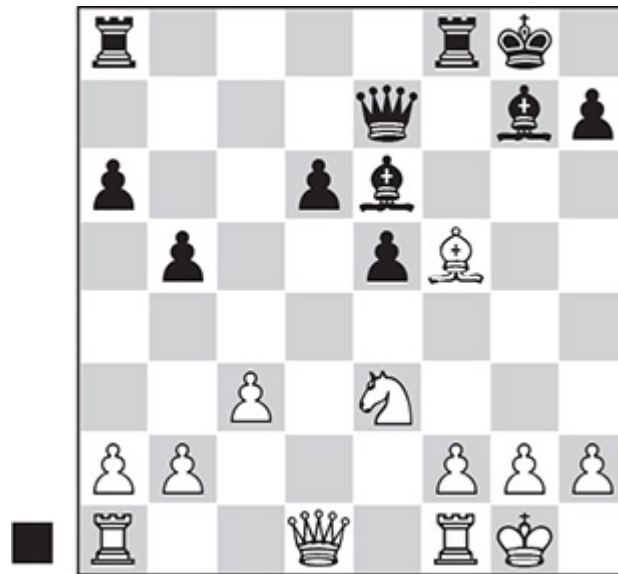
*If you memorize something without understanding, it has got a very short span in your mind. It will fade away. It's not just about chess, practically about anything. That's why... during my school days, I would prepare for exams, and if I would just remember something for the sake of writing it in the exam, I would forget it as soon as the exam was over. In fact, even now, before a game, if I'm preparing something very quickly and just scanning through the computer lines, I will probably remember it for the game. But after that, I will have just no recollection. So I wanted to emphasize understanding. This is how I work on openings. Even during the World Championship match, when I'm explaining certain ideas to Grandmaster Anand, we will never just give some random computer lines but actually try to explain the ideas. This is how I personally also prepared openings... I always say that 'understanding comes before memorization.'*



Berg-Johnson, New York 2022

In a 2022 tournament game, I was reminded why knowing the 'why' in an opening line is important. In a theoretical Sicilian Sveshnikov I played **16... ♘e7??**, not remembering that Black should play **16... ♔h8** or **16... ♖a7**. It turns out that the 'why' for both of those moves is that they prevent the opening trick I walked into. At least I could take comfort that grandmasters Pentala Harikrishna and

Pascal Charbonneau both had made the same mistake some years ago.



Berg-Johnson, New York 2022

After 16... ♕e7, White can play 17. ♖xe7 ♗xe7 and then go 18. ♘xf5! (left diagram), taking advantage of the unguarded a8-rook. White wins this rook after 18... ♗xf5 19. ♘xf5 ♖xf5 20. ♗d5+ (right diagram). This is why instead of 16... ♕e7, Black should either play 16... ♔h8 (avoiding the ♗d5 double attack idea), or 16... ♖a7

(getting the rook off the diagonal). In the game, I realized my mistake, so I played **18...♖f7** and was lucky to eventually escape with a draw.

Few would argue with Ganguly's advice in principle, but with so much chess to study, there is a constant temptation to take shortcuts. But what Ganguly told me is supported by science. In *Make it Stick: The Science of Successful Learning*, Peter C. Brown writes, 'It's true, if you're just engaging in mechanical repetition, you will quickly hit the limit of how much you can learn. However, **if you practice elaboration, there is no known limit to how much you can learn. Elaboration is the process of giving new material meaning by expressing it in your own words and connecting it to what you already know.**'

For less knowledgeable players, ensuring understanding will require constant diligence and much of what feels like extra work. So whenever I am tempted to auto-pilot through memorizing a move that I don't understand, I remember Ganguly's words and look for an explanation of the move.

Here is what to do when you don't understand a move in the opening:

- 1) Look for an explanation in the book, Chessable course, or annotation;
- 2) If that doesn't work, try a 'null move' to see the other side's intended next move. In Chessbase or in a Lichess study you can skip a side's turn by pressing 'x'. This will show you what a side would play if they got to move a second time in a row. If your engine doesn't allow that, try to make an irrelevant move to see the engine response, and hope to discern the plan behind the move you didn't understand. There will likely be times when you are still confused by a move even after these steps;
- 3) If there are grandmaster games available within an opening, you can play through them to try to see a plan in action;

- 4) Ask someone! Flag the position for your coach, crowdsource it in a forum or on social media, or on Chessable, you can even leave a comment for the author on the opening page;
- 5) If you are lucky enough to finally figure out the reason for the move, be sure to make a note so that you can remember what you learned and thus won't have to repeat this process again for the same move in the future!

All of this may seem like a lot of work, but per Ganguly's point, once you have done this legwork, you are much more likely to remember the move the next time around, and instead of temporarily growing your chess knowledge, you are permanently growing your chess understanding!

### **Learning by preparing**

FM Terry Chapman is another accomplished adult improver who attributed a lot of his success to opening study. First, a bit more about his unique background. Terry is one of the older amateurs I have interviewed, as he came back to chess in his fifties after taking some years to focus on a successful business career. Once he returned, Terry put in serious work and went from 2150 to a peak of over 2300 FIDE, earning the FM title along the way. That is quite a rare feat! Terry exudes a growth mindset and has a strong work ethic, but it is probable that he is also helped by the fact that he could easily spend multiple hours a day on chess, especially when ramping up for a tournament.

Terry chooses his tournaments carefully and often chooses invitational 'closed tournaments', at which he can find out his opponents in advance and attempt to guess their openings. Admittedly, those tournaments can be hard to find for club-level players, but I still think Terry's general approach to openings is something from which we can learn. Furthermore, if you are playing league games, like Lichess' 45/45 or a weekly round-robin tournament at your local club, you may be able to prepare for your opponents in a similar fashion.

One of the reasons for Terry's success is likely that he simply enjoys learning about openings and thus has an inherent curiosity. He told me in Episode 169:

*It's just so interesting when you've started a position in a tournament and try to work out how to play it, you can go home and look it up and see how some of the best players in the world have dealt with it. It's just such a really interesting experience, such a positive enjoyment of chess that that kind of thing is available.'*

Returning to a prior theme, it is noteworthy that Terry emphasizes exploration and understanding of the opening rather than rote memorization. Similar to Greg Shahade, Terry also advocated a long-term mindset when it comes to learning openings. He said:

*As an older player, I'm focused on improving my repertoire. And part of my effort nowadays is remedying bad decisions I made ten years ago. So I've been trying to think longer term and think, well, with a bit of luck, I'll still be enjoying chess and playing tournaments for a good few more years. So it's worth introducing significant new systems and coming to understand them. Even if it takes a year or two for them to bed down in my own play, it will still be worth it as a long-term investment. So, as I get older, hopefully, I can end up with the best repertoire I've ever had at some point. That's the plan anyway.*

Even after our March 2020 interview, Terry's long-term mindset continues to pay dividends. In September of 2021, Terry earned the silver medal in the European Over 65 Championship.

Although Greg Shahade, Willy Hendriks and Terry Chapman all make compelling points, the reader should note that they are all already master-level players, so they are well positioned to capitalize on advantages from the opening. Much of the debate about the efficacy of openings, on the other hand, centers around lower-rated players.

### **Why chess novices and amateurs often love openings**

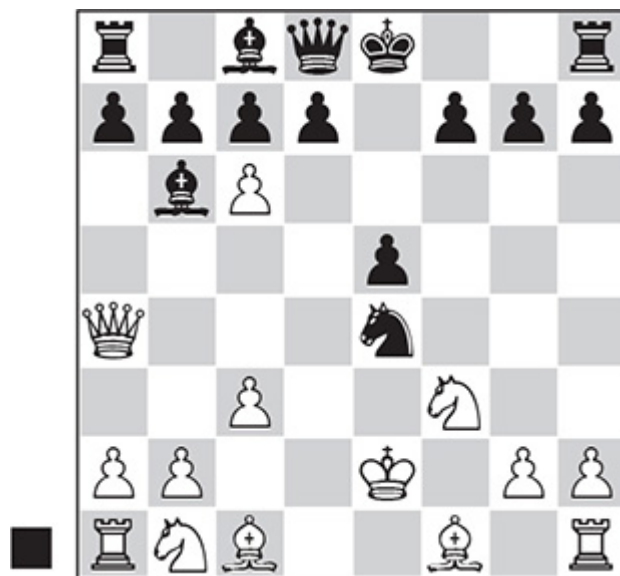
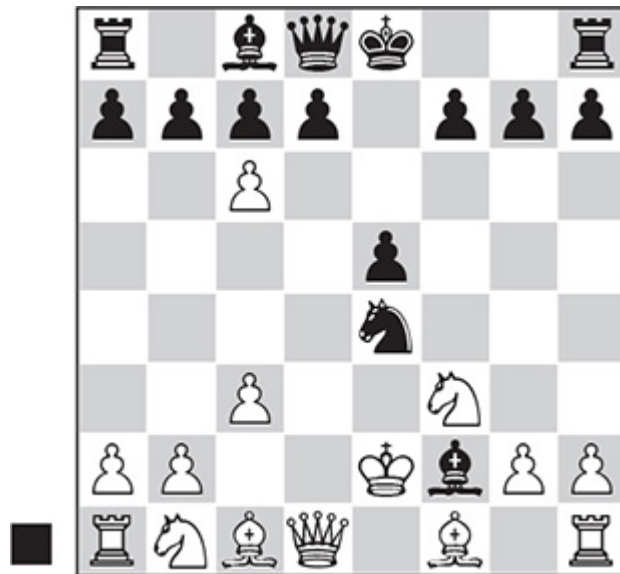
There is something deeply personal about opening choice that resonates with players of all levels. The joy that openings can spark goes beyond any discussion of chess improvement and often touches our souls. The reasons for this boil down to a crucial feature

of openings that sharpens their appeal: **openings provide a sense of identity and agency.**

Hans Henning Lübberding, who is a Dublin-based Google sales executive and dedicated chess amateur, summarized the appeal of openings quite poetically in my 2022 interview with him (Episode 298):

*What fascinates me about openings is the fact that within chess they allow for an expression of personality or creativity... An opening allows you to show a part of yourself, and I think that attracts me to it.*

Lübberding conceded that his focus on openings was unconventional for a sub-2000 amateur. Still, he enjoyed it, and he went so deep into learning his openings that it led to a significant rating gain for him. Hans used engines, a feature called Lichess Opening Explorer, and analysis from his games to prepare for the most likely responses at his level in his favored opening. Hans' success showed that if you combine hard work with the aspect of chess you are most passionate about, good results can come.



Kearsley-Lübberding, Benidorm Open 2022

Hans knew that his opponent played the Ponziani, so he was able to review lines and also make sure he understood why moves are played. In the position in the left diagram, 7...bxc6 is the old main line, but modern engines prefer 7...♞b6 (which Hans played). While 8.♙a4 is the best move after 7...bxc6, against 7...♞b6 8.♙a4? (right diagram) allows 8...♞f2!, saving the knight with tempo, and Black is already winning due to more material and a safer king. Hans got to play this and won the game. In describing his prep for this game,

Hans wrote, ‘if you want to leverage openings as an amateur meaningfully, this is what it looks like. A super sharp, concrete variation where you understand the history and what it implies for the type of mistakes you may encounter.’

The deep connection one can feel with openings was also illustrated in my interview with Kyle Boddy (Episode 303). Kyle, like me, is a former professional poker player who loves chess. But, unlike me, he went on to found a successful and massively influential baseball performance company called Driveline Baseball. Driveline now has over sixty full-time employees and boasts of many professional baseball players as clients. Kyle has a family in addition to running this business, so he is not awash in free time. But Kyle loves chess and makes time for it. He takes lessons with Chessbrah GM Eric Hansen, plays tournaments as often as possible, and finds time for an online game nearly every day. As an avid student of the game, Kyle, of course, has heard the advice that 1200-level players should spend less time learning openings. But sometimes he can’t resist! In our interview, I asked him why he flouted conventional improvement advice and emphasized opening study. It turned out the answer had a lot to do with another game he played competitively, a strategy game called *Magic the Gathering*. In *Magic*, before the game begins you choose which cards to include in your deck out of a large number of possibilities, so ‘deck building’ is a big part of the strategy of that game. Kyle sees similarities between deck building and choosing chess openings and thus feels naturally drawn to learning about openings. He said:

*I understand that studying openings may not be the most efficient thing considering my long-term goal of becoming a candidate master. I don't think I'm necessarily doing the most efficient thing, but I also want to have fun and enjoy the theory of openings. I do enjoy the history of openings. Chess to me is more than improving your rating as a number. It is also about enjoying my time and learning a lot about chess history and chess openings, because I do find that really, really interesting.*

I wholeheartedly endorse the idea of spending time on the aspect of chess that captivates you. And whether they admit it or not, I think a lot of chess players share Kyle’s feelings. If you love the Smith-

Morra Gambit, as Kyle does, you are probably an attacking player. If you are more risk averse, you might prefer the classical comfort of double king pawn as Black, secure in the knowledge that you are playing the most principled reply to 1.e4. And as Kyle alludes to, by picking your openings, you get to cast your vote for what type of chess you would like to play. The game might devolve into a boring endgame or a chaotic mess of hung pieces later on, but you had a real say in the opening, and your opening choices impacted the waters toward which the chess game steered.

In a memorable scene in the hit Netflix series, *The Queen's Gambit*, the character Benny Watts derisively dismissed the Caro-Kann Defense as 'all pawns and no hope.' I have seen various interpretations of this takedown as well as passionate defenses of the Caro in online discourse as if this fictional character can hear you clap back. I am not certain what 'all pawns no hope' means, but regardless of the words themselves, this scene rang true to me because it showed a chess player expressing a strong opinion about an opening in a strident matter. Chess players, having affiliated with various opening 'teams', love to argue about the merit of openings just as NBA fans like to argue whether LeBron James or Michael Jordan was a better player. Even former World Champion Bobby Fischer planted his flag in his legendary argument that 1.e4 was 'best by test'.

While simplistic proclamations about openings may subside for some grandmasters, for others the flame of an opening will always flicker. This idea was illustrated in my conversation with GM Jonathan Rowson. Rowson is a former British Champion and an Oxford-educated applied philosopher who is semi-retired from competitive chess. Jonathan has written some classic chess books about OTB psychology and chess improvement. In fact, Jonathan himself wrote about the link between openings and personal identity in his excellent book, *Chess for Zebras*.

Due to the relentless march of opening theory, opening books typically have a relatively short shelf life, but Rowson's 1998 debut *Understanding the Grünfeld* is beloved by Grünfeld players for the

clarity of its explanations. When I interviewed Jonathan (Episode 150), a fan of his Grünfeld book submitted a question to him about the possibility of issuing a new edition of the book. This got Rowson reminiscing about the Grünfeld. He said: ‘When I’m playing blitz and I play the Grünfeld, I do feel happy to see that position. [I think to myself] “Yeah, I know this... [pauses wistfully] I like this.”’ I was never a Grünfeld player, but I related viscerally to Jonathan’s feeling! As I said to him at the time, when we play an old and familiar opening, it can feel like listening to a beloved song from our youth.

While it may take a high-level player to be able to understand a full game between grandmasters, through repeated study amateurs can learn to understand the ideas of an opening. This was a point brought home to me in my conversation with Dr. Courtney Frey. Courtney is a dad and has a demanding job as a radiologist by day. Courtney is not in chess for fame and fortune, so he studies openings simply because he enjoys them! In Episode 236, Courtney said:

*I think it’s important to try not to fight against what you enjoy studying in chess, especially if chess is a hobby and... not your full time job... I think, for example, if you’re like, ‘Well, I really enjoy studying openings, but instead, I’m just going to grind out endgames for the next two years’, it’s easy to get a little bit discouraged. And so that was one reason [for studying openings]. I just really enjoy it!*

Aside from all this warm and fuzzy talk about openings, Courtney elaborated on the aforementioned idea that he is better equipped to understand grandmaster play when studying openings in isolation. He said:

*As an amateur player, I don’t think my ability to calculate has improved that much, but I think my pattern recognition in the games that I play has improved immensely. So, for example, if you know your openings well, you sort of know the middlegame positions that tend to arise from them. You tend to know what plans are good, and where to put your pieces. You tend to know which tactical themes you should be looking out for. Maybe a grandmaster would just see that kind of stuff in every position, but at my level, I find that since I know my openings better and I know the middle games better, I sort of automatically become a better tactician if I’m playing positions that I’m familiar with.*

Courtney raises an important point about the recurrence of patterns among openings. This is another reason to make sure you look at full games in your chosen openings, not just fragments. It also gets to an important point about the limitations of blindly following the advice that one can safely ignore openings. As Courtney mentions, he has greater comfort in the openings he knows well. This may lead to playing the opening more quickly and confidently and possibly to limiting blunders later. One could even envision a placebo effect in chess, where the illusion of knowing what you are doing in an opening can give you enough confidence to play more instinctively and possibly achieve better results.

### **Okay, enough fence-sitting, pick a side. Ben, are openings overrated?**

So where does this debate leave us? We have examples of accomplished improvers and trainers saying both that openings are important, and that they are overrated in importance. What's the conclusion? Well, let's start with what I hope are 'shared facts' and their implications:

- 1) Studying openings *definitely* can help your chess, no matter who you are. Any debate is about the degree to which it can help, and the opportunity cost of using your study time on openings rather than another phase of the game;
- 2) The stronger you are at chess, the more important openings are. The reason, of course, is that you are more likely to convert an advantage you get and less likely to make a colossal blunder that blows an opening advantage;
- 3) It is great that Chessable makes memorization so much easier, but be sure that you understand the moves you memorize. This can often be helped by working with a coach, an engine, or by playing through master games in your openings, as FM Terry Chapman likes to do. (There will be many more tips for how to use Chessable in Chapter 23 in Part IV.)

Beyond those shared facts is where decisions about one's approach to openings become more personal. As Willy Hendriks and others have said, it is unfortunate that we don't have any hard data to rely on when assessing the efficacy of studying openings.

But even though we don't have a large-scale study to rely on, we can and should look at our own games objectively and determine how often the opening is dictating the result of our games.

I don't want to punt entirely on issuing a verdict, so I will say that **players rated below 1500 who are looking to maximize their chess improvement, should not spend more than 20% of their time studying openings.** Furthermore, at that level, it pays to focus more on deeply ingraining opening principles rather than memorizing sequences. One can work to learn these principles by studying a Chessable course like IM Andras' Toth's *Chess Principles Reloaded*, or by studying the games of Paul Morphy.

If you are either a) over 1500, or b) equally concerned with having fun with your chess time and asserting your identity over the board, then by all means, study openings! In such a case, you can take heart in the fact that when studied properly, you *know* that knowledge of openings can help your chess. On the other hand, if you find studying openings to be a chore, guess what? Your tactics could probably use some work too!

## **In summation**

- Studying openings can help a chess player of any level, and the better you get, the more important they are.
- If you are rated below 1500, and you are looking to optimize your chess time, you shouldn't spend more than 20% of your chess time studying openings. Instead, focus primarily on playing serious games, game review, and tactics. Even without consciously studying openings, your game review should help your opening understanding improve over time.
- Whatever your rating, it is important to emphasize opening understanding over memorization to expand your chess

knowledge.

- Our ultimate goal should be to have fun playing chess, so if you love the sense of agency and identity that opening study provides, study them to your heart's content!

## Must you know endgames?

*When it comes to chess improvement, the biggest bang for your buck you can get is by studying endgames.*

– GM David Smerdon, award-winning author (Episode 30)

### **Different roads to endgame excellence**

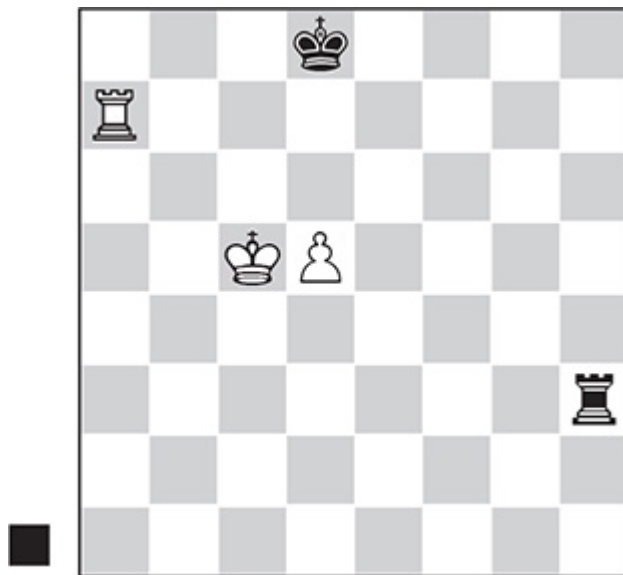
Specifics may vary, but most trainers agree on a general approach to chess tactics. Solve them. Every day. Trainers may have different preferences about which workbook or tactics trainer you use, but just make sure you do the work. In Chapter 3, we did draw some distinctions between calculation work and pattern recognition, but a large part of tactics study is showing up. Endgames, on the other hand, are a different beast. One can study them in various ways or not at all. A few of the potential approaches to endgame study follow.

**One can focus on studying theoretical endgames.** Historically these often have been learned from books, which show you an exact endgame piece configuration and show you how to win or draw it. Popular books and courses include *Silman's Endgame Course* at the lower to intermediate level, *100 Endgames You Must Know* by De la Villa at the intermediate to advanced level, and *Dvoretsky's Endgame Manual* at the master level on up. GM Magnus Carlsen, who many consider the greatest endgame player of all time, often cited the classic book *Fundamental Chess Endings* by GM Karsten Müller and IM Frank Lamprecht as a formative one for him during his developing years. Carlsen said:

*Fundamental Chess Endings helped me quite a bit in playing some key endgames better. When I was eleven years old, I was quite poor at endings, and then already at age thirteen or fourteen, that was becoming a strength of mine.*

It is rare for a thirteen-year-old to show such passion for the subtleties of endgames, and as an adult, Magnus turned his

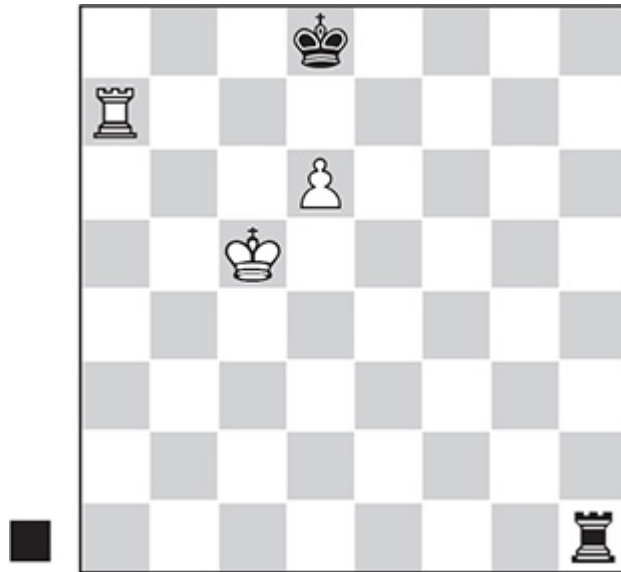
endgame ability into a competitive advantage.



Philidor, 1777

Most theoretical endgame books will include a position such as the famed Philidor position, a drawing method in some rook & pawn vs rook endings. It is likely familiar to many of you, and this is not an endgame book, but for clarity, I will briefly show the key idea here.

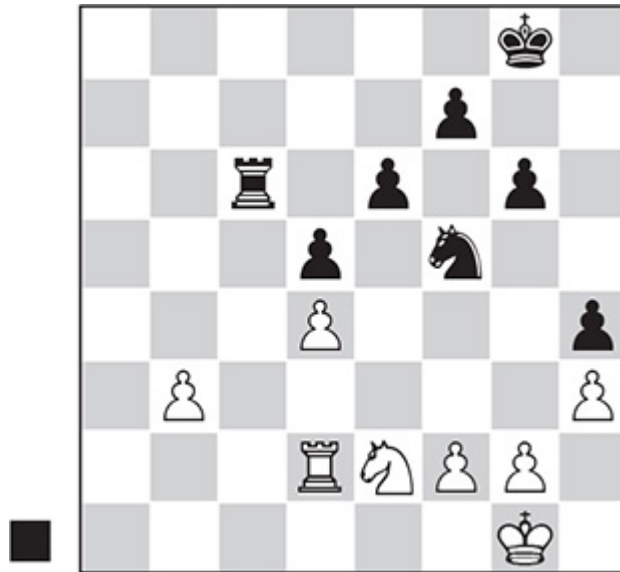
Black plays **1... ♖h6!**, with the idea of preventing the white king from advancing ahead of the pawn. Black will now keep the rook on the sixth rank until White advances the pawn, which is the only viable attempt to make progress. Once White advances the pawn with **2.d6** we play **2... ♖h1!**.



Philidor, 1777

In Silman's *Endgame Course*, the author IM Jeremy Silman aptly described that Black's plan is now to check the white king from behind 'like a berserk demon!' With the d-pawn advanced to the sixth rank, White's king now has no place to hide from the checks, and a move like 3. ♖a4 with the idea of interposing the rook would lead to a drawn king and pawn endgame.

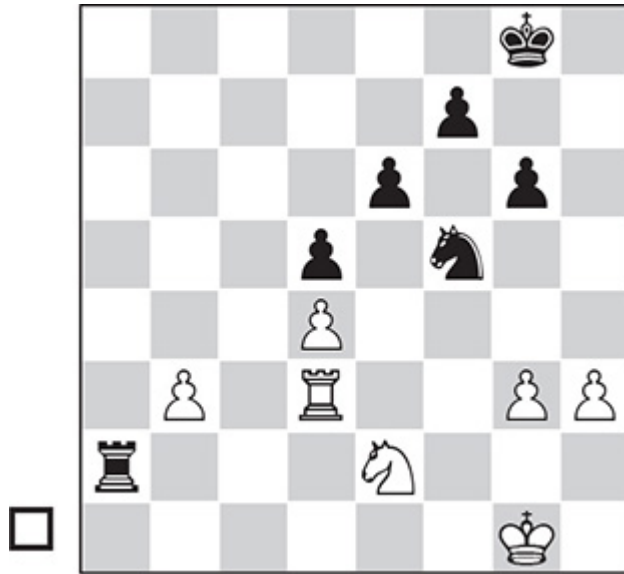
**One can instead focus on studying the strategy of endgames.** In these cases, rather than memorizing how to convert or hold certain positions, we see illustrations of general endgame principles. Multiple generations of chess players have learned these principles from books. Mihail Shereshevsky's canonical intermediate-level book *Endgame Strategy* is famous for a few endgame precepts, such as 'do not rush' and 'the principle of two weaknesses'. One can also learn endgame principles by studying the games of endgame specialists like Akiba Rubinstein or Vasily Smyslov. GM Vinay Bhat and FM Mike Klein have both said they learned a lot from studying the intermediate-level classic *Capablanca's Best Chess Endings* by Irving Chernev. It also was quite a formative book for me.



Lasker-Capablanca, Havana Wch 1921 (m/10)

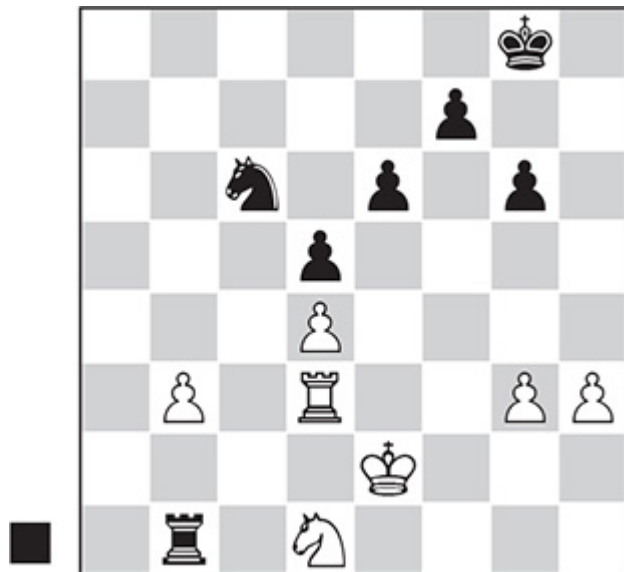
Both Shereshevsky and Chernev, among many other books, feature this quintessential endgame between the then reigning World Champion Emanuel Lasker and his successor José Raúl Capablanca, who slowly leverages his superior rook activity and better pawn structure to win. This endgame is referred to as ‘practical’, rather than ‘theoretical’, as one would not try to memorize it (like the Philidor position), but to learn from how to approach this type of position. Check out the aforementioned books for a fuller treatment, but I will share a few notes about this instructive moment.

**35... ♖b6!** This forces White’s rook off the second rank, since 36. ♖b2 ♖b4 would lose a pawn. **36. ♖d3 ♖a6!** With the white rook off the second rank, Black can now threaten 37... ♖a1+ followed by 38... ♖a2, again, winning a pawn. **37.g4 hxg3** Modern engines actually prefer 37... ♘d6, leaving White’s pawn structure more extended. **38.fxg3 ♖a2** Black’s rook is now dominant.



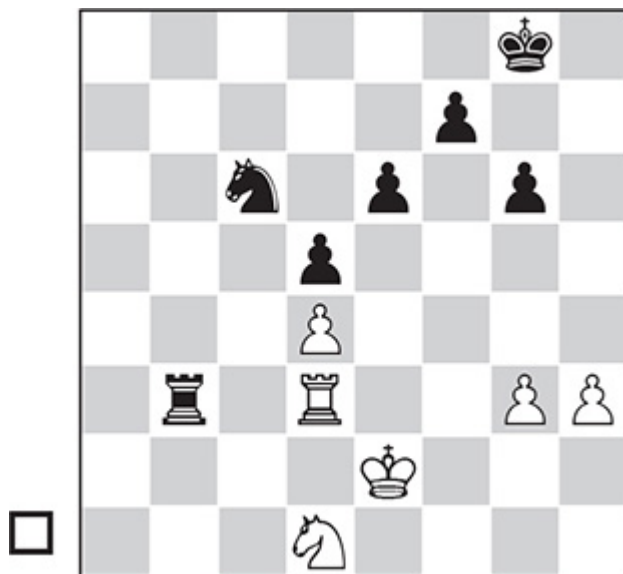
Lasker-Capablanca, Havana Wch 1921 (m/10)

**39.** ♖c3 ♜c2 Threatening 40... ♗xd4. **40.** ♗d1 ♗e7 The knight is now headed to the queenside. **41.** ♖c3 ♜c1+ Shereshevsky originally gave this move an exclamation, but the modern endgame master, José Raúl Stockfish, prefers 41... ♗c6 right away, keeping the white king hemmed in for a bit longer. Black is still winning with either move. **42.** ♜f2 ♗c6 **43.** ♗d1 ♜b1 **44.** ♜e2?



Lasker-Capablanca, Havana Wch 1921 (m/10)

After systematically probing White's weaknesses, and rerouting the black knight to the queenside, Black wins a pawn here with a cute tactic. 44. ♔e1 would have avoided immediate material loss, but the result was already inevitable. **44... ♖xb3!**



Lasker-Capablanca, Havana Wch 1921 (m/10)

45. ♖xb3 ♗xd4+ would fork the king and rook and win two pawns. Instead, Lasker played **45. ♔e3**. Having relentlessly probed Lasker's weaknesses, Capablanca eventually cashed in the extra pawn.

### **One can learn endgames by practicing them against engines.**

Chess engine expert and two-time British Champion GM Mathew Sadler did not mention specifically practicing endgames, but in our 2019 interview, he discussed his affinity for playing practice games against strong engines on his daily train commute. Practicing against engines has clearly worked for Sadler, who has maintained a rating near its peak well into his forties. One could also use engines to take the advice of GM Jonathan Hawkins in the excellent, endgame-centric book, *Amateur to IM*. (He was an IM when he wrote the book but is now a GM.) Hawkins suggests that whenever you want to learn a theoretical endgame, you should start by playing it against an engine or a training partner without studying it first. Hawkins writes,

‘In this way, you will see the problems in the position really clearly since you are already committed to thinking rather than memorizing.’ Due to their historical import as training tools, and the fact that they don’t become obsolete as quickly as opening books, a lot of this chapter is devoted to the relative merits of different endgame books, but learning endgames via engines is a valid and possibly underutilized way to learn.

**One can eschew studying endgames specifically and rely on gaining some endgame skills through general work on calculation, plus game analysis, both of which will include some endgames.** GM Keith Arkell is a relentless competitor, and an institution in British ‘weekender’ tournaments, who is especially known for his endgame prowess. When he has an equal endgame position after forty moves, he likely has you in his crosshairs. Keith told me (Episode 196), ‘There’s a lot of players going around saying “I nearly drew with Keith Arkell,” because they got a position which is near to equal after fifty moves.’ Keith’s excellent book, *Arkell’s Endings*, demonstrates his inspiring endgame acumen. Game after game features long wins from similar opening structures, in which he has gathered a lifetime of experience.

So, of course, when I interviewed Keith, I asked him which books unlocked the endgame cheat code for him. His answer might surprise you. ‘I’ve actually not read much endgame literature. **Whatever abilities I’ve got, I’ve acquired through practical play, tried and true. I’ve always enjoyed trying to grind down a long game.**’ Similarly, GM Noël Studer has said that he only read one endgame-specific book in his fifteen-year competitive career, ‘and I didn’t even finish that one!’

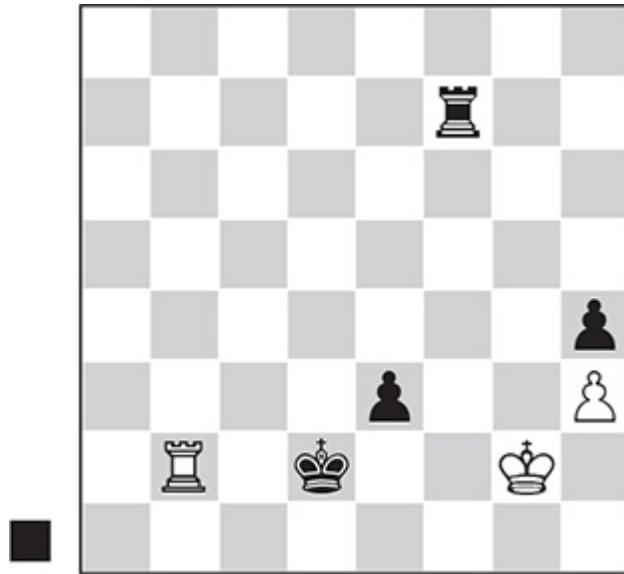
To further complicate things, these study methods (or the lack thereof) are not mutually exclusive, so if one is given the advice to ‘study endgames’, there is still a wide scope for how to proceed from there. One excellent book that is often recommended may contribute to further confusion, a book Hikaru Nakamura referred to simply as ‘The Manual’.

## **The most recommended endgame book**

*Dvoretsky's Endgame Manual*, by legendary Soviet trainer IM Mark Dvoretsky, is one of the most recommended books in *Perpetual Chess* history. It is a classic book which is already on its fifth edition and has earned its outsized reputation in the chess world. Dvoretsky passed away in 2016, but the book lives on. The 2020 edition was revised by GM Karsten Müller (who also co-authored the aforementioned *Practical Chess Endings*) with assistance from GM Alex Fishbein, who was a student of Dvoretsky's in the 1990s.

In the Foreword to the most recent edition, former World Champion GM Vladimir Kramnik refers to the book as 'the bible among endgame books'. And it is a beautiful book that contains both practical and theoretical endings, and even color codes the positions so that you know which might be worth memorizing. I have nothing bad to say about this classic book, except that it is so beloved by titled players that it is often reflexively recommended to lower-rated players as well. I highlight this point in order to illustrate the often conflicting nature of endgame advice which is dispensed. Let's begin with none other than GM Hikaru Nakamura's experience with this book (Episode 32):

*Dvoretsky's Endgame Manual is a fantastic book. I think it is a must-read for anyone who is 2300 or stronger, even if you're not going to remember everything. It's absolutely a fantastic book, and it is also useful, because a lot of these endgames do happen over the course of your career. You do end up in a lot of these very interesting rook and pawn as well as minor piece endgames.*



Carlsen-Nakamura, Airthings Masters rapid 2023

Ironically, on the day I was writing this, Hikaru Nakamura squandered a win against Magnus Carlsen with the natural looking, but incorrect, **90... ♖c3** instead of **90... ♔d1**, whereupon commentator GM Jan Gustafsson remarked, ‘rook endgames are too difficult for humans.’ The engine further explains that in this position **90... ♔e1** and **90... ♔d3** are also winning, because they continue to threaten the move, **91... e2**, but **90... ♔c1** is also a draw. If you are confused, don’t worry, this endgame confused Magnus and Hikaru as well!

Obviously, Hikaru is a special player, and for someone who plays the volume of games that he does, with such high-quality opposition, meticulous study is clearly worthwhile. As we poll a broader range of players, we begin to get more conflicting reports on the efficacy of amateurs studying books like *Dvoretsky’s Endgame Manual*. Let’s start with more praise:

*The book is so deep and so rich and you can get lost in it. And I should be clear, I haven’t nearly gotten through the whole book.*

– John Hartmann, award-winning US Chess journalist, Episode 120

*It’s very hard, but I have read it, and I think people are a little more intimidated by it based on its reputation than they should be.*

– Jason Cigan, USCF Master, Episode 125

*I love endgames, so my favorite book may be Dvoretsky's Endgame Manual.*

– GM Michael Krasenkow, former world top 10 player, Episode 116

There are also those who have been slightly more measured in their praise of this classic book. This is especially common for trainers who have worked with a wide range of amateur players and thus have likely encountered players who were recommended the book when they were not ready for its degree of difficulty.

*Dvoretsky's Endgame Manual is an amazing book. I ranked it as one of the top ten best chess books of all time, but it's often recommended to people that would, I think, do much better with an easier endgame book. It can be unnecessarily complicated at times.*

– IM Kostya Kavutskiy, ChessDojo co-founder, trainer, Episode 262

*I compared Dvoretsky's Endgame Manual to a car manual, because who reads a car manual from cover to cover? So why would you do it with the endgame book? You cannot just learn endgames by reading a manual. It doesn't work that way.*

– GM Davorin Kuljasevic, accomplished grandmaster, author of the excellent book *How to Study Chess on Your Own*, Episode 229

And finally, amusingly, we get even closer to the truth from a couple of very strong players and entertaining guests:

*I have always said I am going to read this Dvoretsky's Endgame Manual [laughs], but I still haven't read it!*

– GM Pontus Carlsson, Episode 29

And lastly, for the win!

*I only have Dvoretsky's Endgame Manual on my shelf to look cool when my friends come over. I never actually read any of it.*

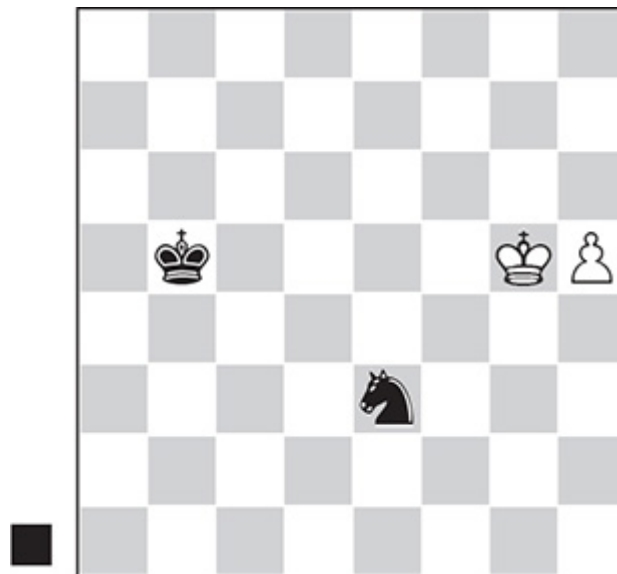
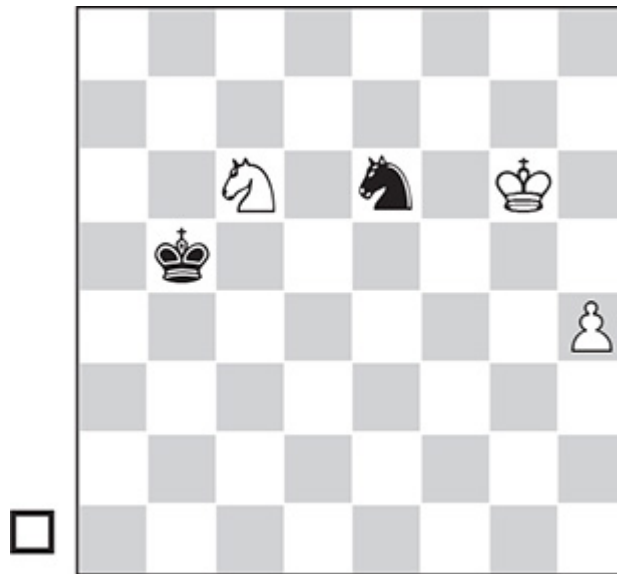
– FM Peter Giannatos, Episode 241

Although *Dvoretsky's Endgame Manual* is a great book, if you are rated below 1500, it should be far off your radar, and even at the 2000 rating level, it is best suited for the extremely enthusiastic or ambitious player.

## **What should we study instead?**

Despite my hesitation to recommend *Dvoretsky's Endgame Manual* for amateurs, some endgame books and courses are worth studying for players rated below 1500. *Silman's Endgame Course* is a very

digestible and cleverly-presented book. Its lessons are divided by the rating level of the material presented, so one can 'grow up with it'. Like *Dvoretsky's Endgame Manual*, it has been recommended countless times on the podcast, but for most club players, it is a better choice than Dvoretsky's notoriously challenging classic. The wildly popular *100 Endgames You Must Know* lies somewhere in between Silman and Dvoretsky in degree of difficulty. It actually has well more than a hundred endgames (198 trainable variations on Chessable), so completing it is an ambitious undertaking. This makes me worry that memorizing all of its positions may not be the best use of one's study time. Memorizing positions takes a lot of work, and when one of the positions finally occurs in your games (if it does), you may not recognize or recall the position. *100 Endgames* does have the benefit of being trainable on Chessable (as does *Dvoretsky's Endgame Manual*). A downside of *Silman's Endgame Course* is that it is only available electronically via Kindle, which does not enable you to play through moves or practice the endgames digitally.



Eingorn-Beliavsky, Kyiv ch-URS 1986

This is a fun puzzle from *Dvoretsky's Endgame Manual* illustrating the peculiarities of knight vs pawn endings (left diagram). After **69. ♖d4+!! ♜xd4 70. ♚f6**, the black knight cannot stop the white h-pawn. Play continued **70... ♜c2 71. h5 ♜e3 72. ♚g5!** (right diagram) **72... ♜c4 73. h6**, and Black resigned.

Once you have the basics in endgames down, further study can be a matter of personal preference. After all, endgames are mainly

differentiated from middlegames by having fewer pieces on the board. Endgames are still chess. They are still decided by outplaying the opponent, by seeing further ahead, or by making fewer mistakes. Of course, in endgames, there are sometimes subtleties in board geometry that come to the fore, but if you are a good calculator, you may find that you have a natural facility for endgames. Legendary tactician and Super GM Alexei Shirov wrote in *Fire on Board*, 'I believe that the endgame is my strongest area, perhaps due to my very concrete style.'

While being able to calculate like Shirov is an advantage in any phase of the game, figuring out a position without prior knowledge can be more challenging in the opening than in the endgame due to the dizzying array of variations that can stem from an opening position. Karsten Müller, who is a mathematician in addition to the world's leading endgame expert, said, 'Endgames are like pure mathematics (where there is a fundamental truth), and openings are more like probability theory.'

### **Let your games be your guide**

So, where does this leave us with regard to how much to actually study endgames and how to go about it? Let your games be your guide! As with many aspects of chess, an unbiased, macro-level look at your games can help you reveal how your endgame skills compare to other aspects of your chess game. Are you frequently squandering winning advantages? If it is determined that endgames are, in fact, a weakness for you, that still doesn't resolve the question of *how* to study endgames.

My advice is similar to that for building pattern recognition. Below 1500 or so, it is important to 'lay the foundation' with some of the fundamental endgames in a book like Silman's. IM John Bartholomew also has a great free Chessable course called *Endgame Bootcamp* and a worthwhile YouTube playlist called *Chess Endgames*. Once you get beyond those levels, I lean towards the Keith Arkell approach. Do your best to improve at endgames by studying them every time they occur in your tournament or serious games. This advice was also given by the award-winning author, GM

Axel Smith. In the excellent improvement primer *Pump Up Your Rating*, he advises, **‘The best way to practice endgames is to play long games, decline draw offers, and analyze them afterward.’** Of course, the advice to play long (time-control) games and review them rigorously is good improvement advice for any aspect of your game and need not be specific to endgames.

Nonetheless, if you have a natural affinity for endgames, you should embrace it, as you should with other aspects of the game. It was popular YouTuber John Bartholomew (Episode 26) who first made me aware of the excellent book *Amateur to IM* by GM Jonathan Hawkins. This book focuses on how Jonathan became an International Master in part by taking a rigorous approach to studying and understanding endgames. When I read Shereshevsky’s *Endgame Strategy*, I enjoyed it so much that I wanted to read more, but if you do not have a similar experience with such a book, it is reasonable to learn the basics and then to review and work on endgames only on an as-needed basis when they inevitably appear in your serious games.

## In summation

- There is less consensus about how to study endgames as compared to tactics or openings.
- *Dvoretsky’s Endgame Manual* is a great book, but it is often recommended to players who might be better off with a less complex resource. GM Hikaru Nakamura recommended the book specifically for those over 2300.
- *Silman’s Endgame Course* is a great resource for those looking for something easier than *Dvoretsky’s Endgame Manual*, especially for those rated below 1500. A downside is that there is no digital version that allows you to incorporate engines or practice key positions.
- Since there is no clear consensus among top players and trainers on how to approach endgames, you can let your game results and your enjoyment level dictate how you approach them.

## **Mimicking the masters: do you still need to ‘know your classics’?**

*Come mothers and fathers, throughout the land. And don't criticize, what you can't understand. Your sons and your daughters are beyond your command. Your old road is rapidly agin'. Please get out of the new one, if you can't lend your hand. For the times they are a-changin'.* – Bob Dylan

### **Studying the greats is a tried and true way to learn**

In the era of Chessable, TikTok, and tactics trainers, there are still legions of chess players who swear by learning from the legends. ‘Knowing your classics’ has been a staple of chess improvement for seemingly all of the World Champions up through Magnus Carlsen. To cite just one representative quote of many from my interviews, chess bibliophile and Brazilian GM Rafael Leitão (Episode 147) regaled me with tales from chess history and said, ‘Every good chess player must have a good grasp of the classics.’

And historically, he has been right. For example, one can see the thorough grasp of chess history that former World Champion Garry Kasparov has when you read his canonical *My Great Predecessors* series. Likewise, when Magnus Carlsen took a test on historically significant chess positions, he displayed a staggering recall of not only the tactical patterns, but also the historical details of the games.

At the strong amateur level, learning from famous games is also a study method which has many successful adherents. FM Nathan Resika is an extremely rare chess player who went from rote beginner to the master level in adulthood over the course of seven years in his twenties. When I spoke with Nathan, he drew an interesting parallel between his approach to chess improvement and

that of his father, Paul Resika, who has had a long and fruitful career as a painter. Nathan said (Episode 204):

*My father's an artist, right? He's a successful painter. He's ninety-two. He has studied his craft. He was successful in painting because he's been single-minded. He is similar to Bobby Fischer in that he's trained classically. He knew what he wanted to do since he was eleven... He said he used to go to the Metropolitan Museum, and he would go in front of a Rembrandt or a Renoir and he would study and copy the master. And that's the way I look at chess. Really understanding one game of a great master is better than playing one hundred of your own tournament games. So that's his philosophy, and that's what rubbed off on me. Like, you humble yourself, but you don't just want to go through the game. You have to go through it thinking, what would you do on every move?*

I was struck by Nathan's emphasis on active rather than passive learning, even while playing through the games of others. Other accomplished improvers that I have interviewed have highlighted a similar approach.

Fred Wilson is a lifelong chess lover who earned the title of National Master at the age of seventy-one! Unfortunately, the historical records are not easy to verify, but Fred is on a very short list of people in US Chess history to achieve the USCF master title as a septuagenarian. A chess bookseller, author, and chess teacher by day, Fred spends his life ensconced in chess, but he credits his steady incremental improvement in part due to a daily routine of replaying chess games. Fred told me (Episode 86), 'Almost every day after I get up, I play over games for an hour to two hours. It is something that I enjoy, and I don't consider this type of study work.' Fred went on to mention that he selects games to review based on the openings he plays, like the King's Indian Defense. He cherishes this routine and believes that it has helped his chess.

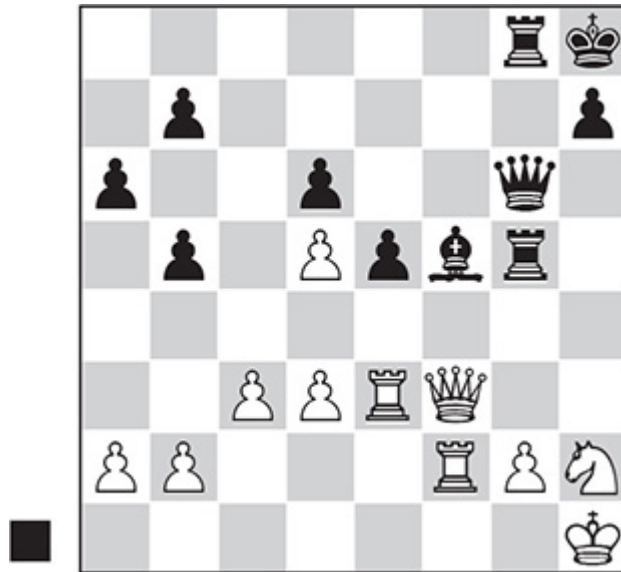
### **The benefits of 'solitaire chess'**

Author and American Grandmaster Alex Fishbein (Episode 291) told me that he also likes to study the games of the greats but with a 21st-century technological twist. He uses a function on Chessbase called 'Replay Training' that allows you to play through a game while it hides the next move from you. (You might have seen some YouTube videos where a similar game review is referred to as

‘Guess the Move’, and it is also often referred to as ‘solitaire chess’. Note that there is a commercially available mini-game with the same name by ThinkFun, but it is unrelated to this method of study.)

The idea of solitaire chess is that you play through a game by pretending you are one of the participants in the game. You guess the move for every single move of a game, and after you have made your guess, you uncover both the move that was played (and find out whether your guess was right), and the other side’s reply to the move that was played. If you use Chessbase Replay training, the program will even give you a hint if you ask for it, such as the type of piece that was moved. (You can also play solitaire chess using Lichess studies.)

Fishbein recently studied the games of GM Viktor Korchnoi via solitaire chess because Korchnoi is a notable example of an elite chess player who peaked in his late forties, and played at a high level into his seventies. As a 54-year-old who still competes actively, Alex wondered, ‘How did he do that?’, and played solitaire chess ‘as Korchnoi’ to uncover the explanation. And in this case, what Alex discovered was surprising. Alex said, ‘In his late forties, Korchnoi started to play like a wild animal. You see a person constantly trying to complicate the position, even when he has the advantage. I think he did that intentionally because he wanted to remain sharp when he was older.’ As Alex’s observations about Korchnoi demonstrate, you can learn a lot from solitaire chess!



Caruana-Korchnoi, Gibraltar 2011

As a capstone to a career of achievements, a 79-year-old Viktor Korchnoi beat Super GM Fabiano Caruana, who was 61 years younger than him at the time. Korchnoi seized the initiative in the early middlegame, and here grabbed a pawn with **29...♗xd3!**. Fabiano can't take the bishop due to 30...e4. Korchnoi converted relatively cleanly from there. In the Foreword to Korchnoi's entertaining autobiography *Chess is My Life*, Garry Kasparov wrote, 'In all of chess history you cannot find another player with his long-lived discipline, vigor and ferocity. He is truly one of a kind.'

GM Gregory Kaidanov was one of the strongest players in the United States and a top 20 player in the world at his peak. Now a highly respected trainer, Kaidanov is also a strong proponent of learning from legends via 'solitaire chess'. In Episode 295, he told me:

*Solitaire chess has been part of my training, so I strongly recommend it to everyone, regardless of level and age. I started doing that when I was around age thirteen. Somehow it is a less known method of training. Most people have either never heard about it or heard about it but never did it. But I find it extremely useful, and I can go on explaining the benefits of it and how to do it correctly. But that's a big part of my work. Over the years, I started using this method. I studied games of a humongous number of players throughout chess history. And it allowed me to understand their style and learn many things about them, not only chess-wise but sometimes even certain personality traits and so forth. So it's a lot of fun. And of course, it's very useful.*

Gregory went on to go into greater detail about his approach to solitaire chess. He uses a chess clock and even tries to imagine that he is the player whose game he is studying. Gregory said that because he has been playing solitaire chess since he was a kid, playing it still gives him a childlike enthusiasm and curiosity when studying. Of course, this method of studying is not for everyone, but I for one, was convinced by the enthusiasm of grandmasters Fishbein and Kaidanov.



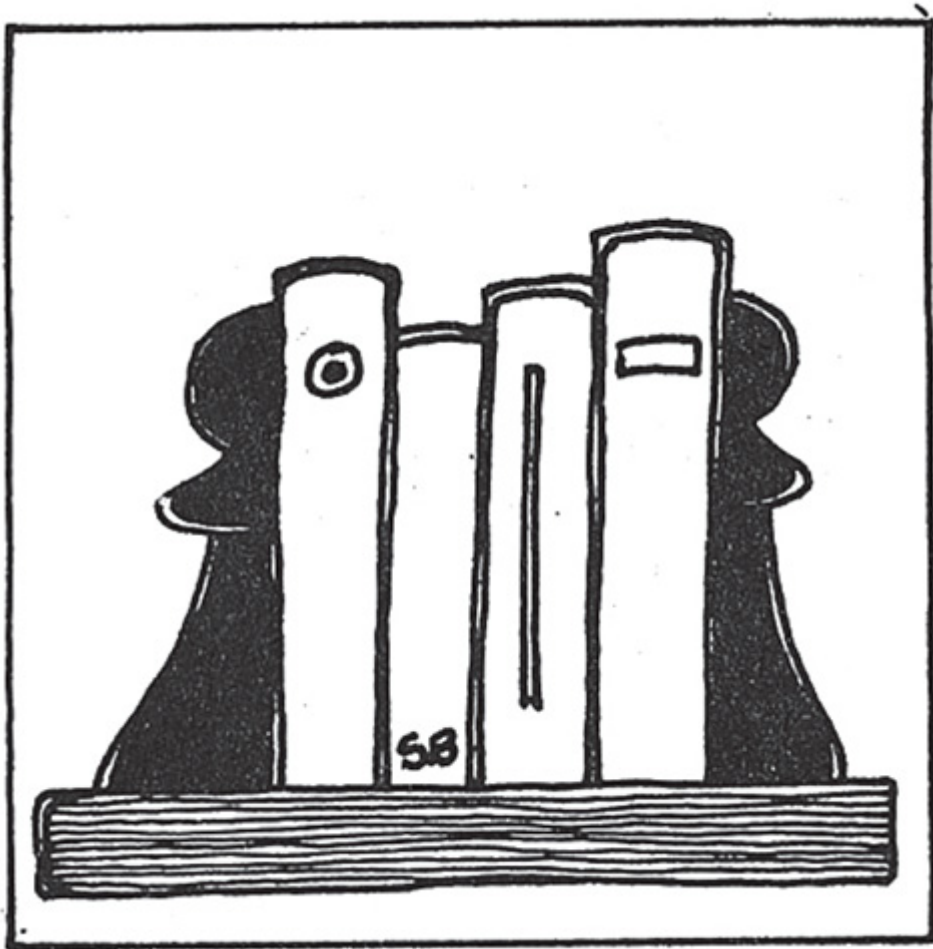
### **Kaidanov-Anand, Moscow 1987**

This is what Chessbase's Replay Training looks like for Kaidanov's most famous move. White to move and mate in three vs Anand. (The answer is 25. ♖xf7+!! ♜xf7 26. ♗g6+ ♘h8 27. ♜h8#)

### **Magnus and the classics**

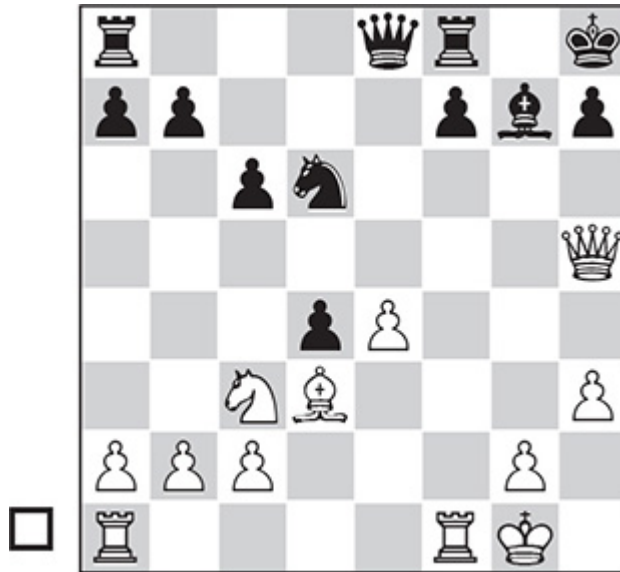
Magnus Carlsen was born in 1990, so he came of age just when computers were starting to significantly influence chess education. However, he attributes much of his chess education to reading chess literature. In an enlightening interview on the Lex Fridman podcast, Magnus told the story of his own love affair with chess books. He said:

*At the school where I had chess training, there was this massive chess library. My coach told me, 'You can have anything you want, just pick out books you like, and then you give it back the next time I see you.' I just absolutely raided them, and then in my next tournament, I would try out one of the openings from that book if it was an opening book and so on.*



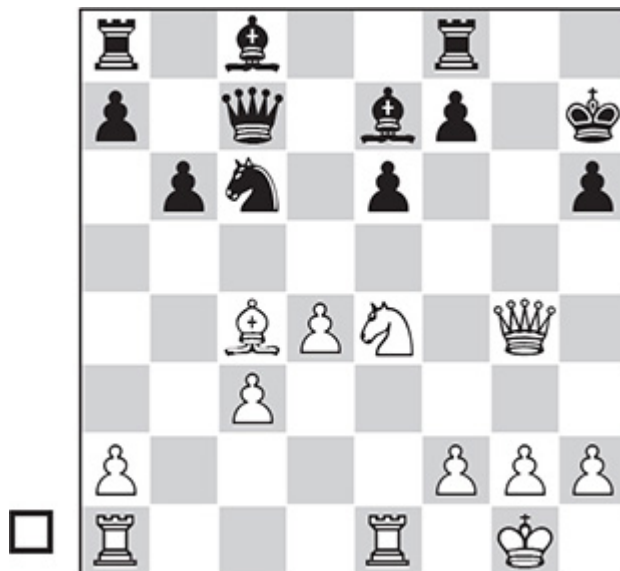
Magnus' good friend, GM David Howell, is another strong proponent of learning from the classics. David hasn't quite made it to World Champion, but the three-time British Chess Champion has achieved more in chess than 99.9% of us ever will. As David has explained, he became great partially because of his own awareness of the chess classics. He talked about a particularly memorable moment for him in his instructive video series *Winning Grandmaster Methods: How I Reached 2700*. I asked him to elaborate on that story in our 2020 interview (Episode 176). David said:

*One thing I try to instill when I coach younger players, is that they do have to keep up with top games. They do have to read through these classics because it's just an easy way to pick up these ideas, to pick up patterns that come up much more than you'd expect. And I actually use this idea of blocking the pawn on f7 from Fischer vs Benko in one of my games. When I played it, [Super GMs] Anish Giri and Wesley So were watching, with a big crowd around that board. And it is definitely one of my proudest moments.*



Fischer-Benko, New York ch-USA1963

With the legendary move **19. ♖f6!!**, Fischer gives up his rook in order to block the f-pawn and prevent it from closing the b1-h8 diagonal. If Benko had taken the rook with **19... ♗xf6**, Fischer would have played **20.e5** followed by checkmate on h7.



Howell-Bitalzadeh, Wijk aan Zee 2009

In each game the blocking of the f-pawn forces a mating net. If after **16. ♖f6+!!** Bitalzadeh had played **16... ♗xf6**, checkmate on h7 would

have followed after 17. ♛d3+ ♔h8 18. ♚e4.

Just as David tries to instill a passion for the classics amongst British youth champions, Greg Shahade has observed a trend in his work at the US Chess School with top American youths. Greg has noticed that interest in chess history is often an early indicator of chess achievement. In Episode 107, Greg told me:

*It's not so much that the kids want to know chess history; it's about caring so much about chess that you need to know everything. It's correlated like this. Knowing these facts [about chess history] is not going to make you strong. If you read Lasker's biography, you're not going to gain a hundred points. The point is, you have to be so obsessed with chess that you just want to know everything, right?*

Although many of us reading this will not, in fact, be world champions, there is much to learn from what Greg said here. To be great at anything, it cannot hurt to have an insatiable thirst for knowledge about your area of interest. Later in the conversation, Greg shed more light on what separates the brightest chess talents that he sees. He said:

*Well, tactics training is good up to a certain point, but once you're past the rating of 2000, there's so much more you have to do. So I take notice of students who are totally immersed in chess... For example, I had a student, Eddie Tian, who is one of the top players in the US for his age. In a camp recently, he knew many famous games that none of the other kids his age did. And kids like this devour information, for example, My Great Predecessors. They're going to read every single one of those books.*

Greg was so insightful on this topic that I have to share one more of his stories. He said:

*These kids just do all the right things on their own, I mean, there's this kid, Eric Yuhan Li from California, I think he's ranked number three in the country. We'll have a chess camp, and during the break, when everyone's playing Bughouse [an addictive team chess variant that kids love to play for fun], you know what he's doing?... He gets out some chess book and is in the hallway studying his book... And I'm like, 'What are you doing?' [laughs] And this is why he's great. These kids just have this endless thirst for more and more knowledge. And at that age, they just soak it all up. And I don't know how some of these kids are getting so good. These are just examples I can see with my own eyes, because when you're in a class and you're showing a game and there are one or two people who just clearly have more chess culture, knowledge, and stuff like that, you realize that there's a reason why they're the number one or number two player for their age in the country.*

Those stories from Greg have stuck with me for years, but before you order ten chess history books to improve your rating, I have some counterexamples to share.

### **It is only the moves that matter**

GM Hikaru Nakamura was born in 1987, a few years before grandmasters Howell and Carlsen, but he is among the earliest and most prominent examples of elite players who learned chess in the 'new school' way. Hikaru came of age just as the Internet Chess Club, or ICC, was ascendant. The ICC was the most popular chess-playing site at the time, and Hikaru was a ubiquitous and fierce presence on the server. Often playing under the name of 'Smallville', a popular Superman-based TV show at the time, a young Hikaru played thousands of chess games per year and climbed the online rating ranks rapidly. Hikaru played so much because he loved the game, but doing so also enabled his superbrain to assimilate chess patterns at a breakneck pace.

In our 2017 interview (Episode 32), Hikaru told me, 'I've always found that I learn best from being in the actual situation and actually playing.' Of course, Hikaru didn't limit himself to online play. He was a constant competitor in the U.S. tournament scene and no doubt benefited from the facts that his stepdad, Sunil Weeramantry, is a FIDE Master and a well-regarded author and chess teacher, and that his older brother Asuka was a fast-rising scholastic champion in his own right. Nonetheless, Hikaru's early emphasis on online play presaged a shift in how many chess players learn. Nowadays, online chess learning is the norm rather than the exception. Tournaments are still vital, but many kids aren't as inclined to learn from books.

On this point, GM Jesse Kraai told a funny, illustrative story in our 2017 interview (Episode 44):

*We're moving more and more away from the printed word [every year.] Years ago, at some chess camp, I gave a ten-year-old kid a book as a prize, [as a substitute for] a trophy. And I gave him a book and he looked at it, and not as a joke, but in all earnestness, he said to me, 'This isn't very user-friendly!' [laughs] That's how this new generation sees it, and they want answers faster than flipping through a book.*

When high-level trainer GM Srinath Narayanan began working with top young talent Arjun Erigaisi, who is now one of the top juniors in the world, he discovered something shocking. **‘He just absolutely didn’t know any of the top historical players and hadn’t seen their games.’** In an interview on the Chessbase India YouTube channel, Srinath told IM Sagar Shah, ‘This was an absolute eye opener for me that someone could be so strong without having seen the classics.’ Moments later, in the same interview, Srinath memorably said, **‘It’s not about the names behind the moves. It is only the moves that matter.’** And, as Sagar Shah was quick to point out to Srinath, learning from the moves rather than the person who first showed an idea, is also how the AlphaZero engine learned the game and became one of the strongest engines in the world.

At the amateur level, I have also noticed in more recent *Adult Improver* interviews that ‘*The Queen’s Gambit* generation’ of chess amateurs are making fast progress in chess without an undue emphasis on chess classics. Braden Laughlin and Lula Roberts are examples of twenty-somethings I have interviewed who have gained hundreds of points quickly while primarily learning digitally.

What all of these stories illustrate to me is why chess improvement can be so confounding. We know that countless star players and accomplished amateurs have benefited immensely from studying our game’s rich legacy. Over the years, these players have often told us the value of following in their footsteps. But in modern times, the rules are being rewritten. Neural network engines and some of the chess world’s rising stars are improving rapidly without books and without emphasizing chess history.

So this is another case in chess study where you can comfortably gravitate toward what you enjoy. I love chess history and books and it will always be a regular part of my chess diet. But many from the younger generation are doing just fine without them, so if you prefer to eschew the dusty books, it probably won’t hurt your game too much. And, of course, in the modern age, one can try to have the best of both worlds and combine modern tools with an appreciation of the classics. So whether playing solitaire chess on Chessbase,

reading Kasparov's *My Great Predecessors* on Chessable, or learning classical tactical sequences via *The Woodpecker Method*, one can study the classics and learn digitally at the same time.

### **In summation**

- Studying the games of the great has long been a favored study method of both world champions and accomplished amateurs.
- Solitaire chess is a great way to learn from the masters while ensuring that active, rather than passive, learning occurs.
- Due to the proliferation of excellent digital learning tools, the way that chess is studied is changing. Neural net engines and some newer generation players prove you can become a great player without 'studying the classics'.
- Nonetheless, chess history is pretty cool, and I recommend learning about it whether or not it helps you optimize your game!

## **Board visualization and blindfold chess: do I need to be able to stare at the ceiling while calculating?**

*If we can set aside our insecurities that we are not good in calculation or visualization, and if we can, with an open-minded approach, learn these skills, I think we can see quite significant improvement in our skills.*

– GM R.B. Ramesh, author and renowned trainer (Episode 283)

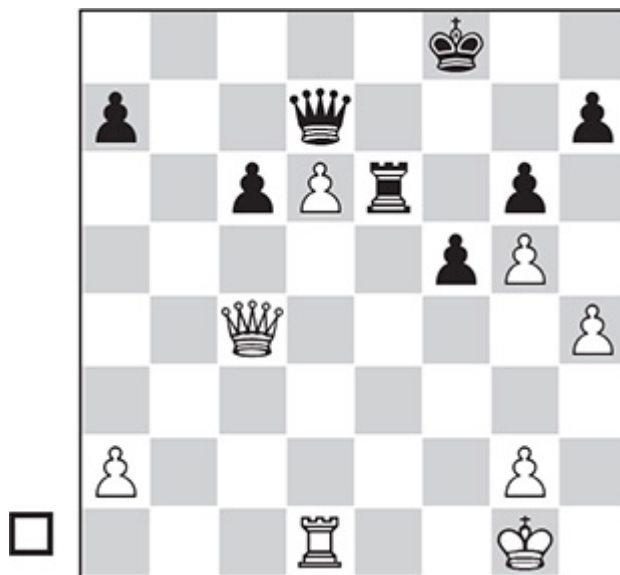
### **Visualization vs calculation**

Visualization in chess is closely related to calculation but distinct. Whereas calculation involves looking at the board and envisioning potential sequences in your mind, visualization is specifically the ability to picture a chessboard in one's head, even with eyes closed. One of the biggest challenges for those who take up chess in adulthood is developing the ability to visualize the chessboard. This starkly contrasts with professional chess players, who invariably learned chess as youths, as a native language of sorts. Tasks such as naming the square color of a random square on the board without a board nearby are second-nature to those who learned chess as kids but often require effortful learning for people who learned chess as adults. The difference in the ability to visualize a board magnifies as we move on to more challenging tasks like playing a chess game, or even multiple chess games blindfold, merely by being told the board coordinates of a move.

Grandmasters like Hikaru Nakamura and Vasyl Ivanchuk are so adept at picturing a chessboard that they are known for *not* looking at the board when calculating during a game, often staring at the ceiling. They can remember the position on the board with minimal effort, and some grandmasters have said they get distracted when looking at the pieces where they are. Just as hockey great Wayne

Gretzky famously 'skated where the puck was going' rather than where it was, chess greats visualize where the pieces will be rather than where they are.

The ability of many grandmasters to play multiple games blindfold simultaneously is an even more impressive feat, especially to non-players of chess. There is a rich history of chess players performing blindfold chess feats as either a party trick of sorts or as an exhibition. In pre-Twitch stream days, players like Harry Pillsbury and George Koltanowski often put on paid blindfold simultaneous exhibitions to dazzle chess fans and, often, help financially support themselves.



Pillsbury-Wilcox, New Orleans blindfold simul 1900

**32. ♖xe6!** (sacrificing the queen to free the d-pawn for promotion) is not such a dazzling tactic, except for the fact that Harry Pillsbury played it as part of a seventeen-board blindfold simultaneous exhibition! (Meaning he was playing this game, and sixteen other blindfold games all at the same time.)

More poignantly, after World War II, legendary Polish GM Miguel Najdorf organized a record-breaking blindfold exhibition to generate newspaper headlines. Najdorf, who was Jewish, hoped to alert his

family that he had relocated to Argentina during the war. Alas, unbeknownst to Najdorf at the time, his family members had already perished in concentration camps.

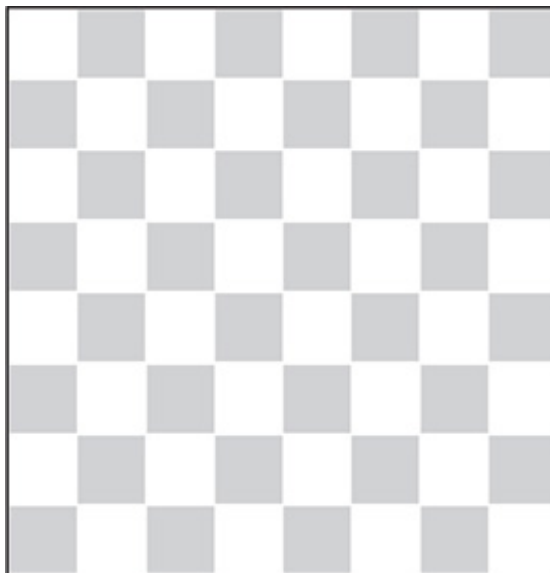
In recent years, the term 'blindfold chess' has become synonymous with the name of GM Timur Gareyev, aka 'The Blindfold King'. Timur is in the *Guinness Book of World Records* for playing an astounding forty-eight players blindfold at once. Timur even rode a stationary bike while playing these games, as if to mock us mortals. When I asked him (Episode 20) how he performs these feats, Timur simply confessed, 'I think it should be fairly obvious that I have a certain predisposition to be able to play blindfold chess and that I excel at it.'

Meanwhile, for adult learners, the struggle to visualize is real. I was lucky to start tournament chess when I was twelve years old, and while I am no Timur Gareyev, I have passable board visualization ability. However, it is nothing special compared to my rating peers. For new adult players, it takes conscious, repeated work to learn to picture a chess board in one's head. Learning board visualization can be thankless and cognitively intensive work, but as you get serious about chess, it is worth laying a solid foundation for your visualization skills. Just as studying verb conjugations can make it easier to learn a language, developing a facility for visualizing a chessboard can make calculating easier for the rest of your life as a chess player. Luckily, a lot of good advice for learning to improve at visualization has been shared on the podcast. Let's dive into it:

## **Ways to work on your visualization skills**

- 1) [Chess.com/vision](https://www.chess.com/vision) is an exercise that simply names board squares, one after another, and then times you as you click after each named square. (As in, it would flash 'e4', and as soon as you click on the e4-square, it flashes another square name. You are timed and scored in order to work to improve your ability to identify squares more quickly.)

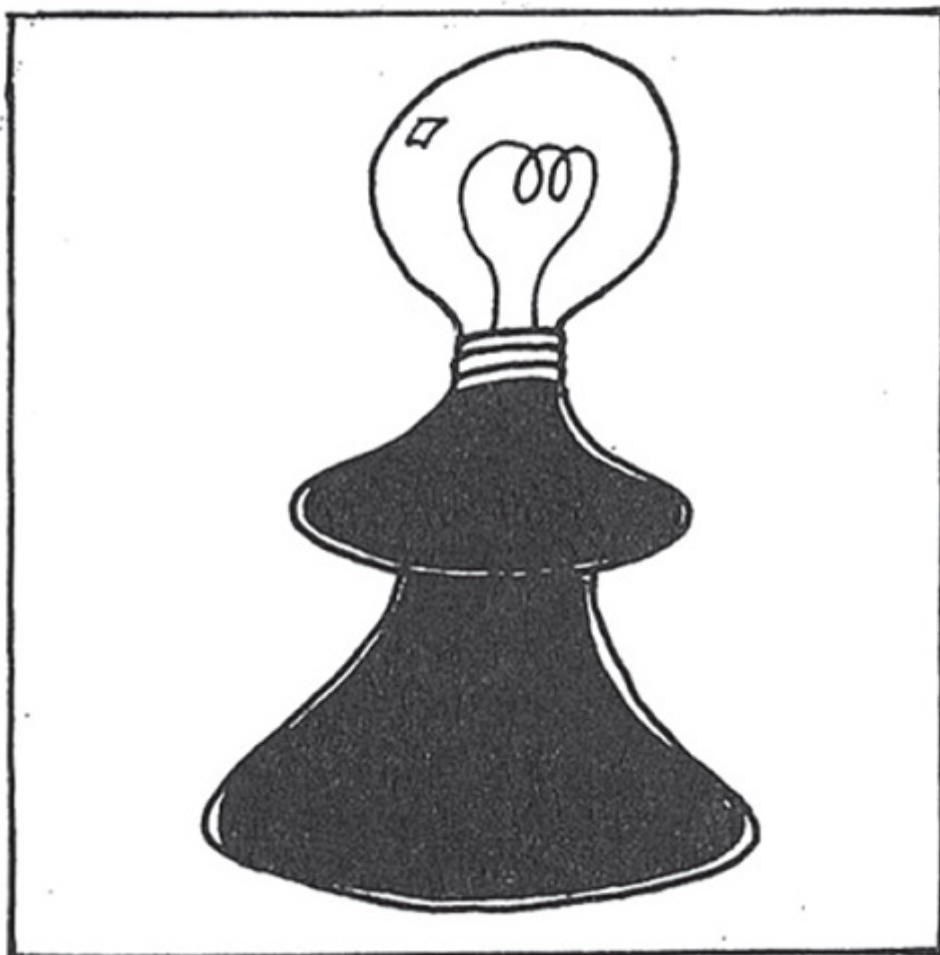
2) Books! *Learning Chess: Workbook Step 2 Thinking Ahead* by IM Cor van Wijgerden and Rob Brunia is a fantastic workbook with visualization drills to keep you busy for months. It is well suited for anyone below 1600. If you finish that book, Martin Justesen has two good books for club players centered around blindfold chess puzzles, and I also recommend the *Invisible Chess Podcast*, which presents blindfold chess puzzles to be solved in audio form.



Among the many creative puzzles, in *Learning Chess: Workbook Step 2 Thinking Ahead*, the authors ask questions like the following: If White has a queen on f6, and a bishop on g6. And Black's king is on h8 (on an otherwise empty board). Is the black king checkmated or not? (It is not!)

- 3) John Neely's *Visualize* series on Chessable is a good resource for novice and intermediate players who want to work on their visualization skills. It presents a position to you and then asks you a question 'set in the future,' i.e. after the following 2 moves are played, do you see a tactic?
- 4) Practice! Both Lichess and Chess.com have blindfold chess settings, and there is no better way to improve than to suffer through some games. These features are not exactly like 'pure'

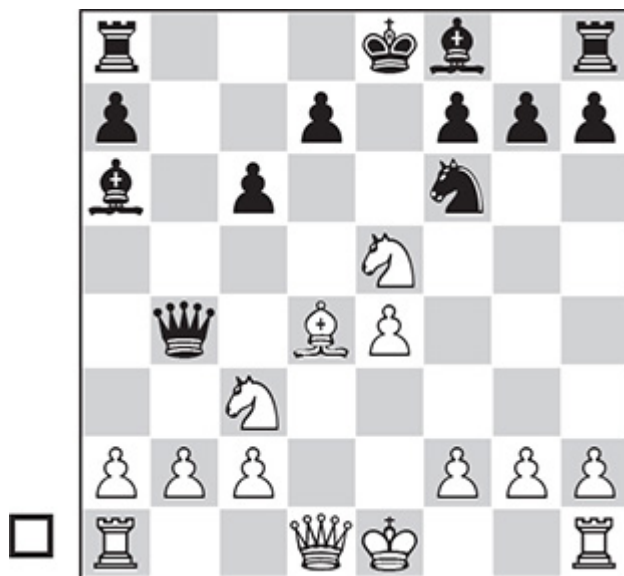
blindfold chess, as you see a blank board, making a game easier to play. If you have a friend who will play you without a board and you can play whole games, all the better.



Of all these recommendations, for ratings between 1000-1600, I would highlight the *Learning Chess: Workbook Step 2 Thinking Ahead* book as the most indispensable. We will say more about the *Chess Steps* series as a whole in Chapter 19 on book recommendations, but this particular workbook can be done as a stand-alone, and it is vital for reaching the core competency necessary for chessboard visualization. Dr. Nick Vasquez is an emergency room physician who decided to take his chess hobby more seriously as a way to escape the professional stresses of work

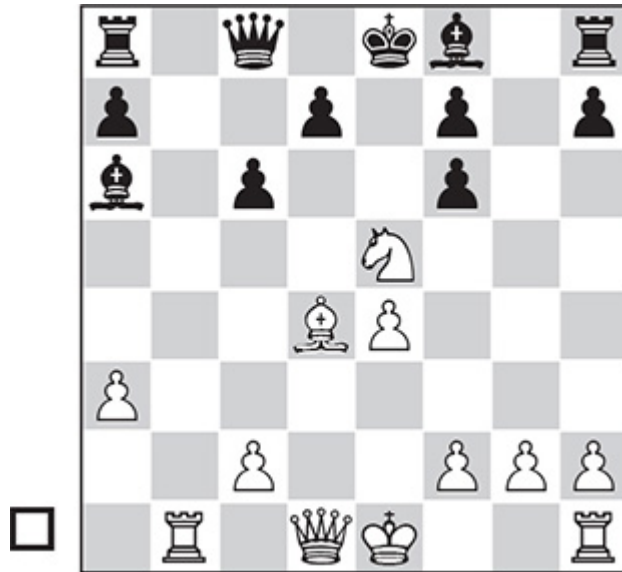
during the Covid pandemic. Here is what Nick said about the benefits of studying this book (Episode 286):

*I remember the moment where I felt like I was actually making improvement, it was by doing the workbook Step 2 Thinking Ahead. Previously I had never really worked on visualization. I never really worked on trying to imagine the board after a couple of moves. All of a sudden I realized, wow, there's this whole other game that I haven't been playing! Chess is not just 'move the pieces around and see what tactics you can make'. There's a lot to think about. And that was the opening of the door for me.*



Vasquez-Novik, Phoenix Rapid 2021

Shortly after Nick Vasquez began working on *Step 2 Thinking Ahead*, he was required to do just that in his second ever OTB tournament. In the diagrammed position, rather than play instinctively, without calculating, as was his prior habit, Nick calculated that after **10.a3!** ♟xb2?! **11.♘d5!** (discovering an attack on the black queen) **11...♟b7** **12.♖b1!** ♟c8 **13.♘xf6+ gxf6**, he would have ample compensation for the pawn sacrificed on b2 due to a lead in development, a better pawn structure, and a safer king. That is what occurred in the game and Nick went on to win.



Vasquez-Novik, Phoenix 2021

After 14. ♖d3, Nick was finally able to castle and he eventually consolidated his advantage, although it turns out the engine likes 14. ♗h5! here even better, as f7 can't be guarded, and 14...fxe5 would allow 15. ♗xe5+, picking up the rook on h8.

### How to learn to play blindfold chess

For those who want to go deeper into visualization, many helpful insights have been shared on the podcast. USCF Master Elliott Neff is a very strong player, but by his own admission, he is not a natural genius like Timur Gareyev. Elliott did a lot of work on his blindfold visualization skills partly because he recognized that blindfold was a useful skill to showcase when doing promotional events for his successful chess education organization, Chess4Life. Anyone interested in improving their blindfold game should listen to our interview and check out Elliott's YouTube channel (called Chess House), but I will share a few highlights of Elliott's advice.

Elliott recommended a very patient approach to building his skills. He suggested starting with mini-drills, like trying to get a knight from a1 to a2 in the fewest possible moves in one's head and progressing to more challenging drills from there. Similarly, Elliott would play

blindfold for a handful of moves at a time and then advance the pieces forward on a board until he reached a point where he was comfortable playing entire games. Now Elliott can play five games at once blindfold without much difficulty!

### **Beyond the basics: is it worthwhile to train blindfold?**

Blindfold chess is undoubtedly a cool party trick, and it is better to be a great visualizer than not, but it is hard to know whether it is an efficient way to study once one has the basics down. When I asked Elliott Neff (Episode 94) if all of his blindfold training improved his game, he answered that he did think that it helped, but as a busy working dad, he was not playing much serious chess at the time, and his primary goal was not to increase his rating. Nonetheless, Elliott found it worthwhile, as he felt that working on the ability to visualize and think ahead was a helpful skill beyond the chessboard.

If you are primarily interested in maximizing your chess improvement time, there is always a question of opportunity cost. 'If I spend x hours mastering blindfold, will it help my chess as much as if I spend x hours doing more traditional chess study?' Honestly, this is another case where the opinions of top players and trainers run the gamut. GM Judit Polgar is possibly the quintessential example of someone who worked on blindfold visualization from a young age, and rising American chess star GM Christopher Yoo, among many others, has followed in her footsteps. GM Wojciech Moranda told a fun story of going on childhood family hikes in the woods and constantly working on visualizing a famous chess game during that hike to alleviate the boredom he felt. In other words, he worked on blindfold chess only when no other form of chess was available!

On the other hand, eight-time US Women's Champion, GM Irina Krush, told me (Episode 74), 'I have done no blindfold training in my life.' As one of the most accomplished chess trainers in the world, R.B. Ramesh is always worth listening to on these questions. When we discussed blindfold exercises on *Perpetual Chess* (Episode 283), Ramesh drew the distinction in this way: when one plays OTB chess

they can see a certain position, so it is important to do visualization work from a certain starting position, but not necessarily to play an entire game blindfolded from scratch. This is reminiscent of Elliott Neff's training advice to practice visualizing changes in a position a handful of moves at a time, and is also the way that Chessable's *Visualize* puzzles are presented.

FM Peter Giannatos, ever the straight talker, was skeptical of blindfold training as a way to improve one's overall chess game in our 2021 interview:

*I never did blindfold chess. And even to this day, I'm still terrible at it. And I know many instructors recommend it because, in theory, it sounds like a great way to help you visualize. But I wonder how much they actually did it.*

I am inclined to agree with Peter and advise against spending a ton of time on blindfold work unless you are an extremely ambitious player with tons of time to study chess (as young Christopher Yoo and Judit Polgar were). Or, of course, if you just want to look cool by looking at the ceiling while calculating during your chess games!

## **In summation**

- If you are newer to chess, investing some time in practicing board visualization is worthwhile. As Elliott Neff has said, it is an excellent first goal to be able to name the color of each square quickly without a chess board in front of you.
- If you are rated below 1600, spending time doing the hard work in completing the book *Learning Chess: Workbook Step 2 Thinking Ahead* has a very high return on invested time.
- If you are already rated 1600 plus, blindfold work will likely help your game, but it's not clear that it is more effective than training methods that more closely resemble an actual chess game
- As a result, for intermediate players, I would only recommend extensive blindfold training for very ambitious players or for those who really enjoy it!

## Rules for fasting: how to approach speed chess

*Working with [Indian prodigy] Nihal Sarin made me question the assumptions and preconceived notions that we used to have about chess training and improvement. It feels like a generation of kids are growing up with this particular training state of just playing lots of blitz games online on tablets, with a lot of focused attention, and they are able to learn a lot from it.*

– GM Srinath Narayanan, top trainer and Chessable author (Episode 308)

### Speed chess in historical context

Another evergreen debate in chess improvement discourse has been some variation of ‘Does speed chess help me improve at slow chess?’. Speed chess (aka blitz chess) traditionally allowed five minutes per player, but the world moves faster these days, and now online blitz is most commonly played with three minutes per side.

Whatever the exact time parameters, the debate about the efficacy of speed chess has raged for decades. Former World Champion Mikhail Botvinnik was famously dismissive of speed chess, and Bobby Fischer himself supposedly said, ‘Blitz kills your ideas,’ although young Bobby was a frequent and ferocious speed chess player – and renowned chess historian Edward Winter was unable to find a primary source for this quote. Regardless of that particular quote’s veracity, before the internet age, it was a common argument that frequent speed chess playing is counterproductive for your overall chess skills.

You may still hear such arguments today, but I believe the war is over, and the blitzers have won! Many of the top players in the world are blitz beasts and have been since their prodigious childhoods. For

example, Magnus Carlsen, Hikaru Nakamura, and Alireza Firouzja have had historic classical chess achievements despite a strong affection for the faster forms of chess. In fact, players like Nakamura did a lot of their learning through thousands of online blitz (and bullet) games, as we detailed in Chapter 7. And as one reflects on the skills that speed chess train, it is evident that many of them are transferable to slow chess. These skills include pattern recognition, time management, resilience, and, most of all, opening knowledge.

Questions about the efficacy of blitz as a training tool get murkier for newer adult learners. Part of your job in any chess game is quickly assimilating a vast amount of information. It takes practice to learn to ask yourself the right questions during a game, and it is challenging to do that in just three to five minutes without a great deal of chess experience. In this regard, speed chess is a bit like weight-lifting. It is good for you if done properly, but if done improperly, you might injure yourself! Just as one should only lift weights or throw a curveball in baseball once their body has reached an adequate level of physical development, one should only play speed chess regularly once they have reached a certain slower chess rating. My guess is that the rating is around 1400, but I wouldn't object if you wanted to raise or lower that estimate by 100 to 200 points. I must add, though, that playing blitz can be a lot of fun for players of any level, so **this advice only applies if chess improvement is your primary goal.**



**Advice for those rated below 1400 USCF/FIDE**

If you are rated below 1400 USCF/FIDE/Chess.com and aim to maximize your chess improvement, you probably shouldn't play much speed chess. And if you do play speed chess, then you should favor the slowest possible versions of it. Chess is a complex game, sometimes with hundreds of micro-decisions to make in each game. At lower rating levels you are at great risk of reinforcing bad habits when you play speed chess. You will often need to figure out some things about your opening, and then you may not know the typical middlegame plans for a given position. These things take time to sort through, and if we don't have time, we may make bad guesses. If we repeatedly make bad guesses in speed chess, those decisions may calcify and become automatic.

Below the 1400 level, one is also more prone to blunders. Of course, blunders are an issue for chess players of all levels, but below 1400, some work on improving one's thought processes can go a long way to help limit them. This work can be a haphazard attempt to ask oneself the right questions or, if playing slower games, one can take a systematic approach and utilize checklists, as we will discuss in Chapter 12.

Even if you decide checklists aren't for you, I would still argue that below the 1400 level one should embrace a more deliberate thought process. There are many basic mistakes to work toward rooting out of your game, and this process takes time. (If you play a five-minute game and average forty moves per game, you have less than eight seconds per move.) When I interviewed adult improver Cody Smith (Episode 270), he mentioned that he came to a similar conclusion on his own and didn't play much blitz early in his chess development. He told me, 'Playing slower games gives you more time during the game to recall what the people on YouTube were saying about chess and to try to integrate those things into your thought process.'

At that level, a little extra time can help your game significantly, so even a time control like ten minutes with a ten-second increment can help you play a significantly higher-quality chess game. And if you have the patience and life circumstances to practice at slower time

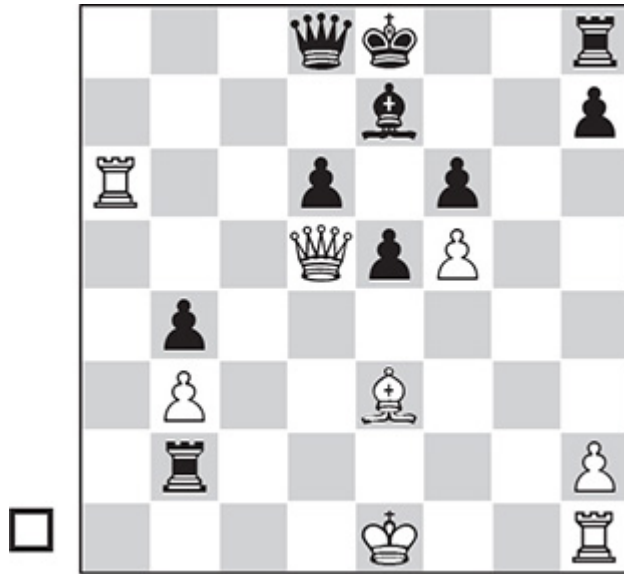
controls than that (and if you are able to find online opponents), it cannot hurt to take more time.

### **For those over 1400 FIDE**

As one climbs the rating ladder, speed chess can start to assume a place as a useful training tool, in addition to being a fun activity. It is conducive to improving one's knowledge of one's openings. Greg Shahade, among others, has convincingly argued that for every blitz game you play, you should try to learn one additional move in the opening variation that arises. Depending on your knowledge of the opening you end up in, this could happen on move five or move twenty. If you play blitz multiple times per day and stick to a system of always trying to learn one new move per game, you will continue expanding your opening knowledge over time.

In addition to gaining opening knowledge, speed chess can also help you improve other aspects of your game. The 'game review' features on Chess.com and Lichess are helpful resources in this. Here is what Elijah Logozar told me about his approach to reviewing blitz games (Episode 181):

*The purpose of analyzing your blitz games is completely different from the purpose for analyzing your standard games. Of course, you want to improve your understanding, but for me, at least, the goal mostly is... to pinpoint my decision-making mistakes... How was my time management? That sort of thing. I'm working on my thought process, calculation, methods and habits over the board, and I need to scrutinize that very carefully in a lot of cases.*



Logozar-Firouzja, Chess.com 2019

Analysis of blitz games need not be as detailed as tournament analysis. In this game, part of an 'Arena Kings' tournament, Elijah got the opportunity to play the young phenom, GM Alireza Firouzja. In this position, Elijah missed that he could play 25. ♖a8 and win Black's queen, likely overlooking that after 25... ♜b1+ 26. ♔f2 ♜xh1, he can play 27. ♙xh1 and his queen still guards the rook on a8. Neither player would be likely to miss this in a slow game, but Elijah still finds it worthwhile to deconstruct his thought process in the limited amount of time he had in a blitz game. Instead, Elijah played **25.0-0** and eventually lost the game.

Once you are a decent chess player, your blitz strengths and weaknesses will often serve as microcosms of your overall game. For example, I struggle with time management in both classical chess and blitz chess, but I usually hold my own in the opening in both forms of the game. By working to be more conscious of the clock at all times in blitz, one can hope to do the same in slower games.

## Fighting blitz addiction

In my opinion, one cannot extol the potential virtues of faster chess, without discussing its dangers. (Cue the ominous music.)

Specifically, many chess players, including me, are susceptible to blitz addiction or blitz tilt. The risks of tilting are even greater when one plays bullet chess (less than two minutes per side).

After losing a tough game in blitz, it is not unusual to immediately feel that one wants revenge. Many chess players have ruined days or nights looking for blitz revenge or chasing lost rating points. It is particularly common for a player to get 'anchored' to a round number or a peak rating and to go on tilt chasing that number.



Dr. Jana Krivec, as a champion Slovenian player, author, and psychologist, offered *Perpetual Chess* listeners in Episode 216 a

good perspective on fighting blitz or bullet tilt, but conceded that even she is not immune from it. To those who are prone to blitz or bullet tilt, she advised placing notes to yourself around your computer in advance of any potential tilted sessions. She also suggested that breathing exercises (again, best practiced before the tilt happens) could be helpful. When asked for advice on curbing bullet chess addiction Dr. Joel Sneed, who is a Psychology professor and an expert-level chess player, advised (in Episode 309) that we bear in mind that in some cases, the addiction might not be about chess itself, i.e., it could just be an outlet for an individual's broader addictive tendencies. Dr. Sneed said that he found literature about video game addiction very applicable to addiction to faster online chess.

### **A few words about bullet chess**

In my experience, any addictive tendency which rears its head in an online blitz session is even more likely to occur if playing bullet chess. Alireza Firouzja is an incredible chess player, but I am guessing that he did not plan in advance to play an all-night bullet session with GM Daniel Naroditsky in the middle of the 2022 Candidates Tournament, which was likely the most important tournament of his life up to that point. Firouzja was roundly criticized after this occurred, but it is a wholly understandable mistake for a nineteen-year-old chess lover to make. My primary advice regarding bullet chess is the following: 1) Bullet is even more addictive than blitz, so it's helpful to establish even firmer guardrails for how and when you play it, and 2) You should avoid deluding yourself into thinking that bullet chess is helping your slow game in any way.

### **Blitz with boundaries**

Whether playing bullet or blitz, it can be helpful to design a system to help curb any impulses and to encourage serious blitz play. FM Alex King takes this idea to an extreme. Alex is a passionate blitz enthusiast who developed a system to help him maintain discipline around playing online speed chess. Alex plays exactly nine games of three-minute chess (with no increment added) per day. Each session

takes about forty-five minutes, and Alex told me (in Episode 97), 'I try to take at least as much time analyzing the games as I spent playing them.' Alex acknowledged that he doesn't always manage to analyze the nine daily games on the same day that he played them, but he does always catch up. At the time of our 2018 interview, Alex had accumulated nine thousand of his chess games in an extensive personal database and had reviewed and extracted at least one lesson from each. No wonder he is a strong blitz player!

An additional benefit of a system like Alex has in place is that it can help one avoid blitz tilt before it happens. *Atomic Habits* author James Clear and others have written about the importance of 'bright lines' when looking to change behavior. Clear writes: 'A bright-line rule refers to a clearly defined rule or standard. It is a rule with clear interpretation and very little wiggle room. It establishes a bright line for what the rule is saying and what it is not saying.' By committing to exactly nine games, Alex avoids any slippery slopes or 'just one mores'. This clear guideline is much more effective than saying, 'I'll play a little bit each day.' And limiting the number of games has the benefit of potentially amplifying the seriousness of your approach to each game.

	A	B	C	D	E	F	G	H
1	Date	Score	PR	GMs	IMs	Total Titled	Federations	Norm
2								
3	4 May	4.5	2448	1	2	6	9	
4	8 May	4.0	2419	1	2	3	6	
5	11 May	8.0	2701		2	3	8	
6	15 May	5.0	2430		4	6	9	
7	16 May	4.0	2323	1	1	2	7	
8	17 May	4.5	2362		1	3	8	
9	18 May	4.0	2328	1		3	9	
10	22 May	4.5	2376			2	8	
11	23 May	5.0	2383		1	4	9	
12	24 May	8.0	2747		2	3	8	
13	25 May	5.5	2455	1	1	3	9	
14	26 May	3.5	2357	2		4	5	
15	27 May	8.5	2892		2	4	7	

Here is a screenshot of FM Alex King's 'Norm Simulation' spreadsheet. In addition to his performance rating (TPR), and how many titled players he plays, he even keeps track of how many federations his online blitz opponents represent! (Screenshot courtesy of Alex King)

As legendary 2012 World Championship finalist, GM Boris Gelfand memorably told me in Episode 200, when you limit your play, you are able to cultivate the mindset that 'Each and every move is very important!'

### In summation

- Blitz is fun!
- If you are somewhere below a 1400 rating, it probably isn't the best way to help you improve your game.
- The stronger you are, the more helpful blitz is as a training tool, especially for learning openings.
- Blitz can be addictive, so it can be helpful to put 'bright lines', i.e. clear rules, in place around when to play and how to respond to feelings of 'blitz tilt'.

- Bullet chess is an amplified version of blitz – less helpful and potentially more addictive. So if you play bullet, you should probably maintain no illusions that it will help your chess.

## Tactics redux: The Woodpecker and other methods

*Repetition is the mother of learning.* – Latin proverb.

### **The history of using spaced repetition for tactics**

Studying chess tactics has always been widely accepted as a crucial component to chess improvement, whether done via tactics trainers, puzzle books, or, in prior eras, by reviewing the games of legends like Mikhail Tal or Paul Morphy. However, in the broad scope of chess history, the idea of utilizing ‘spaced repetition’ to study chess tactics is relatively novel.

Per Peter C. Brown, spaced repetition is the study method whereby one periodically returns to the study of a topic to remember it better. German science journalist Sebastian Leitner helped increase its popularity in the 1970s via a flashcard system, and it has subsequently seen wide adoption in fields ranging from language learning to studying medicine. Chessable, of course, has built a thriving business around utilizing spaced repetition to learn chess, particularly openings, as we discuss periodically throughout this book.

Chess players likely have subconsciously been doing spaced repetition for centuries when they play their games. If a player can play the same opening sequence repeatedly over time, in a sense, they are practicing spaced repetition. When it comes to reviewing openings, Chessable raised the bar by utilizing technology to make this a conscious choice, and it is a very effective method for learning openings. But the idea of consciously embracing chess tactic flashcards preceded Chessable. It started to gain popularity in the early 2000s.

An early proponent was a grad student from the Massachusetts Institute of Technology named Michael de la Maza. In the late 1990s,

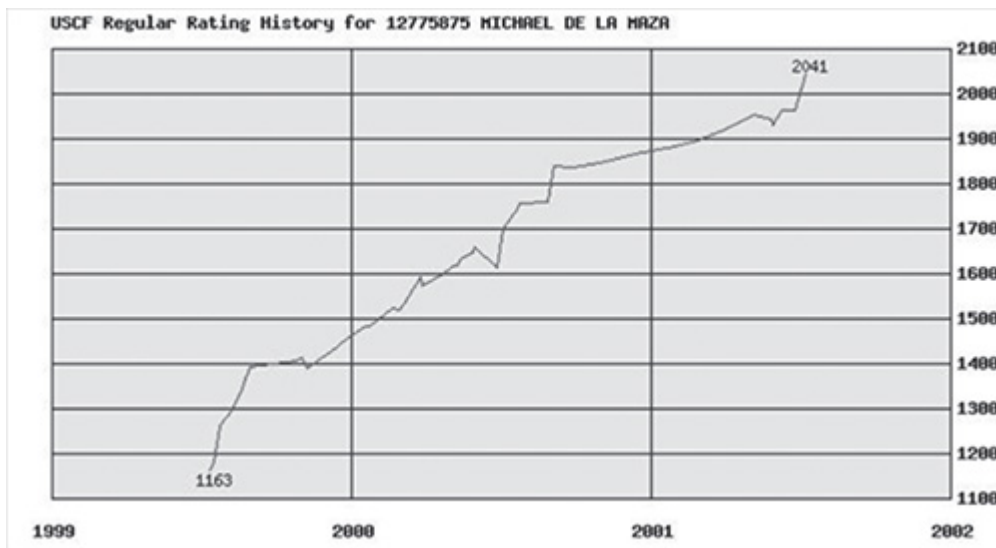
De la Maza had become frustrated with the repeated blunders in his 1300-level chess games. Michael felt that most of the advice he received from stronger players did not help address these blunders. As a result, Michael began to implement a system of his own.

Michael wrote a two-part essay called *400 Points in 400 Days* in which he lamented, 'As a weak player, I consistently lose games to simple oversights: leaving a piece *en prise*, missing a mate, or losing my queen to a knight fork.' De la Maza ultimately expanded his ideas into a book, *Rapid Chess Improvement*. The book showcases a bombastic writing style and is not my personal favorite, but De la Maza's success during this period is undeniable. He went from 1300 to a 2000 USCF rating in less than two years! All the more impressive was that Michael achieved this massive rating jump without using today's digital tools.

De la Maza's complete recommendations are beyond the scope of this book, but they are centered on a few precepts: 1) De la Maza was an early advocate of repeated drilling of tactical patterns. He described his method as 'seven circles' and suggested drilling the same tactics puzzles repeatedly over decreasing time spans until he had memorized all of them. Note that this differs from the more common application of spaced repetition, which suggests increasing the time intervals between review sessions. 2) As an adult learner, he heavily emphasized learning board orientation via studying fundamental tactics on a nearly empty chessboard. 3) Michael was firmly in the 'openings are overrated' camp and focused primarily on tactics and board orientation.

Over the years, De la Maza's groundbreaking success has led to a fair share of disciples, but the degree of success that De la Maza showcased is unusual. One should remember that some unusual factors likely contributed to De la Maza's results: 1) De la Maza treated chess improvement like a full-time job during this period. He often spent seven hours per day studying chess. 2) De la Maza was fairly young when he undertook this experiment and was relatively new to chess. He did not utilize his method to push through a massive plateau but rather to augment an initial leap to a very

impressive level. In that sense, it is unfortunate that Michael did not continue to push the envelope and pursue further chess improvement to gauge continued progress with his methods.



De la Maza showed tremendous rating growth in a span of two years, and has since moved on from tournament chess. (Source USCF Rating Database)

Nonetheless, Michael laid the groundwork for some fresh ideas related to chess improvement. By now, these ideas have seen widespread adoption thanks, in part, to a cadre of ambitious titled players in Scandinavia who carried these concepts further beginning in 2010.

### **Enter The Woodpecker Method**

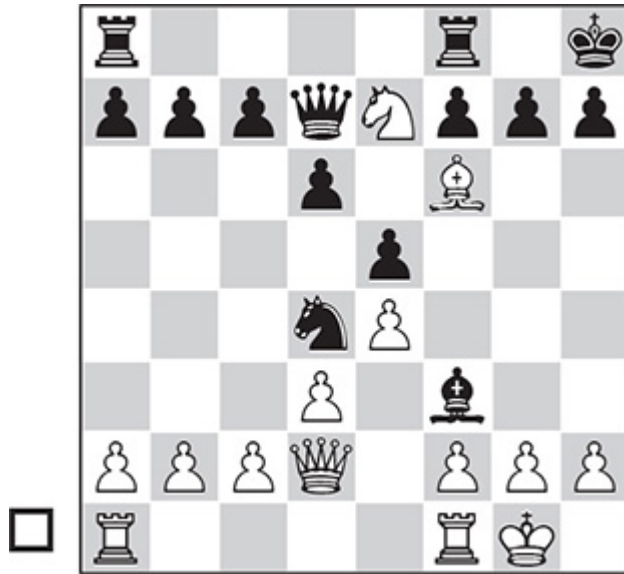
*The Woodpecker Method* is a popular tactics book (later adapted digitally for Chessable) which is authored by grandmasters Axel Smith and Hans Tikkanen. The idea behind the book was first laid out by Axel Smith in his excellent preceding book, *Pump Up Your Rating*. In it, he described the rating gains that his Swedish chess league teammates, Hans Tikkanen, and Danish IM Andreas Skytte Hagen, had experienced after repeatedly studying tactical patterns. Smith wrote, 'Tikkanen's idea was that repeating the same exercises was the key to increasing his tactical skill.'

Tikkanen and Hagen were partially inspired by the book *Talent is Overrated* by Geoffrey Colvin and believed that they could break through the plateaus they were experiencing in their chess ratings. To that end, Tikkanen devised a tactics training program and frequently repeated the exercises in them. In the intro to *The Woodpecker Method*, Tikkanen writes:

*I would solve a set of a thousand exercises [from various puzzle books] over whatever time period it took. Once I completed the set, I would take a break and then repeat the process again and again, getting faster each time. With each cycle of solving, I aimed to halve the total solving time for the thousand exercises from that of the previous cycle. Eventually, I was able to solve all of the puzzles within a single day – though not within eight hours. Initially, I intended to repeat the whole process every six weeks.*

Tikkanen (who was around the age of twenty-five at the time) quickly gained 100 Elo points and acquired all three grandmaster norms necessary to acquire the title. In a similarly impressive fashion, Hagen went from 2290 to 2454 in a four-month span. The authors wrote that they decided to name their method ‘The Woodpecker Method’, because ‘Tikkanen comes from a translation I’ve heard of my Finnish surname, which is supposed to mean “little woodpecker”.’ This was fortuitous, because *The Woodpecker Method* is quite an evocative name and doubtlessly helped them sell a few books and Chessable courses.

*The Woodpecker Method* presents common tactical patterns and puzzles from the games of world champions and suggests that you quiz yourself on them at decreasing time intervals to internalize the patterns. It contains three sections of puzzles designated as ‘easy’, ‘intermediate’, and ‘difficult’, but even the ‘easy’ ones are probably best attempted by those rated above 1400 FIDE or so. In the book, the authors point out that there is nothing special about their tactical set and that one can follow a similar plan with different books depending on her chess level.



Capablanca-NN, New York 1918

Here is an 'easy' puzzle from *The Woodpecker Method*. White to move and mate in three. (In the book they don't tell you that there is a forced mate, it is presented as a general tactics puzzle.)

Regardless of the efficacy of its method, the book has a lot of cool tactics!

(Solution: 14. ♙xg7+ ♚xg7 15. ♕g5+ ♚h8 16. ♖f6#)

Not everyone agrees with the type of study plan suggested in *Rapid Chess Improvement* or *The Woodpecker Method*, but there have been some successful adherents. Young-Kyu Yoo, the father of American prodigy Christopher Yoo, designed Christopher's early, flashcard-intensive curriculum partially based on the writing of Michael de la Maza. Elijah Logozar (Episode 181) is another Woodpecker proponent who designed a learning regimen around reviewing puzzles and tactics he missed.

### Woodpecker doubts

Despite these success stories, using spaced repetition (or a similar system based on decreasing time intervals) for tactical training is a method that also has some detractors. Count Peter Giannatos of the Charlotte Chess Center as a skeptic. As we mentioned in Chapter 3,

Peter also made immense rating gains in his twenties, but he focused more on calculation work rather than the pattern recognition training that *The Woodpecker Method* encourages. In other words, Peter favors solving different puzzles slowly rather than repeating the same ones quickly. Peter believes that it is not the *recall* of the pattern that is important for chess growth, but the *act* of solving it that improves your chess game. Peter told me, 'I feel like you need to learn how to solve puzzles, not memorize the solutions.' So who are we to believe?

Note that this debate echoes the discussion of calculation vs pattern recognition in Chapter 3. Both are undoubtedly important components of chess learning, but in this case, it seems that using *The Woodpecker Method* seeks to turn a wide array of chess puzzles into patterns to be internalized.

Hans Tikkanen, who studied psychology, says as much when he writes, 'One conclusion I drew from my reading was that a tremendous amount of (brain) activity happens unconsciously, below conscious effortful processing, and that this should reasonably be reflected in my approach to chess.'

Renowned cognitive scientist, author, and USCF Master Christopher Chabris is a frequent and insightful guest on *Perpetual Chess*, and I was eager to ask him about this debate in one of our interviews. Dr. Chabris said (Episode 187):

*As a proposed method of learning, I can't think of anything really analogous to it, where the proposal is that you essentially memorize a body of specific examples of something as a way of learning the broader skill... And I think, to be honest, once you get to the seventh round or whatever the terminal round of The Woodpecker Method is, you're sort of supposed to have memorized all the examples by then. Even if you didn't deliberately try to memorize them, you're supposed to have internalized them almost as though you memorized them on purpose. You're supposed to sort of turn it into an act of recognition where you see the position, and you think, 'Oh, yeah, these are the moves.' That's my understanding of it. And I think it's a fascinating proposal for a learning technique. And I would really like to see it tested in rigorous ways.*

I agree with Dr. Chabris that it would be fascinating to see a large-scale data set on this topic. Unfortunately, researching chess study is a bit like researching nutrition in that even if one is improving

rapidly at chess, it might be challenging to isolate the variables that do or do not contribute to chess growth. Until we have more data, I am sad to report that we don't know whether one is better served repeating tactical patterns or solving new ones.

If forced to pick a side, though, I lean more towards that of Peter Giannatos. Most cases I have heard of those who saw substantial rating gains from doing spaced repetition on tactics involved someone who also put in many hours of study. This was a point raised by GM John Nunn in an unflattering review he wrote of *Rapid Chess Improvement*. Nunn argued that if one is putting in tons of hours studying chess, it is difficult to know if the method worked or if the sheer volume of time was the primary contributor to success.

I am a big fan of Axel Smith's work, but I also find it a bit odd that he says one can use any tactics book for *The Woodpecker Method* and writes, 'But you may ask, isn't it better [to do *The Woodpecker Method*] with instructive and carefully chosen exercises? I don't think it makes much difference.' In my opinion, if you are going to invest a lot of time and energy into memorizing patterns, it makes sense to pick them carefully.

As mentioned previously, there is a benefit to utilizing some sort of Woodpecker-like system for internalizing common checkmate patterns. More so than general tactics, checkmates of various patterns really do recur throughout one's chess development and are well worth studying and repeating until one's eyes bleed. For prior generations, books like *The Art of Checkmate* and *How to Beat Your Dad at Chess* were excellent primers on these patterns. Those are still classic books, but in the modern era, I think Chessable's *The Checkmate Pattern Manual* is an even better choice for anyone rated below 1500, and it is helpful well beyond that rating threshold.

But once one has assimilated the vital checkmate patterns, I am less convinced that repeating tactics has special power. Both De la Maza's *Seven Circles Method* and Smith and Tikkanen's *Woodpecker Method* recommend a massive commitment to daily chess practice, so it's unclear if it's the method or the time commitment that led to their successes. Nonetheless, if a chess student is enticed by the precise measurement and task-oriented

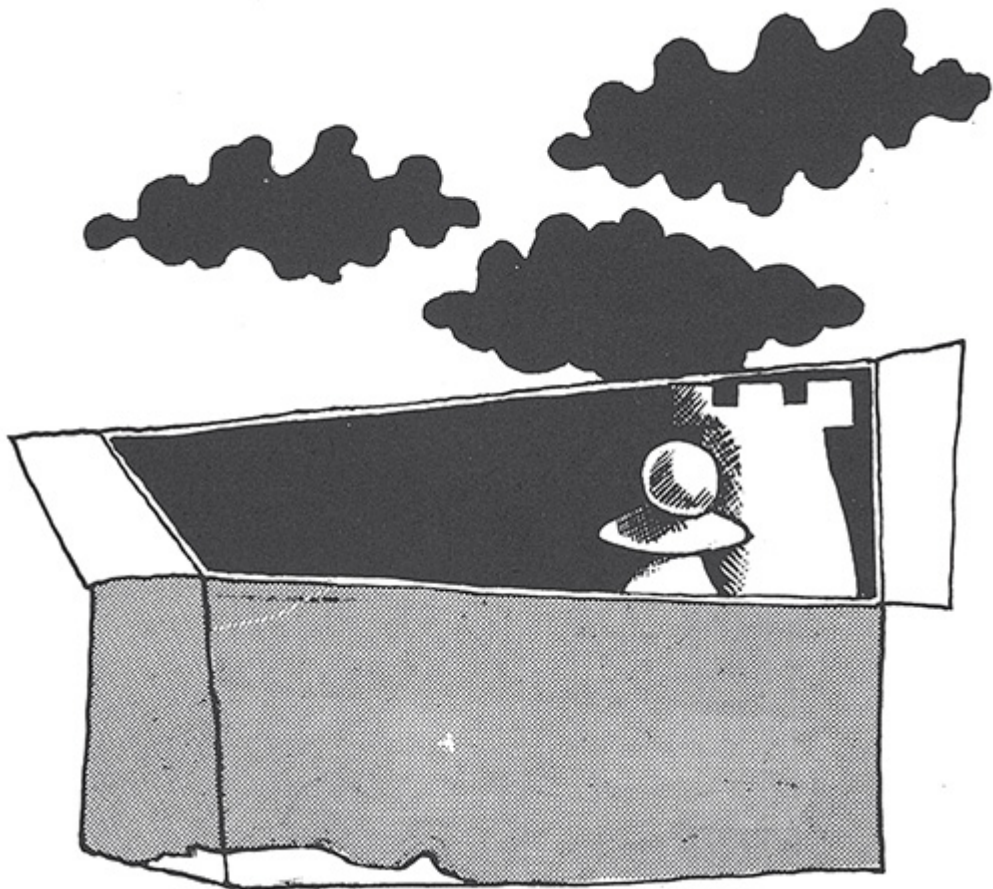
nature of a system like the one set out in *The Woodpecker Method*, continued experimentation around these methods might help get us closer to knowing what works best.

### **In summation**

- Spaced repetition has revolutionized chess learning, as it has done in language learning and other fields. It is a natural fit for learning opening sequences, but others use it to study tactics.
- Some chess players have seen significant rating gains after using a training method often called 'The Woodpecker Method', where they repeatedly drill tactics puzzles over decreasing time intervals.
- Others are skeptical of these methods and wonder whether one may be better off continuously solving new tactical puzzles rather than repeating familiar ones.
- Even so, if you are newer to chess, learning some basic checkmate patterns is extremely helpful and spaced repetition is a great way to do so.

## PART III

# Working on your chess game away from the board



## Introduction to Part III

Chess is an unforgiving game in which the quality of the opposition is only getting tougher. The preponderance of online tools makes learning easier, but nonetheless, we cannot simply will ourselves to learn and think faster than our opponents. There are some financial considerations when it comes to paying for coaching, courses, and books, but for the most part we all have access to excellent learning tools.

The fact that we are all facing tougher competition suggests that we should also look for gaining edges away from the board. Luckily this is one of the areas of chess where there are still edges to be found. Perhaps more importantly, a lot of the advice shared in these chapters could make you a more well-rounded person, independent of chess. Here are the ‘away from the chessboard’ topics that we discuss in Part III:

**Chapter 11** – Given the hierarchical and public nature of chess ratings and titles, it is natural to think about chasing titles and rating points, but measuring yourself by rating or title is a tough way to live, especially in an age when OTB ratings are changing.

**Chapter 12** – Can checklists help my chess?

**Chapter 13** – What habits and narratives are effective for helping us maintain motivation?

**Chapter 14** – Aside from motivational plateaus, how can we attempt to break through performance plateaus?

**Chapter 15** – What does research about deliberate practice and brain and cognitive sciences suggest about how a time-constrained

adult should approach studying chess?

**Chapter 16** – What tournament routines should we strive for while the competition is ongoing?

**Chapter 17** – Should we adjust our strategies when playing against children?

**Chapter 18** – Can fitness, rest and mindfulness help our chess?

Let's step away from the board and dive into these important topics.

## **Status and titles: title envy, deflating ratings and tales of inspiration**

*But who said that I am to be measured by how well I do things? In fact, who said that I should be measured at all? Who indeed? What is required to disengage oneself from this trap is a clear knowledge that the value of a human being cannot be measured by performance – or by any other arbitrary measurement. – W. Timothy Gallwey, *The Inner Game of Tennis: The Classic Guide to the Mental Side of Peak Performance**

### **Titles are seductive**

CM, FM, IM, GM, WFM, WIM, WGM, NM, LM, SM – what is this alphabet soup? 500, 1000, 1200, 1500, 2000, 2200, 2500, 3000 – what is so inviting about these numbers? Chess players can easily become obsessed with the letters and numbers next to their names and will often make supreme sacrifices to change them. A new chess fan watches *The Queen's Gambit* one day and dreams of earning the title 'chess master' the next. A wildly successful chess streamer and YouTuber radiates anguish in his pursuit of changing the first letter preceding his name from 'I' to 'G'. Why?

There are a few reasons that chess players are uniquely obsessed with the status seemingly provided by these letters and numbers: 1) Chess is so measurable! I might want to get better at sewing or yoga, but measuring my performance in these activities is challenging. But in chess, my rating changes after every game, and the titles by our names, once achieved, last forever. The immediate gratification of instant rating change and the permanency of titles both provide strong incentives to always push for more. 2) Chess is solely individual – unlike in basketball or soccer, we have no one to blame but ourselves for our shortcomings. And unless your name is

Stockfish or AlphaZero, there are always shortcomings. 3) Chess is hierarchical. Anyone who has spent years in the chess world knows how difficult this game is, so more respect is often accorded to those who have achieved more. These factors can make the lower rated among us all the more driven to succeed to potentially be more respected by our peers.

I find the case of IM Levy Rozman (aka 'Gotham Chess') to be particularly fascinating. Levy, of course, is the best-known and most successful chess YouTuber in the world, with over four million YouTube subscribers at the time of this writing. His videos consistently manage to entertain and inform simultaneously, and Levy is great at explaining more advanced chess concepts to a broad audience. Moreover, Levy is an extremely strong chess player, International Master is the second-highest title bestowed by FIDE, and Levy is comfortably among the best seven thousand chess players in the world. That may not sound that dazzling, but if you grab a random person off the street, the odds they will be higher rated than Levy are less than one in a million.

But Levy, like the rest of us, wanted more. He dreamed of earning the grandmaster title and began training and competing in 2021, hoping to earn the highest title. During this period, Levy returned to tournament chess and would recap each tournament game he played on his YouTube channel. He also candidly discussed the ups and downs of this pursuit on Twitter and in a couple of *Perpetual Chess* interviews. Meanwhile, Levy was already a Super GM from a career perspective. In addition to significant YouTube and Twitch revenue, Levy has sponsorship deals with Chess.com, G Fuel energy drinks, and other companies. But when it comes to chasing the actual grandmaster title, Levy's money and status did not change the challenge at hand. All it did was afford him a little bit of extra coaching. He still has to perform well in the same events, and put in the same twelve-hour days on tournament weekends. Since one has very little downtime during most American chess tournaments, he would often stay in the same uninspiring hotels as his competitors.

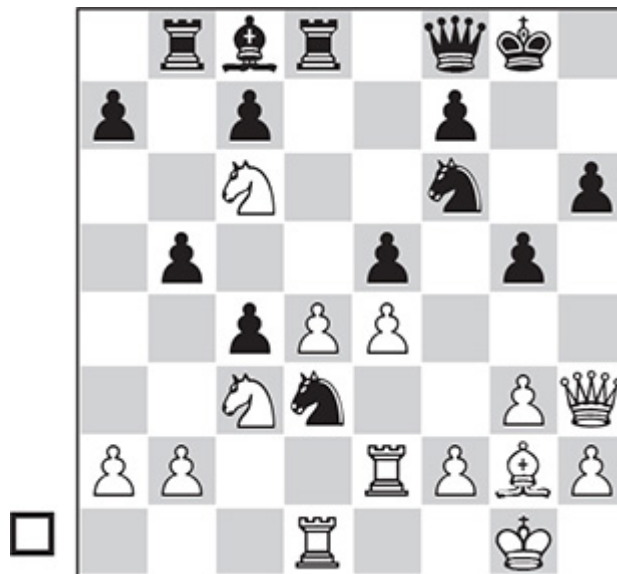
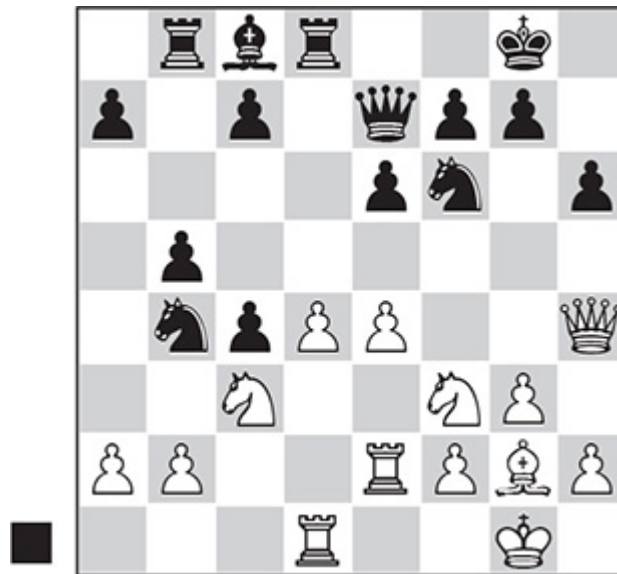


And Levy has been quick to point out that he doesn't even like classical chess, which is the only format of chess where one can earn the IM and GM titles. Classical games can last six hours, and the outcomes of the games often hinge on tiny mistakes, especially at Levy's lofty level. His 'post-mortem' videos are among my favorite genre of chess videos, but when I would watch his anguish, I couldn't help but wonder why he tortured himself to such an extent. Of course, it would be a different story if Levy seemed to enjoy the process of chasing the grandmaster title, but he often has tweets such as this...



Or this...



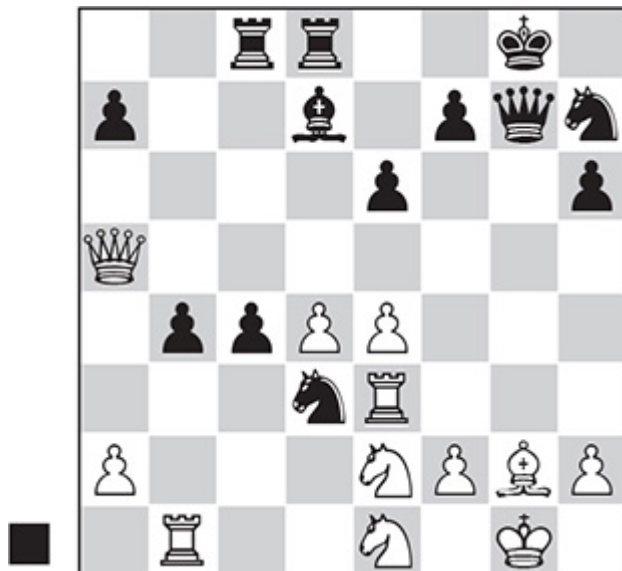


Ngo-Rozman, New York 2022 (analysis diagram on the right)

The left diagram is the position after nineteen moves of the game Levy is referring to in his tweet about 'last night's game'. Levy rightfully was quite pleased with the outcome of the opening here, the knight on b4 will inevitably post up on the juicy outpost on d3, and Black has some hidden tricks. In his YouTube recap video discussing this game, Levy pointed out that after he played **19... ♖f8**, if White responds with the natural **20. ♘e5**, Black has **20... ♗d3!!**, with the idea of **21... g5** and **22... e5** against either **21. ♗c6** or

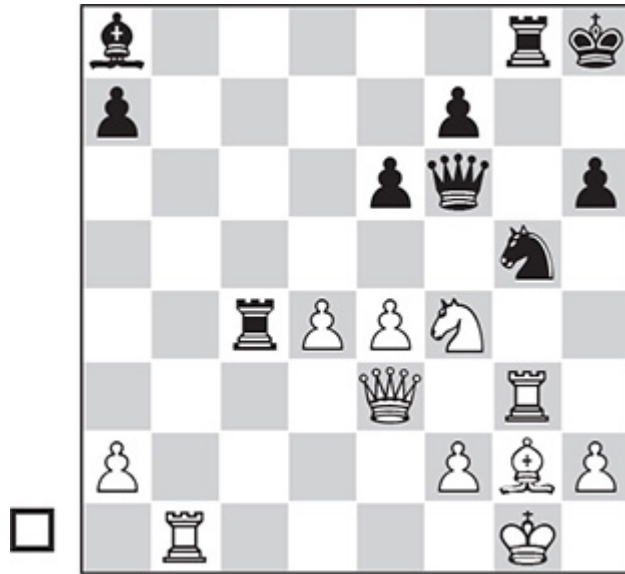
21. ♖xd3. The white queen is being attacked and is very low on squares, so material loss is unavoidable. (The analysis diagram on the right is after 19... ♜f8 20. ♖e5 ♘d3 21. ♖c6 g5! 22. ♜h3 e5!.)

Levy's opponent, FM Bach Ngo, who needed to win to secure his third IM norm (and first place in the tournament), did a good job stirring up complications, and by this point (move 29) the game is extremely double-edged. Black's passed pawns are dangerous, but after **29. ♘e1!**,



Ngo-Rozman, New York 2022

White has dangerous plans of his own involving ♖e3-g3 and a kingside attack. We all have had games where we 'lose the plot', and this was such a game for Levy. A bit later, in time pressure, **36... ♜c4??** (played with a minute left on his clock) loses a piece because it leaves the back rank vulnerable.



Ngo-Rozman, New York 2022

After **37.h4!**, 38... ♖h7 39. ♜xg8+ ♔xg8 40. ♜b8+ would have picked up the bishop, but Levy instead resigned. Painful blunders at the end of a long tournament are a reality of competitive chess, even for Gotham Chess. 'I am heartbroken,' Levy concluded at the end of his recap video.

About a week later, another tweet came along...



Amid all of this anguish, Levy himself conceded that the Grandmaster title would not change his life in the least. Hundreds of thousands will watch his videos either way, and his wife and dog will love him just the same. Nevertheless, he persisted. I tuned in for all

of Levy's game recaps on his YouTube channel and could sense his frustration mounting in each tournament. Finally, after months of publicly riding an emotional roller coaster, in July 2022, Levy had had enough...



In a YouTube video, Levy went into more detail and said, 'Skill wise, I am not there.' As an outside observer, I disagree with Levy's conclusion that he didn't have what it takes to become a grandmaster. Blitz and classical chess are not the same thing, but Levy routinely beats grandmasters in blitz, and I have heard other titled players rave about Levy's tactical creativity. In looking back on his grandmaster quest, his trainer, GM Wojciech Moranda, said (Episode 329), 'If he had continued training back then, I am pretty sure he would have crossed the 2500 threshold with ease and he would already be a grandmaster.'

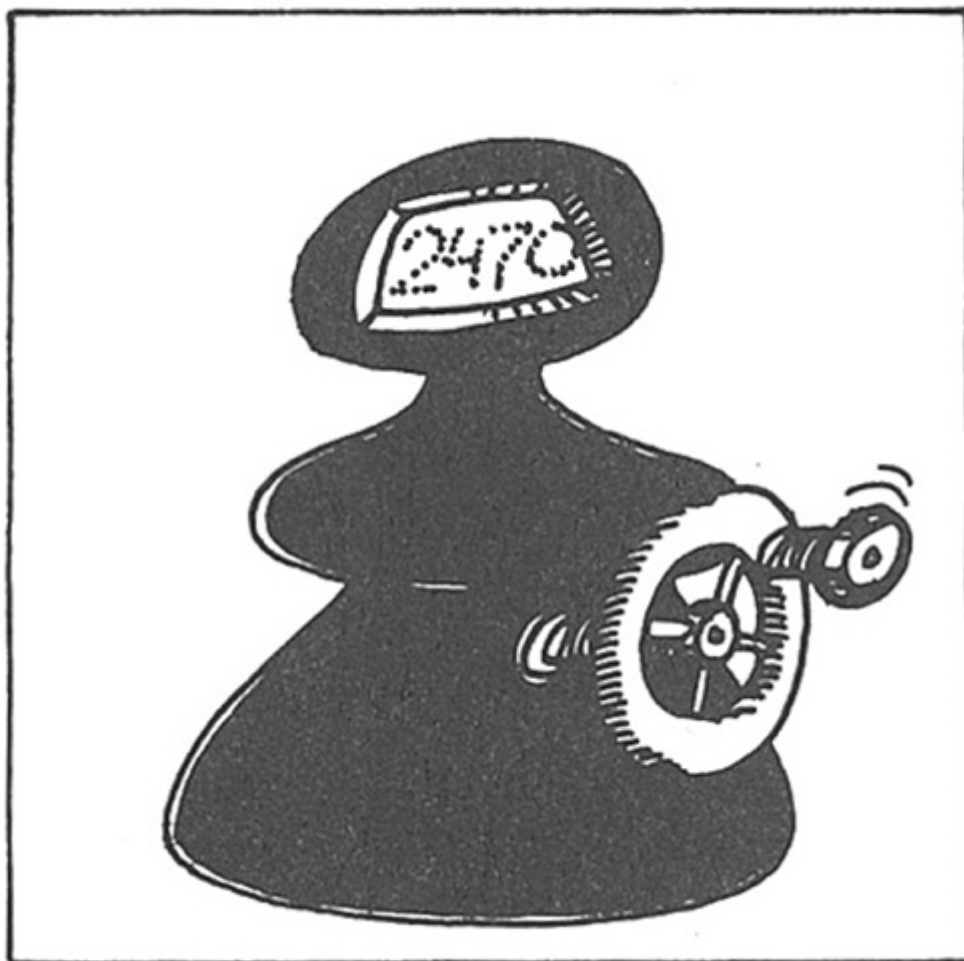
Nonetheless, I 100% understand Levy's decision. It would have taken an enormous amount of study and dedication to try to change that letter in front of his name from 'I' to 'G', and Levy still may not even have succeeded in the face of such an effort. The effort required seems out of balance compared to the potential reward. Not to mention Levy repeatedly mentioned that tournament chess caused him significant anxiety and led to him having trouble sleeping. No title is worth that kind of suffering.

Pursuing titles and rating gain is the chess version of the hedonic treadmill, which is the human tendency to return to a baseline level of happiness despite any positive or negative events that occur in

our lives. In other words, no matter our standard of living, we tend to want more. We could always make a bit more money or drive a nicer car. Unless your name is Magnus Carlsen, the same factors are at play in chess. No matter our rating or title, we want it to be higher. I know that I do. But when it comes to chess ratings, the adage is apropos – ‘Not everything that counts can be counted, and not everything that can be counted counts.’

### **Ratings are misleading**

To make matters worse, as I write this in 2023, the rating system as we have known it is altering. Guests on *Perpetual Chess* from across the rating spectrum have anecdotally noted the differences in rating from those of yesteryear. A 2200 of today plays better than a 2200 in the year 1990, and the same is true for a 1400. There have not been as many studies as we would like to back up these anecdotes, but a 2021 analysis by Chessbase.com did confirm that if one measures the quality of moves by an engine across eras, ‘a player in 2019 was stronger than a player with the same rating in 2000,’ and that this is true across the rating spectrum. This analysis referred to FIDE ratings, but I have observed and heard others discuss deflation within the USCF rating system. GM Keith Arkell has been vocal about the issue of FIDE rating deflation on social media and in 2023 he posted on Facebook, ‘Somebody made me laugh yesterday when they said, “Keith, the more tournaments you win, the more your rating goes down!”’ Of course, the reality is that anybody who plays lots of kids underrated by 200, 300 and sometimes even 400 points, will experience rating destruction unless they win every single game!’



In order to figure out why this is happening and what could be done to improve the rating system, in 2021, I spoke with one of the world's foremost experts on ratings, Dr. Mark Glickman, who is a USCF Master and a Harvard-educated Statistics professor. Dr. Glickman said (Episode 249):

*The basic problem again with the Elo rating systems is that they don't really capture the uncertainty of a rating. The chess rating system has always been assumed to be equally reliable regardless of how old you are, how frequently you're playing, or whether there's any evidence that you're improving over time. None of these factors is incorporated into the Elo system. So, if you're an adult player who's fairly stable and you are playing a scholastic player who is improving very quickly, the scholastic player's rating is going to lag behind. So that's essentially the mechanism by which ratings tend to deflate.*

The phenomenon Dr. Glickman describes has always been true, but the trend has accelerated in recent years. In 2023, Chessable

author, trainer, and GM Alex Colovic wrote:

*When checking the results of the players I encountered frequently in the past, I noticed that without exception, they all have lost a lot of rating. There are several reasons for this. The first one is the broken rating system.... The second problem is that due to various factors, there are a lot of underrated players, especially the young ones.*

These issues are not intractable, and the rating systems can be adjusted by FIDE, USCF and other federations. Dr. Glickman has invented a rating system called 'Glicko', which is much more sensitive to recent results than Elo is. This system allows ratings to better keep up with fast-improving players, and to FIDE's credit, in mid-2023 they announced proposed rating system changes (for 2024) with the goal of combatting rating deflation.

But until the rating systems are changed, we have yet another reason to adjust our expectations and to work to disassociate our sense of self-worth from our ratings. In late 2022, IM Dean Ippolito, who is an accomplished player, author and trainer, offered some helpful advice (Episode 307):

*You have to learn not to concentrate on your rating, because it's completely different than it used to be. Everybody's good now, and you're going to be playing kids that are 1800 now and might be 2400 in two years. So just try to focus on improving, doing some tactics, training, and putting a lot of effort in during the games and not on the rating because it's very easy to get discouraged if you do focus on rating.*

When it comes to online ratings, things are not as stark. Both of the two largest chess playing sites, Chess.com and Lichess use Dr. Glickman's 'Glicko' system. There are differences in the rating scales on the respective sites due to what each site defines as the average rating, but both sites upweight recent data more than FIDE or USCF's Elo system does. The sites are also helped by the fact that players often play a much larger quantity of online games than they do OTB. That doesn't mean it's healthy to obsess over our online ratings, there are still better ways to measure ourselves in life, but at least the rating systems are more consistent!

Despite all of these warnings of the perils of chasing titles and numbers, I have been lucky to interview a few people who defied the odds and earned a higher title under unlikely circumstances. Let's

hear the inspiring stories of IM Kåre Kristensen and GM Kevin Goh Wei Ming.

### **Occasionally the implausible occurs**

Kåre Kristensen is a Danish bank executive and dad who improbably earned the International Master title at the age of fifty-four. It is much more common for one to become an IM in their teens or twenties. If you get the IM title in your thirties, you may be called a late bloomer. And if you do it in your fifties, you will probably be interviewed on a chess podcast and then be featured in a subsequent book about it! So how did Kåre become an International Master in his fifties?

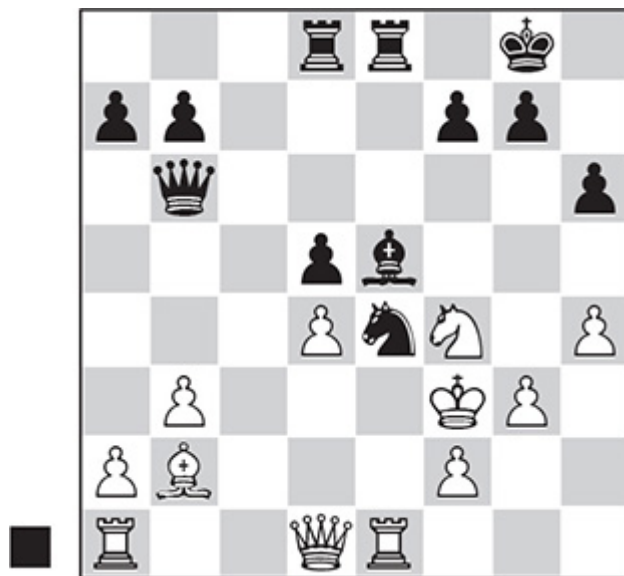
In our 2020 conversation (Episode 178), Kåre didn't credit any one factor for his improvement as much as persistence. Here is the brief timeline of his long journey to the title. After a decade-plus break from tournament chess, he returned to it when he was forty-two years old. In 2007, he began to work on his game again and to familiarize himself with some improvement tools which hadn't existed in his younger years. Nonetheless, Kåre encountered significant struggles early in his comeback and eventually encountered what screenwriters might describe as the 'all is lost moment'. Kåre said:

*One thing that was very disappointing for me, after I played quite well for some time in 2008, I suddenly played extremely badly and I lost rating every time I played. And I was just below 2200 [FIDE rating] at a point around 2008. I remember I was writing an email to the chairman of my [chess] club and saying, 'Well I think I'd better stop because I cannot stand playing this badly. And I've been training, I've been doing all the right things which are supposed to be good for you, but just going totally downhill and making horrible mistakes all the time.' I guess most chess players know how that feels.*

But Kåre did not give up, and his results slowly started to turn around. Nonetheless, it would be another 7+ years of periodic tournament competition before he got closer to earning the IM title. In order to earn the title one must attain a FIDE rating of 2400 and also earn three IM 'norms'. (Norms are earned when you attain a particular rating performance against a player pool of specific parameters in a single tournament with a classic time control of,

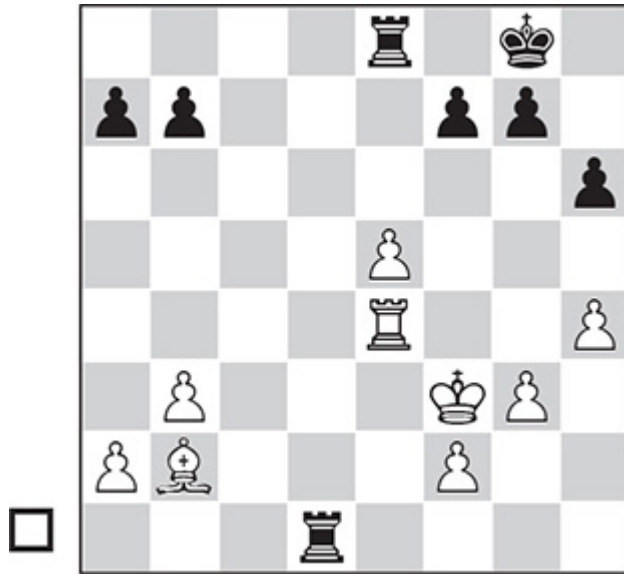
usually, at least nine rounds. Norms are designed to ensure fairness and, seemingly, to confuse casual chess fans.)

Finally, a few months before turning fifty, Kåre earned two IM norms, and, to his own surprise, surpassed the required 2400 rating. This meant that he only needed one more IM norm, so he then resolved to pursue the title in earnest.



Antonsen-Kristensen, Copenhagen 2015

In the game that ultimately pushed Kåre's rating over 2400 to satisfy one of the requirements for the IM title, he did not steer away from complications (see diagram). **21. ♘xd5** looks like it defuses the pressure, as after 21... ♖xd5 22. ♖xe4 the position is fairly balanced. But Kåre had envisioned **21... ♗c6!**, taking advantage of White's adventurous king. Then White had nothing better than **22. ♖xe4 ♗xd5 23. dxe5 ♗xd1 24. ♖xd1 ♖xd1**.



Antonsen-Kristensen, Copenhagen 2015

This has landed Black in an endgame up the exchange. Kåre converted the advantage and earned a 2400 rating!

Even after crossing 2400 FIDE, Kåre had a long journey ahead. It would be another four years before he earned the third and final IM norm to earn the title of International Master. In looking back, he wondered, 'Even though I started late, I've been playing chess for more than thirty years, and what's the likelihood of a guy being in his late forties, never been over 2340 or so... what's the likelihood that he would suddenly get over 2400?' I don't know the exact odds, but I assure you that this feat was improbable. But it did happen! And unlike some of the other improvers I interviewed, Kåre did not put in superhuman levels of chess study. He estimated that he studied about an hour per day, and, as a working dad, he took a practical approach and used whatever time he had when on the go. Kåre explained:

*When my kids were younger, they were playing a lot of tennis and badminton and things. And when we were waiting for the next match, I took my computer and studied chess at all of these sports hall centers around Denmark. So you can do it. You can basically study chess almost anywhere. I used the time anyway I could, but my study definitely was not adding up to three hours a day on average. Never. That's never been possible for me.*

Kåre's example shows that a 'slow and steady', incremental approach to chess improvement *can* pay dividends. He stuck with it and became an International Master. While helping me prepare this chapter, and looking back at his whole chess career, Kåre concluded, 'In assessing your improvement, a key question to ask is, "Can I, and do I now play games which I wasn't capable of before I resumed seriously working on my chess?" And I am proud to say that the answer is yes!' Another *Perpetual Chess* guest managed to one-up him and take a similar approach to earn the coveted Grandmaster title!

### **The remarkable story of GM Kevin Goh Wei Ming**

Kevin Goh Wei Ming was the CFO at a multinational organization but refused to give up on his dream of earning chess' highest title. As a working International Master in his twenties, he was initially compelled to continue pursuing chess by one of the most powerful motivators: revenge! Kevin was the four-time National Champion of Singapore, but was not selected to represent his country on its Olympiad team. In 2020 (Episode 184) Kevin told me:

*I was National Champion of Singapore from 2006 to 2009, and in 2010. I finished third in the National Championship. And the selection committee basically said that only the top two places get a spot and then they are free to choose anyone else [for the third and fourth spots]. So they conveniently omitted me from the team, and I remember that I was just really devastated because playing for your country is something that I felt was really important to me. I took it as a badge of honor and I tried to play my best every time. And I remember that I was at work and I semi-broke down in the middle of the office, and at that time, I did a lot of soul searching, and I just felt that I really did not deserve a place, not just because I'm number three in the country, but I have not done anything in the last few years. I stagnated. I didn't really do anything to prove that I deserved to play for my country. So that was the point when I decided that I should take a year off from work and see how far I can go in chess. And it all started from there.*

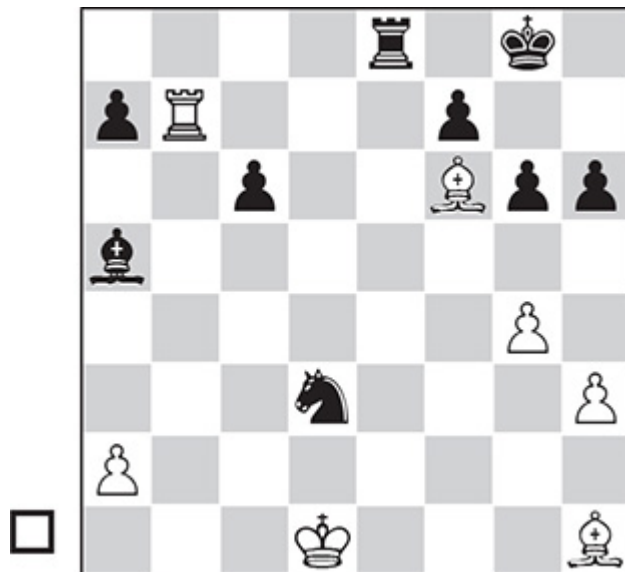
Kevin's goal of becoming a GM was degrees of magnitude more challenging than Kåre's goal of becoming an IM. In chess, as in any hyper-competitive endeavor, the better you are, the more difficult it is to achieve incremental progress. Kevin explained:

*If you want to take time off to become a Grandmaster, it's not the same as trying to become an FM or an IM. Becoming a GM is a lot more serious. It's a bit hard to explain why, but it's*

*just that the gap in knowledge between a GM and an IM is far greater than the difference among other levels.*

Knowing the challenge before him, Kevin developed an intense study regimen, which helped him make good progress during his year off from work. He studied chess for about ten hours per day and decided to emphasize openings above other aspects of the game. He felt that he had a knowledge deficit compared to stronger, younger players that would be tough to overcome in the middlegame and endgame, but that he could harness the power of engines and preparation to gain a competitive advantage in openings. Plus, equally importantly, openings were an aspect of the game that Kevin found to be enjoyable.

Kevin's journey was long and filled with setbacks, including a challenging period from 2018 to early 2020 when he fell just short of the rating requirement, lost a lot of rating points, and had to begin the climb again. Unfortunately, such a struggle is quite common when one chases top chess titles, and while Kevin ultimately achieved his goal, many do not manage to re-climb the mountain. In fact, from my observations, it is more common that one fails to achieve a lofty chess goal than that one achieves it.



Here, in mutual time pressure, GM Li Chao, outrating Kevin by 200+ points, uncharacteristically blundered with 37. ♖xc6??, giving Kevin the chance to earn his second GM norm. After 37... ♖e1+ 38. ♔c2, Black won material with 38... ♗b4+ and eventually the game. Annotating the game for Chessbase India, Kevin wrote, 'Words cannot describe the happiness I felt when this move [37. ♖xc6] was made.'

So yes, one can draw inspiration from people like Kevin Goh Wei Ming and Kåre Kristensen, but one should also know that the road is long, and not all will make it to the destination. When I interview rare success stories like Kevin and Kåre, there undoubtedly is some survivorship bias, as we neglect the many hard-working chess players who may have made supreme sacrifices but still fell short of the title they sought. Luckily, most of us can pursue goals slightly lower on the chess ladder than earning the GM or IM title, and while chess improvement is still quite challenging, the next level up is never as difficult as earning the Grandmaster title.

### **Breaking through at lower levels**

Derek Wilder provides such an example. Derek is a Detroit-based chess teacher who recently broke through a seven-year (!) plateau to achieve a USCF rating of 2000. That rating places Derek in the 96th percentile of US tournament players, so it's quite a feat, but it's a lot more doable than becoming a grandmaster, of which there are approximately 2000 worldwide. Derek's seven-year road from 1800 to 2000 was primarily one of perseverance. Derek would take one step forward and one step back, but continue to work on his chess. In Episode 279, Derek highlighted the significant financial investment that chess was for him during this period.

In one memorable story, Derek recounted a decision to spend all of his savings to travel across the U.S. to compete in the World Open, the biggest and possibly most expensive tournament in the country. Derek said, 'I was broke all summer, but as I tell everybody, when you play chess, you're doing it because it's something you love

and it's a passion... And when you love something, and you have a passion for something, the cost doesn't matter.'

A strong network of chess friends also buoyed Derek's success. An amiable guy, Derek began making friends as a scholastic player in Detroit and has continued to befriend and get advice from many local masters and stronger players. Of course, good guidance is only good if you are willing to listen to it, and Derek was willing to try different approaches. A fundamental change for Derek was to work on adapting from being a relentless attacker to a more well-rounded chess player:

*My training method changed tremendously. Previously, when I was playing chess, it was attack, attack, attack. Now, when I go in, I look for a return on my investment. And what I mean by that is when I'm playing chess, I'm still trying to attack, but I'm also scanning your position for weaknesses, looking to tie down pieces. And I realized that I cannot win every game by checkmate. Some games will be long and drawn out... I had to become a player like Magnus Carlsen, who can win long drawn-out positions.*

In addition to working to make his game more well-rounded, Derek focused more on openings. Finally, he achieved the beautiful round USCF rating of 2000 (commonly called 'Expert level'). Of course, once Derek achieved this, one might guess what his next thought was:



There is always another goal around the corner! Speaking of goals, let's wrap up with what I hope will be a few helpful pointers for those who would like to set reasonable chess goals without making themselves crazy.

- 1) One step at a time! If you are rated 800, it may be unavoidable to secretly dream of one day reaching a rating of 2200 and becoming a Master. One might be better advised to first focus on

something *much* more proximate. One should always have a near-term goal that is no more than 200 points away from one's current level. Anything beyond that is like planning the last day of a vacation you hope to take in eight years!

2) Embrace S.M.A.R.T.(E.R) goals. SMART is an acronym that stands for:

- Specific
- Measurable
- Achievable
- Relevant
- Timely

When reading the excellent book *Analyzing the Chess Mind*, by GM Boris Gulko and Dr. Joel Sneed, I was introduced to two extra letters on the SMART acronym. SMART became SMARTER, with the 'E' and 'R' at the end standing for 'Evaluate' and 'Reassess'.

So rather than saying, 'I want to get good at chess,' one might say, 'I will solve twenty puzzles daily and play [and review] one serious game weekly for two months.' Notice that I didn't even have a rating gain in there? If one insists, they could include a rating goal, but they should be aware that there is significant variance within chess results and that rating can be a lagging indicator, so one shouldn't be as strict in that guideline.

Here were my own SMART goals at the start of 2023: 1) Study chess for at least fifteen minutes per day. If you can't do fifteen on a given day, do five. 2) Play fifty rated tournament games in 2023. 3) Analyze those games.

After I evaluated those goals in March of 2023, to paraphrase Jeremy Silman, it was time to reassess my chess goals: I would need to set aside any OTB chess goals until I finished this book. I share this detail only because readers are likely to encounter real-life derailments of their own chess goals, and one should keep the chess goals in their proper perspective. And if one sets a relatively

modest goal and exceeds it, all the better; you can always set another one!

3) Don't be too hard on yourself! As mentioned earlier, rating-related chess goals are probably missed more often than they are made. As an adult with other interests and responsibilities, one should always acknowledge the possibility of future failure to meet goals. It is also helpful to bear in mind that plateaus are the norm for adult chess players, rather than the exception. We will have more specific advice for plateaus in Chapter 14, but in short, one should never be surprised by them.

### **In summation**

- Ratings and titles create a natural tendency to fixate on the chess learning destination rather than the journey.
- Adults tend to overrate their potential for improvement given the constraints of work, family, etc.
- Rating goals are a moving target because a certain rating does not always correlate to the same actual playing strength.
- Great achievements do occur, but the stunning feats of GM Kevin Goh Wei Ming and IM Kåre Kristensen will always be the exception.
- It is best to take a moderate approach to chess improvement; one should utilize S.M.A.R.T.E.R. goals and pursue one rung on a ladder at a time. (Don't set goals of more than 200 rating points at once.)
- Periodic reminder – it is also acceptable to play chess solely for enjoyment!

## **Chess checklists: improving thinking processes**

*Discipline is hard – harder than trustworthiness and skill and perhaps even than selflessness. We are by nature flawed and inconstant creatures. We can't even keep from snacking between meals. We are not built for discipline. We are built for novelty and excitement, not for careful attention to detail. Discipline is something we have to work at. – Atul Gawande, *The Checklist Manifesto**

### **Addressing chess shortcomings with checklists and habit trackers**

Listen, in chess, as in life, we all have shortcomings. Here are a few of my chess shortcomings. 1) Relative to my rating peers, I struggle to convert advantages. 2) I am prone to time trouble, probably due to the 'deadly chess sin' GM Jonathan Rowson described as perfectionism. 3) My calculation skills could use some improvement, the attentive reader might note that I mentioned struggling to consistently practice this in Chapter 3.

Others might have different struggles than my own. Common issues I have seen in club players include moving impulsively, failing to consider an opponent's threat, excessive risk aversion, or neglecting the way that a given move changes the character of a position (i.e. you advance a pawn and leave a weak square in its wake). There are many more of course. There is also the common, catch-all weakness of 'blundering too much'.

Why do we make the same mistakes over and over again, and what can we do to fix them? In order to answer this question, we first have to identify the nature of the mistake we make. Here is how Dr. Atul

Gawande described different types of mistakes in his excellent book, *The Checklist Manifesto*:

*In the 1970s, the philosophers Samuel Gorovitz and Alasdair MacIntyre published a short essay on the nature of human fallibility that I read during my surgical training and haven't stopped pondering since. The question they sought to answer was why we fail at what we set out to do in the world. One reason, they observed, is 'necessary fallibility' – some things we want to do are simply beyond our capacity. We are not omniscient or all-powerful. Even enhanced by technology, our physical and mental powers are limited. Much of the world and universe is – and will remain – outside our understanding and control.*

*There are substantial realms, however, in which control is within our reach. We can build skyscrapers, predict snowstorms, save people from heart attacks and stab wounds. In such realms, Gorovitz and MacIntyre point out, we have just two reasons that we may nonetheless fail.*

*The first is ignorance – we may err because science has given us only a partial understanding of the world and how it works. There are skyscrapers we do not yet know how to build, snowstorms we cannot predict, heart attacks we still haven't learned how to stop. The second type of failure the philosophers call ineptitude – because in these instances the knowledge exists, yet we fail to apply it correctly. This is the skyscraper that is built wrong and collapses, the snowstorm whose signs the meteorologist just plain missed, the stab wound from a weapon the doctors forgot to ask about.*

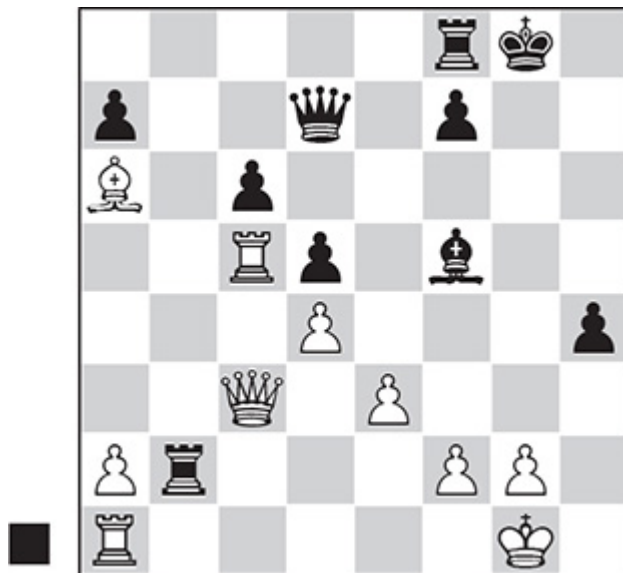
Although Dr. Gawande's book is about science and the world at large, many of the lessons he spells out are applicable to chess. In chess, we can also categorize 'necessary fallibility' as an inability to calculate like a grandmaster. Through hard work, I can improve my chess calculation abilities, but there is no amount of training that will give me an edge in that department compared to a grandmaster. However, two of the biggest chess shortcomings I highlighted in my own game fall in the categories of 'unnecessary fallibility', and most likely in the subcategory of ineptitude. I have the knowledge to play faster, and to win more often when up a pawn, so better chess performance is a matter of better applying what I know. A blunder-prone, impulsive player could also place their mistakes under the umbrella of ineptitude. So how to fix these issues?

One thing to keep in mind is that the type of ineptitude you are displaying may be the result of a different type of error. Chessable author and NM Han Schut encourages his students to not only

identify their mistakes, but to work to identify the ‘root cause’ of their mistakes in their chess games. In an interview on the topic for the *How to Chess* podcast (which is a chess improvement-focused podcast I host, in collaboration with Chessable), Han further elaborated:

*It's so tempting just to see the evaluation graph of the engine, to look at where the evaluation drastically changed, and to say, 'What should I have done here?' You might look up the theory and then move on. What I'm trying to do is to make it a little bit more fundamental.*

After every game Han evaluates with his students the critical moments and uses the ‘Five Whys Technique’ to get to the root cause of why the student went wrong. Han is a former corporate executive, and this framework is popular in the business world. As you might guess, this technique involves asking yourself why something occurred five consecutive times, with the hope that each time you ask yourself ‘why’ you will get closer to the root cause of the problem.



ZheniaSemyanko-fisensee, Lichess Standard 2021

Here is an instructive mistake that Han Schut shared on his Chess.com blog. Han writes, ‘My teammate continued **22... ♖c2** **23. ♗b4 ♖xc5** **24. ♗xc5**, and the initiative and advantage have

switched from Black to White. I told him that I would never have considered trading but would have added energy to my army by playing 22... ♖fb8, with ideas of a kingside attack with ... ♗e4 followed by ... ♗g4. This was not the first time my teammate preferred trading, or a defensive move over an active move. We went through the “five whys” to find the root cause: My teammate verbalized it very well: “I don’t trust my calculation. I got burnt too many times overseeing something, so nowadays I choose safe moves.” Quite a statement, very honest, and one that goes far beyond “The engine says that I could have played move X here instead of move Y. Good to know. Next game.” The remediation plan is to build calculation skills and hone those skills in online slow games.’

According to Han, some of the most common root causes for chess mistakes are:

- Not calculating concrete variations, but playing moves based on general characteristics of the position and gut feeling.
- Reducing tension by trading pieces based on fearing complications in a position.
- Inability to sustain focus for an entire game.
- Lack of complete board vision (focusing on a limited part of the board and missing developments at the other part of the board).
- Skipping a blunder check (capture, checks, threats) at every move.
- Overlooking the possibilities of the opponent.
- Letting a higher rating of the opponent impact the player’s confidence and resilience.
- Getting into time trouble and blundering.

### **Enter the chess checklist**

One potential way to work on your thinking process is to use what Dr. Gawande calls a ‘Read-Do’ type checklist. In *The Checklist Manifesto*, Gawande describes it as such: ‘With a Read-Do checklist,

people carry out the tasks as they check them off, like a recipe.’ When playing a slower online game, we can literally sit there with a short list of questions to go through each move, and place a physical check on a paper when we ask ourselves a question. This would not be allowed in a tournament game, but, in my opinion, there is nothing ethically wrong with using a checklist as a training method in a low-stakes online game, and it can be a helpful tool to develop a consistent thinking process.

### **Chess cognition checklists**

What questions might you have on the read-do checklist? If you are a novice to intermediate player who struggles with blunders, you might want to start with something short and basic:

- 1) What is my opponent’s threat/intention? (You may not always be able to figure out your opponent’s plan, but at least you tried!) Do they have any fruitful forcing moves(checks/captures/threats)?
- 2) What has changed in the position based on the last move?
- 3) Do I have any fruitful forcing moves (checks/captures/threats)?

This is just a sample checklist, and it is possible you may come up with something more targeted for your own game, or you may want to pare it down even more and focus exclusively on looking at your opponents checks, captures and threats before you move (a blunder check).

As you make your way toward more advanced strategizing, questions such as GM Jacob Aagaard’s famed ‘three questions’ can be useful in helping you formulate a plan when you don’t know what to do in a position. Aagaard’s questions are designed specifically for when you don’t know what to do in a relatively quiet position. In his excellent book, *GM Preparation: Positional Play*, Aagaard writes:

*It is probably a decade ago that I sat down and tried to make a list of all of the relevant questions I could ask my students to make them pay attention to nuances in the training positions I provided them with. I think I had about nine. But some of them I felt were not really relevant to the positions I looked at, so I ditched them. Others tended to have very*

*similar answers to each other in otherwise quite different positions. Merging them seemed reasonable, and bam! I was left with three questions:*

- 1) *Where are the weaknesses?*
- 2) *Which is the worst-placed piece?*
- 3) *What is your opponent's idea?*

*I have since used these questions in training with club players of average level [and below] and strong grandmasters. They are equally useful for all levels for a simple reason... their purpose is to direct your focus.*

In Episode 111, Aagaard elaborated further. He said, 'My reason for making questions is that **we're very good at finding answers, but finding the questions is really the difficult thing.**' He also stressed the point that three questions is an appropriate number because it could be cumbersome to recall more questions than that at the board. And he concedes that there are more than three questions one could reasonably ask oneself.

This brings us to GM Vladimir Kramnik's preferred questions. In his Chessable course, *Thinking in Chess, A How to Guide*, former World Champion Kramnik suggests following a different checklist: 1) Do I have a strong basic tactic (look quickly at checks, captures and threats)?, 2) Does my opponent have a direct threat?, 3) What is my opponent's plan?, 4) Only after those three questions, he asks, what is my own plan? When I interviewed him for Chessable's *How to Chess Podcast*, the legendary former World Champion admitted that he doesn't consciously utilize this thought process himself, but he thinks it's a useful deconstruction of a top player's thought process. Here is what Kramnik told me:

*A top chess player usually [asks these questions] kind of automatically... not consciously. Yes. So you are actually answering this question, answering those questions and then you make a move. But on the top level... you don't notice. So what I did then is to try to make a certain retrospective analysis. So actually trying to understand what kind of questions we ask... to help us find the right move... And then I understood that actually, this is the path.*

From my own perspective, I have tried both sets of questions, and I have found Aagaard's to be more helpful. I like the fact that his questions are a bit more leading than Kramnik's suggestions. But it

could be different for you. As Aagaard told me, there are other questions one could incorporate as well, such as, 'What is good about my position?' Aagaard also mentioned a suggestion of GM Sune Berg Hansen, who is a fan of asking himself, 'If I lost this game, how would it happen?' As you may gather, there are lots of good questions we could be asking ourselves, so the challenge becomes to select questions that we like, keep them short, and work on internalizing the process of asking ourselves.

### **Habit trackers – for when a checklist doesn't cut it**

Of course, not every competitive chess issue can be solved by a 'Read-Do' checklist. For example, if we return to my own OTB issues, time management and advantage conversion are not conducive to Read-Do checklists. Although for time management, writing down one's time spent after each move in a tournament game is a small step in the right direction. But for online chess, a checklist where I simply check a box after each game verifying that I never spent more than twenty seconds on a move in a three-minute game might be effective. This type of checklist might fall under the other category of checklist that Dr. Atul Gawande describes. He calls it a 'Do-Confirm' checklist. With a Do-Confirm checklist, you first perform the task from memory and experience, often separately, but then you stop and assess that you did things as you originally planned.



A Do-Confirm checklist is similar to what James Clear would simply call a 'habit tracker'. A famous example is given in *Atomic Habits*. Clear writes:

*Jerry Seinfeld reportedly uses a habit tracker to stick with his streak of writing jokes. In the documentary Comedian, he explains that his goal is simply to 'never break the chain' of writing jokes every day. In other words, he is not focused on how good or bad a particular joke is or how inspired he feels. He is simply focused on showing up and adding to his streak.*

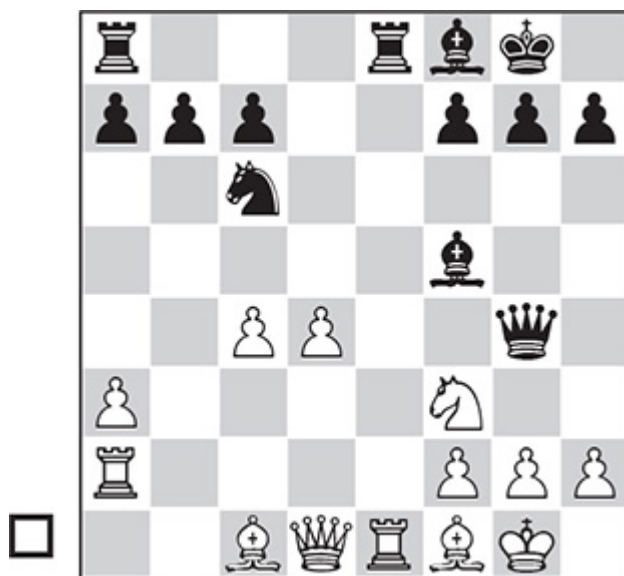
Should I be building a streak of blitz games where I never fall more than 'x' seconds behind on the clock, or never think more than 'x' seconds? Or perhaps, in order to improve my 'advantage conversion' skills, I could develop a daily practice beating a chess computer from an advantageous position. It might be worth a try! A last observation about habit trackers in chess is that the streak

counter in Chessable has certainly proved to be a powerful motivator for the many adherents who have built streaks in the hundreds, or even thousands. Beyond Chessable, there are many habit tracker apps available for free. I use one called 'streak', where you define your goal and then simply check it off when you achieve it in your desired time frame.

### **Keep your expectations realistic**

Before concluding this chapter, I would also like to remind readers that there are no guarantees in chess, as in life. A checklist may help you improve your chess habits or thinking processes, **but many people struggle to bring about real change and are unable to improve their games despite putting in significant work.**

If conquering chronic time trouble were easy, a world-class player like Alexander Grischuk would not succumb to it repeatedly over a span of decades. Similarly, one can highlight GM Ian Nepomniachtchi's well-chronicled penchant for playing too quickly and occasionally missing an idea he likely wouldn't have missed if he had thought for longer.



Nakamura-Nepomniachtchi, Berlin ct 2022

Nepomniachtchi had gotten off to a blistering start in the 2022 Candidates, scoring three out of his first four games. On move 17, Nepomniachtchi misremembered an opening line and hastily played **17... ♖g4?**, which allows **18.h3**, when Black has nothing better than **18... ♖xe1+ ♗xe1** and **19... ♗e4**, going into an unfavorable endgame. Magnus Carlsen was broadcasting for Chess24 during this crucial round five encounter, and joked, 'He's getting back to his true self in his last few moves – playing poor moves quickly!' In this case, Magnus spoke too soon, as Nepo escaped with a draw in this game and went on to win the 2022 Candidates comfortably.

From a personal standpoint, I will say that my 'imposter syndrome' is strongest when writing chapters like these. Imposter syndrome refers to the idea that one self-doubts about whether he is worthy of the role assigned to him. When it comes to dispensing advice about how to manage one's time during a chess game, to quote former NBA star Charles Barkley, 'I am not a role model!' I found myself nodding knowingly when I read the following passage in IM Willy Hendriks' *Move First, Think Later*:

*I am curious what a study on kicking the habit of 'exorbitant use of thinking time' would reveal. I wouldn't be surprised if it showed little or no success. When I look around me in the tournament hall, I see the same guys struggling with the clock as twenty years ago. And if I speak to them about it, they tell me that they 'really should do something about this time pressure', just as they told me twenty years ago. I am not laughing at them; unfortunately, I am a member of this club!*

While my time-trouble issues may be irreparable, I have higher hopes that habit trackers can help me lead a more disciplined life. But I had a Chessable daily use streak of over four hundred meet a tragic demise in 2021, and I have struggled to maintain a streak since then. I try not to drink alcohol on weeknights, but I don't always succeed. Behavior change is exceedingly difficult, and there is a vast gap between knowing one should do something and consistently doing it. But as James Clear says, 'You do not rise to the level of your goals. You fall to the level of your systems', so if one sets up systems such as checklists or habit trackers to potentially change

their ways, they at least have a greater chance of change than they otherwise would.

### **In summation**

- Changing your habits is extremely difficult!
- As a result it can be helpful to use a tool such as a checklist or a 'habit tracker'.
- Identify the chess habit you would like to change most, and design a system to address it.
- The ultimate goal with a Read-Do checklist, is to internalize a thought process and thus to no longer need it!
- Do not expect overnight change, I have been struggling with the same issues for years!

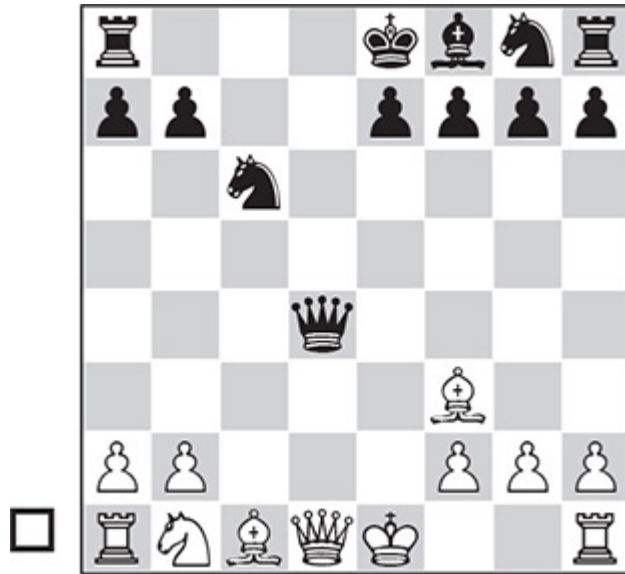
## **‘I am a chess player!’ Habits and identity**

*You should be far more concerned with your current trajectory than with your current results. – James Clear, Atomic Habits*

### **Neal Bruce’s rock bottom blunder**

Every superhero has a good origin story, and Neal Bruce is no exception. Neal is a dedicated chess amateur who has built a loyal following by sharing his passion for chess improvement on Twitter. He is also that rare tournament competitor who learned chess from scratch after age forty. Neal achieved a lot for such a late starter and earned a 1700+ USCF rating, despite a busy life as a CPO at a tech startup, a husband, and a father of three. Early in this journey, as so many of us do, Neal hit a moment of extreme frustration with his chess. He missed an easy two-move tactic early in a game and lost in aggravating fashion. Neal has made several popular appearances on *Perpetual Chess*, but he told his story best to IM Kostya Kavutskiy on the *Dojo Talks* podcast (Episode 24):

*After the blunder, I thought to myself, how? How stupid of me! What’s wrong with me? And I decided I never wanted this to happen again. So I said, ‘I am going to take this really seriously. I am going to start by buying all the books with pictures of little children on them that have to do with tactics.’ And then I started going through the books, got a coach, and went from there.*



Bruce-Piotrowski, Boston 2016

Here is the blunder that changed Neal's life. In this position, he played **9. ♖b3**, a decent move except for the fact that **9. ♕xc6+** wins the queen! From that point forward, Neal decided to get serious about his chess study.

As Neal studied more, he noticed he was having trouble remembering puzzles, so he started making flashcards of any puzzles he forgot. (This was in pre-Chessable days.) Much to the delight of chess book publishers, Neal would buy two copies of any book he was working on in order to have one to cut into flashcards and one to keep on his bookshelf.

Neal's flashcards ran the gamut from tactics he had missed to 'positional puzzles' about rerouting or exchanging a piece, as one might find in books like *Winning Chess Strategy* or *Mastering Chess Strategy*. It was around this time that Neal began to share his puzzles and his hard-won wisdom on Twitter, he built a large following of fellow adult chess players looking for inspiration.

And lots of us, myself included, are often in need of inspiration. Trying to improve at chess is a daunting and relentless pursuit. Just as we think we have one weakness shored up, another emerges.

And the more important things in life can impede our progress or provide an excuse for us at any time. The struggle is real.

An avid reader, Neal Bruce has learned more about adult learning along the way and has been able to impart some of that wisdom to his fellow chess amateur enthusiasts. Neal's long-term audacious goal is to make it from his current level to USCF Master (a 2200 USCF rating) someday.

### **He becomes the 'habit grandmaster'**

Neal's reading interests range from stoicism to history to many books with a self-help orientation. In particular, Neal has read multiple books about developing good habits and became an early proponent of James Clear's smash-hit bestseller, *Atomic Habits*. Per Neal's recommendation, I eventually got around to reading *Atomic Habits* and found it to be illuminating. (As demonstrated by the fact that Clear is quoted periodically in this book!)

Neal functions as the chess embodiment of so many of Clear's simple but powerful principles, and as a result, I have jokingly begun calling Neal 'The Habit Grandmaster'. Neal may not have that chess title, but his inspiring work ethic and commitment to the long view are quite grandmasterly.

The theme of Clear's writing that Neal embodies most is that of cultivating an identity. In *Atomic Habits*, Clear pinpoints the three layers of behavior change as, 1) changing your outcome (i.e. quitting smoking or eating red meat), 2) changing your process (making a new routine to help change the outcome), and 3) changing your identity. Clear writes, 'Outcomes are what you get, processes are about what you do, identity is about what you believe.'

When Neal discusses the idea of identity, it resonates. Here is what he told Kostya Kavutskiy in the aforementioned ChessDojo interview:

*Some days I don't even want to do chess training. If you're an athlete or committed to something, you do it whether you feel like it or not. And to me, it's not even a choice. It's*

*who I am. It's part of my identity. I'm a chess player, and I train. And so I think people overestimate motivation and they overestimate fun and they underestimate the will to simply get better.*

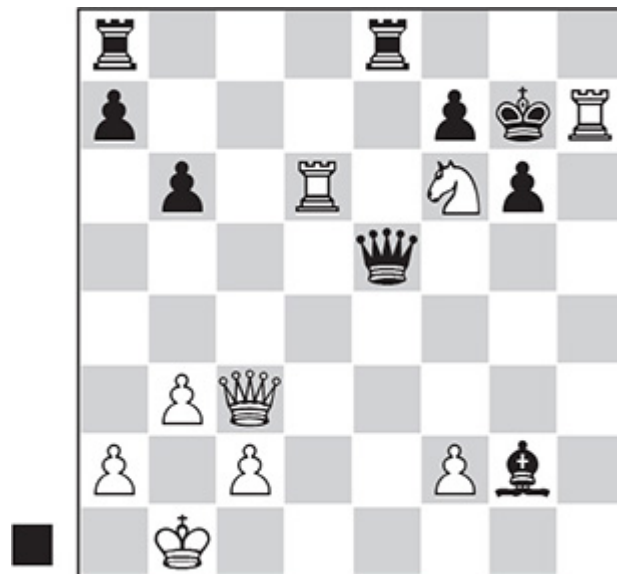
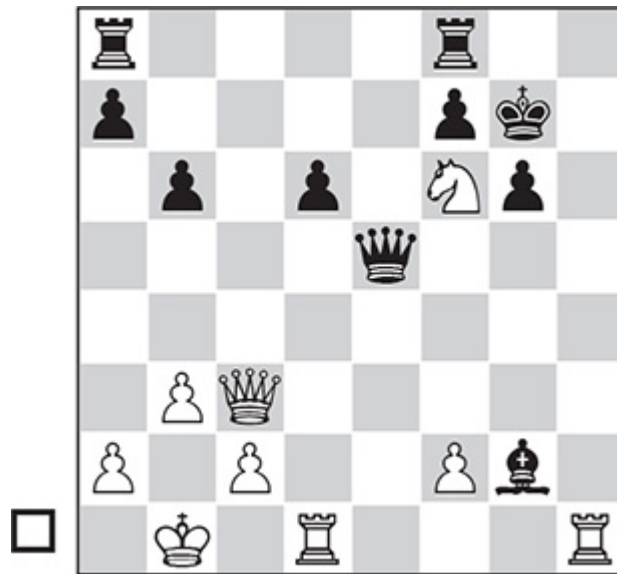
Now that I, like Neal, have read *Atomic Habits*, I can hear James Clear's echoes when Neal speaks. Clear wrote, 'The ultimate form of intrinsic motivation is when a habit becomes a part of your identity. It's one thing to say "I am the type of person who wants this." It's something very different to say "I am the sort of person who is this.'"

This framing is very helpful on days where my chess motivation wanes. I remind myself, 'I am a chess player', and at minimum, I do fifteen minutes of tactics per day, or, again, I did until the writing of this book reached the homestretch!

### **Enter James Canty**

One should not discuss motivation in chess without discussing another beacon from the chess world, FIDE Master James Canty. Just as Neal has an unlikely but admirable goal of making USCF Master in fifteen years, James, as a thirty-year-old dad, strives to gain three hundred and fifty or so FIDE points and the norms necessary to earn the Grandmaster title. This is an audacious goal that I would not bet on any thirty-year-old in the world to complete. But if I were to bet on someone, it would be someone who works like James does.

Since James is a successful Chess.com commentator, Twitch streamer, and chess coach, he is able to spend more time studying chess than others, and spends multiple hours a day studying chess, often while streaming. James' study hours go beyond his streaming time, and he has said that he doesn't even own a television because it distracts him for working toward his goals. In Episode 313, I asked James if viewers ever complain that he is solving puzzles rather than playing blitz and entertaining people when streaming. James said, 'I tell them "You must be new here! This is an improvement stream!'".' Whether knowingly or not, Canty has even applied James' Clear's idea of identity to his chess stream.



Canty-Quesada Vera, Chicago 2022

Canty is an attacking whiz who maintains a daily practice of calculation work. In this position (left diagram), James played **25. ♖xd6!!**, and even though his queen and both rooks are en prise, none can be taken, due to **26. ♜h7#** (or if **25... ♙xh1**, **26. ♚xe5**). After **25... ♜fe8** **26. ♜h7+** (right diagram), Black resigned, as after **26... ♚f8** **27. ♘d7+** would win the queen.

A final word about James Canty and Neal Bruce is that despite having far-fetched goals, they have allowed room for not achieving them in how they go about their lives. James can frequently be heard quoting the aphorism, 'Shoot for the moon, because if you miss you are among the stars.' Neal, on the other hand, knows that he may not make it to USCF Master in the end, but he will still maintain a daily practice and revel in his identity because at heart, like so many of us, his identity is that of a chess player.

### **In summation**

- In order to maintain a daily chess practice, it is helpful to know your 'Why?'
- One can help maintain motivation by repeating good habits and associating daily chess practice with one's identity.
- While I often worry that overly audacious goals can be detrimental to one's chess development, people like Neal Bruce and James Canty show a way to channel their ambitions into productive lives.

## Plateaus: learning to love the chess rating hamster wheel

*The most important principle is to take action even if you're moving sideways. Action is the great unsticker because it necessarily replaces inertia with movement.*

– Dr. Adam Alter, *The Anatomy of a Breakthrough*

### The early days are magical

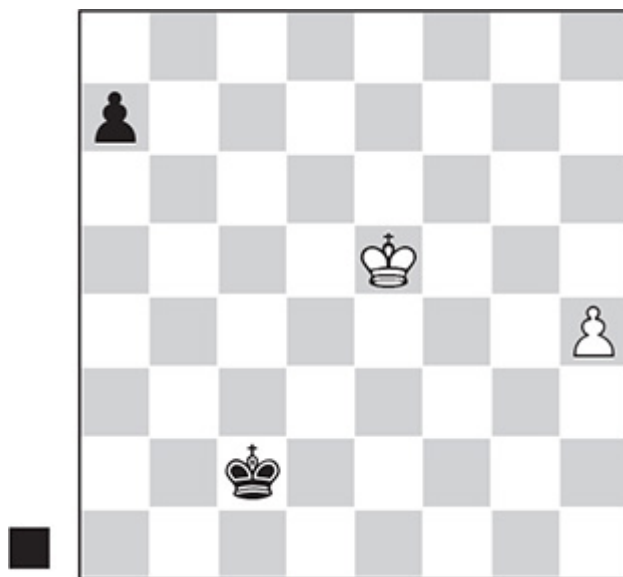
When famed chess YouTuber Stjepan Tomić, better known as 'Hanging Pawns', discovered chess as a graduate student in Poland, he immediately loved it. So upon returning to his native Croatia, Stjepan eagerly looked for a place to play. Here, in Stjepan's words, is what happened next (Episode 117):

*I was walking through one of the main streets in Zagreb and I knew that the chess federation was there. So I passed by the door. There were two guys in front of the building and I said, 'Do you play chess here?' They said, yeah. And I came upstairs and there were fifty people playing a blitz tournament, and I felt like a kid in a candy store. I just couldn't believe it. And ever since then, I just wanted to play chess every day, throughout the whole day.*

And many people have stories similar to Stjepan. The people and the places change, but the magical feeling of the chess world opening up to you is universal. For the chess stars of the world, the chess bug usually bit before the age of ten. Many amateurs discovered chess in their teens or early adulthood. For me, it began at a middle school chess club. For still others, it began with a family member teaching them the rules of the game. Lots of recent chess fans and a few *Perpetual Chess* guests discovered the game through the evocative, brilliantly executed, and, yes, overly dramatized Netflix series *The Queen's Gambit*.

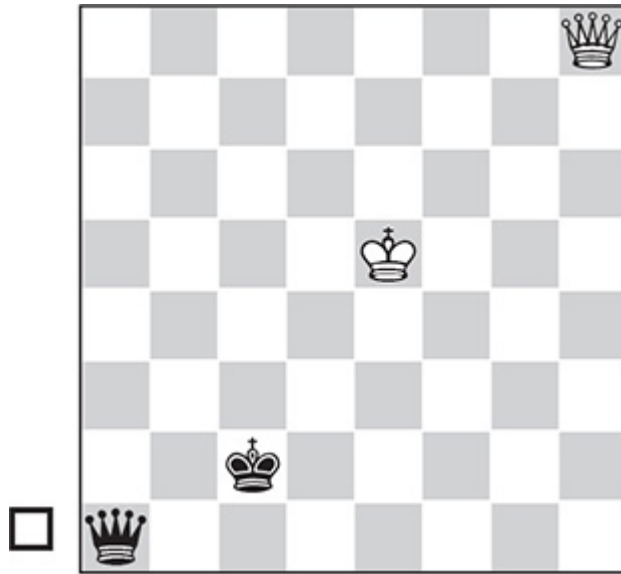
Whatever one's road to the game, it is a special time when the world of chess teaches you a new skill to execute every day. Who

can forget the feeling of delivering their first smothered mate or correctly calculating that you are winning a pawn race by just one step? In those early days, as one dives deeper into the chess world, one's chess skills gather mass and momentum like a snowball rolling downhill. Rating milestones get checked off, prizes and trophies are collected, and fame and fortune are bestowed. Okay, maybe not so much fame and fortune.



Poe (fictional)-Waitzkin (as depicted), 'Searching for Bobby Fischer' 1993

For a chess player, there is something intrinsically pleasing about seeing the 'payoff' in a position like this. In the final scene of the movie *Searching for Bobby Fischer*, Jonathan Poe and Josh Waitzkin reach this dramatic moment after 1) Josh calculates a forced sequence leading to this position, 2) Having decided that he is winning, Josh offers a draw, presumably out of pity for his young opponent, 3) Jonathan (presumably not knowing he is losing) turns down the draw offer, and 4) A frenetic final sequence ensues from this position: **1...a5 2.h5 a4 3.h6 a3 4.h7 a2 5.h8 ♚ a1 ♚+**.



Poe (fictional)-Waitzkin, 'Searching for Bobby Fischer' 1993

White queens first, but Black queens with check and wins the white queen!

### **And then it gets hard**

Eventually, no matter who you are, rating progress will start to slow. Often, you will still feel like you are getting better and learning new openings, and concepts. But your results will no longer keep pace with your increased knowledge. That moment can come at any level. Some people may struggle to improve fairly close to the beginning of their chess journey. Future grandmasters often enjoy a steep ascent through most of their childhoods. For Megan Chen, a software engineer and devoted amateur player, a plateau occurred between 1800 and 2000. Here is what she said (Episode 134):

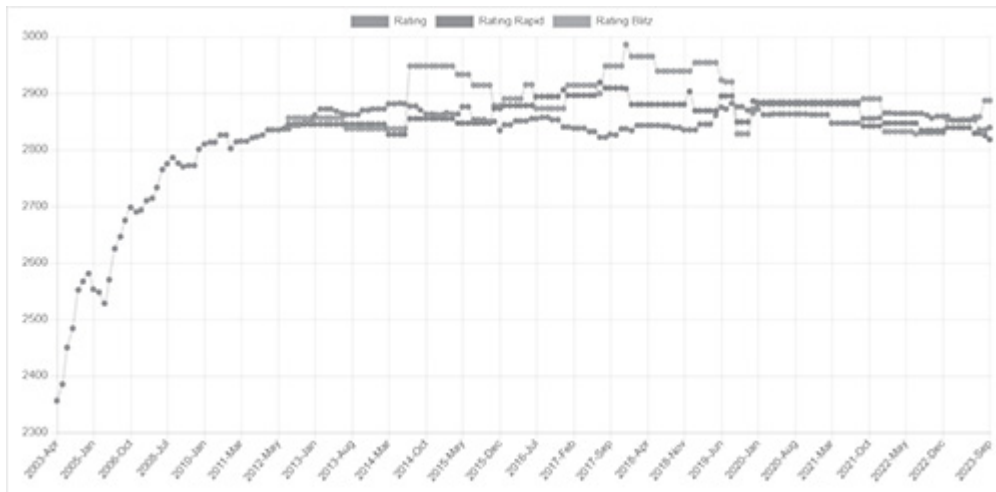
*When I started to tell people that I was stuck, they would assure me that it is much more difficult to get from 1800 to 2000 than, say, from 1300 to 1500... There comes a point where it takes time for the brain, despite accumulating more knowledge, to eventually take in that knowledge and let it sink in so it can translate into over-the-board confidence.*

Megan's mention of knowledge also gets to what author and National Master Dan Heisman, Jonathan Rowson, and others have differentiated as the difference between knowledge and skills. Knowledge is awareness of an additional fact about chess. It could

be the name of a new opening, a specific plan within that opening, or even the ability to recognize a specific pattern like Lucena's position or Boden's mate. Skills, on the other hand, are the ability to analyze, calculate, and manage a game's flow from beginning to end. As 19th-century chess legend Siegbert Tarrasch famously said, 'It is not enough to be a good player. You must also play well.'

A lot of chess skill comes down to calculation and visualization, but factors like time and energy management also can play a critical role. As NM Heisman has pointed out, it is much easier to increase chess knowledge than to learn to calculate more crisply, and players often mistake increased chess knowledge for superior play. There can be an overlap between chess knowledge and chess skill, and knowledge of a new opening *can* help you win a game, but Heisman has estimated that overall chess ability consists of two-thirds chess skills and one-third chess knowledge. I would rate skills as even more important than that. And unfortunately, it is much easier to improve our knowledge than our skills. She who has the biggest chess library doesn't always win, or, as poker legend Doyle Brunson put it when discussing how to evaluate poker players, you don't judge a hunter by his accuracy or his knowledge of the forest, 'You judge a hunter by the number of furs he brings home.' In chess and poker, for better or worse, we are ultimately graded by our results.

Aside from the knowledge/skills trap, we must also grapple with the fact that there will come a day for all of us when all of our chess skills will peak. This means that whenever we are stuck, we must ask, 'Is this a plateau or have we simply already played our best chess?' This is a nagging question that can gain volume as a plateau extends. Magnus Carlsen is the best modern player, but even Magnus reached a point where he was not necessarily getting 'bester'.



**When will Magnus Carlsen move beyond his 2800 rating ‘plateau’? (source FIDE)**

The harsh truth is that for working adults who have been playing chess for years, improving at chess, or at least significantly raising your rating, can be excruciatingly difficult. Stagnating or losing rating points is the norm, rather than the exception. This phenomenon reminds me of the song *Gotta Serve Somebody* by Bob Dylan. (I am aware that my pop culture references could use some updating.) For those not familiar with Dylan’s song, its lesson is self-evident, but I have added my own chess lyrics to drive home the point.

**Bob Dylan’s *Gotta Serve Somebody*:**

*You may be an ambassador to England or France  
 You may like to gamble, you might like to dance  
 You may be the heavyweight champion of the world  
 You might be a socialite with a long string of pearls  
 But you’re gonna have to serve somebody, yes indeed*

**Ben Johnson’s *Your Rating is Gonna Peak Someday*:**

*You might be Hikaru, a chess streaming star  
 You might be a prodigy whose skills take you far  
 You might be Magnus, the Classical Champion of the world  
 You might be Levy Rozman with legions of fans  
 But your rating is going to slump, yes indeed*

## **Okay, enough depressing talk. What do I do to get out of a plateau?**

So should adults give up on the idea of improving at chess? Absolutely not! Let's look at the example of GM Sam Shankland. After some years of consolidation around the 2650 level, Shankland achieved a legendary breakthrough in 2018. He won the U.S. Championship and performed at a top fifteen level in the 2018 calendar year, and went from 2671 to 2727 FIDE between April and September. The fifty rating points may not sound like much, but it is quite an impressive feat when you are 26 years of age and starting from such a high level. To paraphrase Ernest Hemingway's famous line about bankruptcy, Shankland got better 'gradually, then all at once.'

In a 2019 *Perpetual Chess* interview with his trainer, Jacob Aagaard (Episode 111), Jacob shared some behind-the-scenes details about the self-doubt that had preceded this breakthrough. Jacob said:

*In 2017, Sam called me and said, 'Do you really think I can do it? Do you really think I can get past 2700? Should I just wrap it up and teach chess for a living and just accept where I am?' I responded, 'I really don't know. I just think we're doing the right work and that in time it will pay off. And we just don't know when that will be. And we just need to keep going, and we just have to keep confidence. We just need to keep doing the work. And you can lose confidence someday and be unsure of yourself, and if you're doing the right thing, just continue working.' And Sam said, 'Okay, so we'll continue working.'*

In summing up this conversation, Jacob said:

*One of my guiding principles is everything that's worth doing takes longer to achieve than we want it to. What this shows, is that it is possible to develop past the early years and to develop immensely, even at the top level. And if it can be done at that level, it can also be done at lower levels.*

Although I find Sam Shankland's tale of perseverance incredibly inspiring, I also find it admirable that before Sam's breakthrough, Jacob conceded that he didn't know for sure if Sam would be able to ascend beyond his plateau. We all love tales of inspiration, but we also must be aware that the breakthrough may never come, and when it doesn't come, we likely won't hear the story. We also must concede that Sam had a few things going for him in that he was fairly

young and that he possessed a very strong work ethic. When I interviewed Sam in 2023 he was in the middle of another plateau, and I and many other chess fans are rooting for a second act to Sam's remarkable breakthrough.



**As GM Sam Shankland's FIDE rating graph shows, Sam eclipsed 2600 in 2012, and then finally kicked down the 2700 barrier in 2018.**

### **'Change something'**

FM Peter Giannatos also gave succinct and targeted advice regarding what to do when feeling stuck (Episode 241) – 'Change something!', he implored. If your results stagnate, trying a new study regimen, opening repertoire, coach, or tournament routine can be a good idea. As Peter said, what needs to be changed will be different for every person, but it is useful to endure short-term discomfort with the hopes of long-term growth.

And even if we are gaining chess skills, better results may take time to show themselves. In one of our interviews, Christopher Chabris expounded on this point (Book Recap #31), mentioning a scientific study by Yoni Donner and Joseph Hardy called *Piecewise power laws in individual learning curves*. In the paper, the authors analyze the learning performance of adults in various cognitive tasks. In the test, the authors tracked improvement with practice in mental processing, memory, and word processing. Here is Dr. Chabris' explanation of what the study found about plateaus:

*First, you get better [at a task] quickly and then the curve slows down, even as you learn more. But there's only a curve of learning when you average together a lot of people's learning experiences in the way their performance changes over time. If you look at individual players or athletes, what's more likely is they have an upward curve for a little while, then they flatten out, and then there's a discontinuity where they start a new curve and go up. So it's normal to have plateaus and climbs and plateaus and climbs and the plateaus can get longer as you go as you get better and better.*

These findings jibe with the experiences of the many chess players I have interviewed. But there is some slightly discouraging news shared at the end of the same study. The authors write, 'Age was negatively associated with both performance and improvement among study participants.' So in the spirit of the adage that one should 'plan for the worst and hope for the best', chess amateurs should always manage their lives as if their rating might have already peaked. Don't put too much emotional capital or self-worth in the number on the wall chart. Sam Shankland was in a good position where he knew that if he did not ascend to the next level, he could still make a comfortable living teaching chess and writing books and Chessable courses. Peter Giannatos pursued competitive chess for fun while building the successful Charlotte Chess Center. We must strike a balance between hoping that a rating breakthrough is possible, while bearing in mind that it is far from a foregone conclusion. In the meantime, as long as you are enjoying the process it pays to keep working while also experimenting with new approaches.

### **In summation**

- Plateaus are both frustrating and completely inevitable for all chess players.
- Plateaus should be looked at as the norm rather than the exception.
- If you feel yourself stuck and you don't want to give up, you should change your routine and redouble your efforts.
- A breakthrough is never guaranteed, so one is advised to take a balanced approach to chess study and to look to derive pleasure from the game beyond rating and results.

## How should we study chess? Deliberate practice and chess study

*Learning is deeper and more durable when it's effortful. Learning that's easy is like writing in sand, here today and gone tomorrow.*

– Henry Roediger III, Mark McDaniel, Peter Brown, *Make it Stick*

### **The history of deliberate practice in chess**

With an elegant and fairly accurate rating system and the fact that no knowledge of other fields is required for excellence, chess has long been inextricably linked to the concept of deliberate practice. The term 'deliberate practice' was popularized by psychologists K. Anders Ericsson, Ralf Krampe, and Clemens Tesch-Romer in a landmark 1993 paper called *The Role of Deliberate Practice in the Acquisition of Expert Performance*. Author Malcolm Gladwell expounded on this subject in his best-selling 2008 book *Outliers*, and in the subsequent years, the term has penetrated deeply into the cultural lexicon.

Ericsson and his colleagues originally defined deliberate practice as 'effortful activity designed to optimize improvement.' They argued that 'Elite performance is the product of a decade or more of maximal efforts to improve performance in a domain through an optimal distribution of deliberate practice.' Their research touched on many subjects, including music and chess, and cited the Polgar sisters and Bobby Fischer as chess exemplars of deliberate practice. They wrote that the success of the Polgars 'shows that the level of performance can be dramatically accelerated through systematic training initiated prior to evidence of talent.'

Although the concept is often mentioned on *Perpetual Chess*, in reading Ericsson's paper, I am not certain if Ericsson's 'deliberate

practice' framework is the best methodology regarding how adults should study chess for a couple of reasons:

- 1) A lot of the paper is related to 'nature vs nurture' debates regarding how determinative genetics are for future elite performance in different domains. While I find this a fascinating topic, I am not sure how relevant it is for an adult trying to go from 1600 to 1800 in chess.
- 2) The paper primarily looks at how adolescents and teens acquire skills rather than how adults do so.
- 3) One of the best chess players ever clearly states that he was not a fan of deliberate practice; more on this shortly.

Nonetheless, when chess players cite deliberate practice, they are likely invoking the spirit of 'effortful practice', rather than looking to follow a verbatim definition from a thirty-year-old paper. But to begin the discussion, let's look at the pillars of deliberate practice according to Ericsson, Krampe, and Tesch-Romer.

### **The components of deliberate practice**

You can get more granular if you like, but the principle four components of deliberate chess practice, based on Ericsson's paper, are:

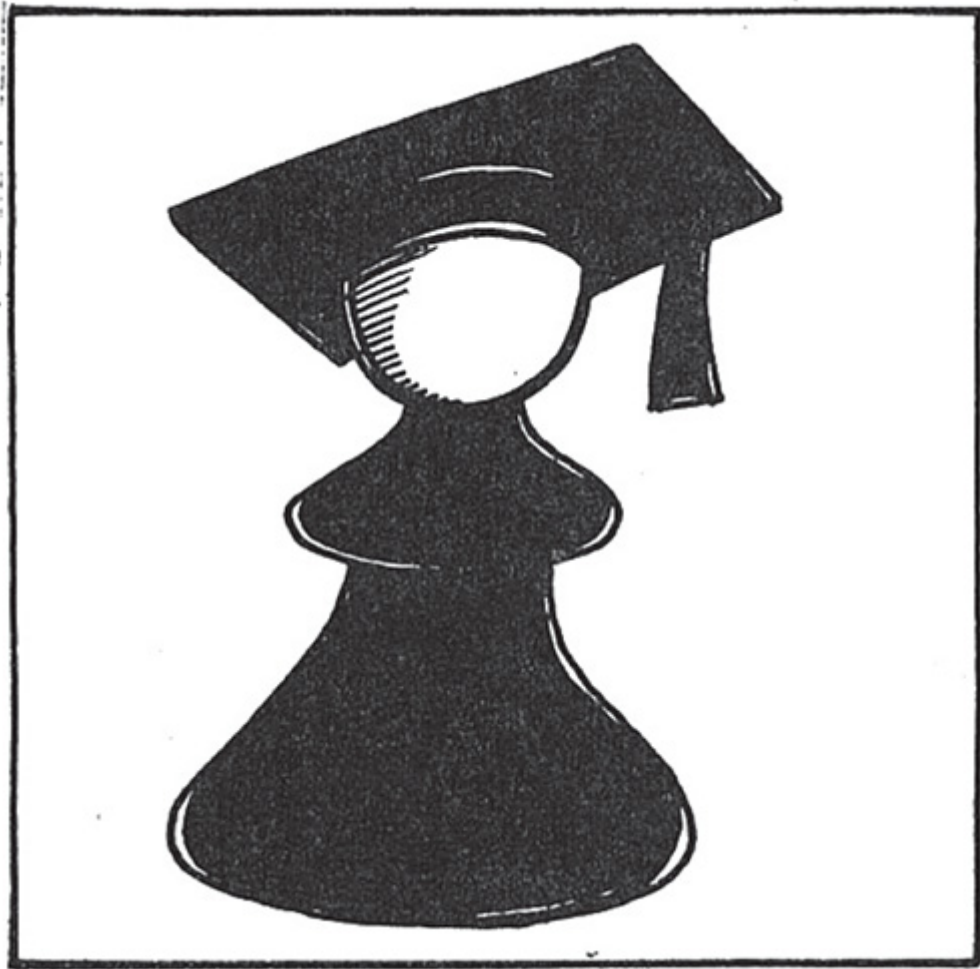
- 1) **It should be effortful.** Blitz on your phone on the toilet just doesn't count!
- 2) **It should be targeted.** It should work on a specific skill. In chess, one might work specifically on calculating or regenerating and writing down your opening repertoire to help you remember it in the future.
- 3) **One should receive immediate feedback.** Whereas in the old days, this could have been a friction point for a self-learner studying chess, an engine or answer key can often provide the feedback needed.

**4) One can perform the same task repeatedly.** Obviously, whether we are talking about online blitz, playing training games from a specific endgame or opening, or some version of The Woodpecker Method, it is easy to apply this principle to chess.

As you might imagine, these components still leave plenty of scope for diversity within a chess training regimen. In order to make a more targeted training routine, it is helpful, first, to think about how we might learn differently as we age.

### **Fluid and crystallized intelligence**

When I asked Christopher Chabris about what general information chess players should know about aging and cognitive decline (Episode 187), he began reassuringly, 'It's not all bad news for aging.' Dr. Chabris went on to explain that according to the literature on intelligence, there are two types: fluid and crystallized. According to Dr. Chabris, fluid intelligence is your ability to manipulate information in real time. It also is heavily linked to working memory and the ability to hold information in the brain while thinking. Dr. Chabris said, 'Calculation is the epitome of fluid intelligence, since it involves keeping straight a lot of information at once. It probably peaks around age twenty-five and slowly declines from there.'



Crystallized intelligence encompasses accumulated knowledge. Dr. Chabris continued, it encompasses 'knowledge or skills or formulas or procedures that you can apply to do more things. A classic example from outside the chess realm would be vocabulary.' When it comes to chess, crystallized intelligence sounded more like it encompassed skills like opening knowledge and ingrained chess patterns. Dr. Chabris concluded, 'I think our ability to learn new patterns and lines is still quite good as we get older, and our ability to retain it and use it is still pretty good, but fluid intelligence presents a challenge.' Hearing Dr. Chabris describe this phenomenon, it rang true based on my own experiences as a chess player. I also thought of my interviews with players like IM John Watson and GM Ben Finegold, who described an increased propensity to blunder as they got older.

The discussion also reminded me of the ‘knowledge vs skills’ dichotomy that we discussed previously. I think adults (myself included) are drawn to chess books that help them increase their knowledge because doing so is less of an uphill climb than working to improve calculation skills. But if we were to work to increase our calculation abilities as adults, what would be the best way to go about it?

## **Chess improvement and neuroplasticity**

On *The Huberman Lab Podcast*, Dr. Andrew Huberman, a Stanford University neuroscience professor, has provided a valuable service by explaining neuroscience in a way that someone like me, with only a Bachelor’s degree in the humanities, can understand. I was particularly interested to hear his discussion of neuroplasticity, since reduced neuroplasticity in adults is often cited as a primary reason adults struggle to improve at chess at the same rate as kids.

Dr. Huberman defines neuroplasticity as ‘the brain and nervous system’s ability to change itself.’ As Huberman explains it, babies arrive in the world with very loose neural connections, but those connections change rapidly from birth until about age twenty-five. Here is an overview of neuroplasticity across the age spectrum, according to Dr. Huberman:

*One of the great gifts of childhood, adolescence, and young adulthood is that we can learn through almost passive experience. We don’t have to focus that hard in order to learn new things. In fact, children go from being able to speak no language whatsoever to being able to speak many, many words and comprise sentences, including words they’ve never heard before, which is remarkable. It means that the portions of the brain involved in speech and language are actually primed to learn and create new combinations. What this tells us is that the young brain is a plasticity machine. But then right about age twenty-five, plus or minus a year or two, everything changes.*

Dr. Huberman’s explication lends a potential explanation to why we adults keep getting crushed by twelve-year-olds in chess. He goes on to offer a few suggestions for adults to create conditions for neuroplasticity, which could potentially augment learning. His suggestions include utilizing motor movements in focused study sessions and studying in a novel or differentiated environment. The

importance of a differentiated environment is also highlighted by Dr. David Eagleman, in the enjoyable book *Livewired: The Inside Story of the Ever Changing Brain*. Dr. Eagleman, an award-winning neuroscientist and author, writes that mature brains shift ‘only when something is unpredicted.’ Dr. Eagleman writes:

*So what is it like to be plastic, uninhibited, and learning about a wide range of novel events? You can probably get close to understanding it by considering other situations in which your awareness and plasticity are firing on all cylinders. When you're an alert traveler in a new land, you drink in the sights of the foreign country, experiencing more novelty, more learning, and more distributed attention. After all, at home, you pay attention to very little, it is all so predictable. When you are the traveler, you overflow with consciousness.*

Since adults are often settled into routine lifestyles, the idea of setting up novel or unpredicted environments for learning is a challenging one. But this inherent challenge could lend credence to an argument for why OTB tournaments are more conducive to learning than a typical study session or online game. As adults, we learn most from errors. To quote Dr. Huberman, ‘The signal that generates the plasticity is the making of errors.’ In our interview, Alex Crompton told a relatable story that illustrates this theme, ‘In my first tournament, I blundered a mate in one to a six-year-old who played the Alekhine. I had no idea how to play against the Alekhine... You know, it happens. But now it's burned into my memory. I'll never not understand how that happened again.’

Tournament chess would not fit K. Anders Ericsson's original definition of deliberate practice for multiple reasons. For one thing, Ericsson wrote that deliberate practice should be ‘inherently not enjoyable.’ (In recently reading the paper, I found this to be a strange precondition, and it turns out that other researchers in Ericsson's field have challenged this notion in follow-up papers.) While some may find chess tournaments stressful, I don't think they are unenjoyable at their core the way a strenuous workout or solving a difficult chess puzzle blindfold might be. In fact, as hobbyists, we often play in tournaments because we enjoy the opportunities they offer for sustained focus, competition, and between-round camaraderie.

More to the point, Ericsson and his co-authors differentiate between three types of activities: work, play, and deliberate practice. They write:

*Work includes public performance, competitions, services rendered for pay, and other activities directly motivated by external rewards. Play includes activities that have no explicit goal and that are inherently enjoyable. Deliberate practice includes activities that have been specially designed to improve the current level of performance.*

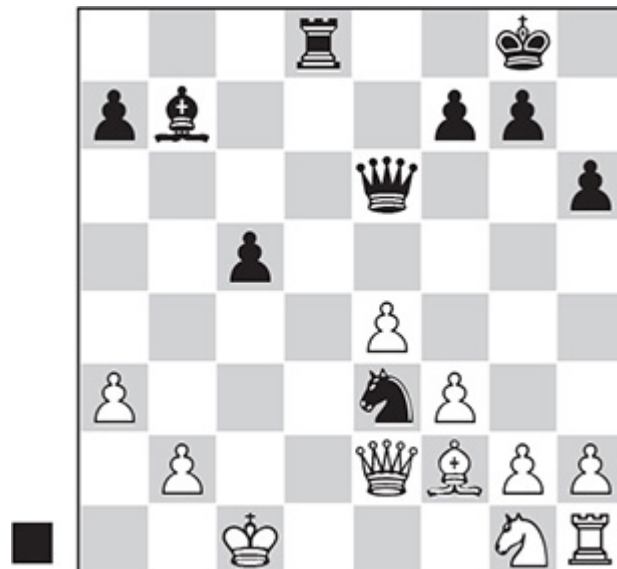
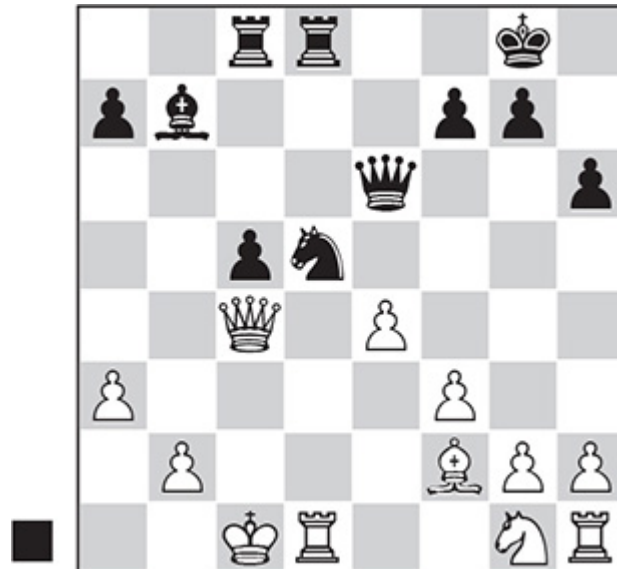
Admittedly, given these parameters, tournament play sounds more like it belongs in the 'work' category, but tournaments offer differentiated environments and indelible lessons that are hard to replicate in a practice setting. The idea of tournament chess being the best form of 'practice' also lends some clarity to what I found to be a fascinating statement by Magnus Carlsen on *The Lex Fridman Podcast*.

### **Is Magnus a poster boy for deliberate practice?**

Amidst a long and insightful interview, Magnus told Fridman, 'I'm not at all a poster boy for deliberate practice. I have never been able to work that way.' Magnus made this statement in the context of discussing solving chess puzzles. Magnus said he quickly got bored by such exercises and that he was more interested in devouring chess books as a kid. But while Magnus may not have solved a lot of puzzles, he competed in a relentless docket of tournaments in his developmental years.

For an elite player, Magnus got a somewhat late start in chess, beginning competitive play at age eight. By the year 2002 (age eleven), he was emerging as a youth champion, and in reviewing my Chessbase database, young Magnus' games start to appear with increasing frequency. Magnus has games from many World Youth Championship events and occasionally locked horns with other future grandmasters, like Ian Nepomniachtchi, Dmitri Andreikin, and David Howell, in such events. By 2003 (age twelve), Magnus was traveling all over and playing OTB tournaments at a breakneck clip. His trainer at the time, GM Simen Agdestein, wrote: 'In just two

years, since his chess enthusiasm began in earnest in the autumn of 2000 until the end of 2002, Magnus managed to play nearly three hundred serious, rated tournament games.’ By the way, he went from a rating of below 2000 to about 2300 FIDE in that span. The future World Champion was off to the races.



Gaasland-Carlsen, Norway 2001

Having played his first tournament in 1999, by the year 2001 Magnus was rated over 2000 and uncorking moves like (left diagram)

23.... ♖e3!!). White is losing his queen or getting mated. Play continued 24. ♖xd8+ ♖xd8 25. ♗e2 (right diagram), and now Magnus played 25... ♗c4+!. White resigned, because mate would follow after 26. ♗xc4 ♖d1# (or 26. ♖b1 ♖d1+ means White must give up his queen).

Of course, one cannot hope to achieve Magnus' results simply by following a busy tournament schedule. As Agdestein details in the enjoyable book *How Magnus Carlsen Became the Youngest Grandmaster in the World*, Magnus possessed a preternatural chess ability and an insatiable appetite for the game. Nonetheless, if it weren't for the densely packed schedule (and the sacrifices and support of his family and sponsors), it is unlikely that Magnus would have progressed at the same rate. So, as Magnus suggested to Lex Fridman, his chess development is a counterexample to Ericsson's theories that skill acquisition should necessarily be based on effortful and unenjoyable drills.

While it is true that Magnus didn't engage in deliberate practice by solving many challenging puzzles, the massive number of tournament games he played in his developmental years may have been a better choice for his development, especially because he enjoyed it! In the foreword to *Chess Improvement: Its All in the Mindset*, Henrik Carlsen (Magnus' dad) writes of him possessing 'an intuitive approach to chess learning that my wife and I somehow managed not to harm or disrupt significantly.'

### **What should non-Magnuses do?**

Bringing it back to the adult chess mortal realm – it's possible to draw some tentative conclusions for how adults should approach chess study. When studying chess at home, one might attempt to create a differentiated environment for study, to use a physical chess set and to grade your work, whether it be by checking the solution of a chess puzzle, verifying an opening line you tried to recreate or analyzing and then checking the analysis on a training game. But if your goal is to get better at tournament chess, tournament chess is likely the best form of 'practice'. Your game review provides the

feedback, and each tournament is a novel environment. (Although here in the U.S. a lot of those hotel ballrooms look alike!)

As a working dad, I fully recognize the financial and logistical challenges of playing regular tournament chess, particularly for those who do not live in chess hotbeds or population centers. Chess is getting more popular all the time, and I am hopeful that there will be easier ways to play competitively in future years. (Let's have more local leagues!) In the meantime, if we wish to maximize our chances of improving at chess, we can practice as effectively as possible away from the board and make our own personal calculations and decisions about the significant trade-offs that are required to compete regularly.

### **In summation**

- The core tenets of deliberate practice involve engaging in targeted and effortful tasks where you can get instant feedback on the success of your practice.
- The Polgars often trained under these conditions, but more recently, a young Magnus Carlsen took a different approach.
- As we get older, we retain and can increase our chess knowledge, but it can become challenging to improve our fluid intelligence, which likely translates to our ability to calculate in chess.
- As adults get older, forming new neural connections likely requires a more directed approach to study than it did in our younger years.
- If you want to improve your tournament game, the best form of 'practice' is tournament chess!

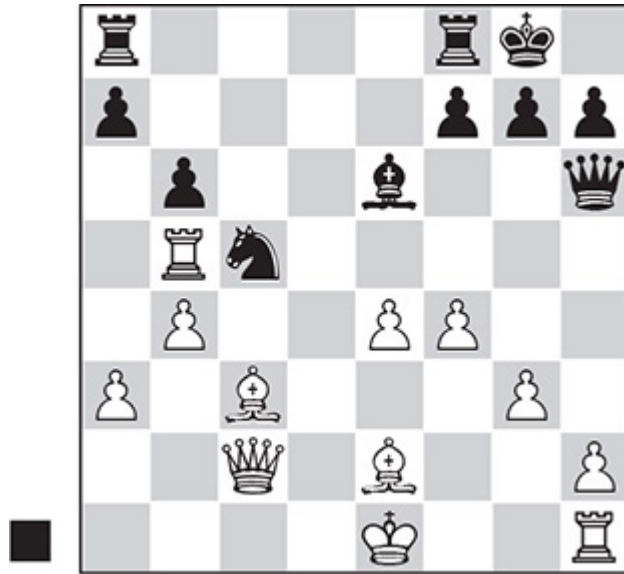
## **We are all professionals now: OTB tournament routines**

*I am here today to cross the swamp, not to fight all of the alligators.*  
– Rosamund Zander, *The Art of Possibility*

### **The tournament landscape has changed**

For a working adult, the cost and effort required to attend a multi-day chess tournament can feel Herculean. Costs mount quickly when travel is involved, and work, household, and family responsibilities must be shunted to the side during tournaments. And due to the level of commitment required, one often does extra prep leading up to a tournament and then has games to review (along with neglected chores) upon return. So the build-up and the wind-down surrounding chess tournaments also divert energy from other activities. Long weekends of competitive chess are not for the faint of heart or the light of wallet.

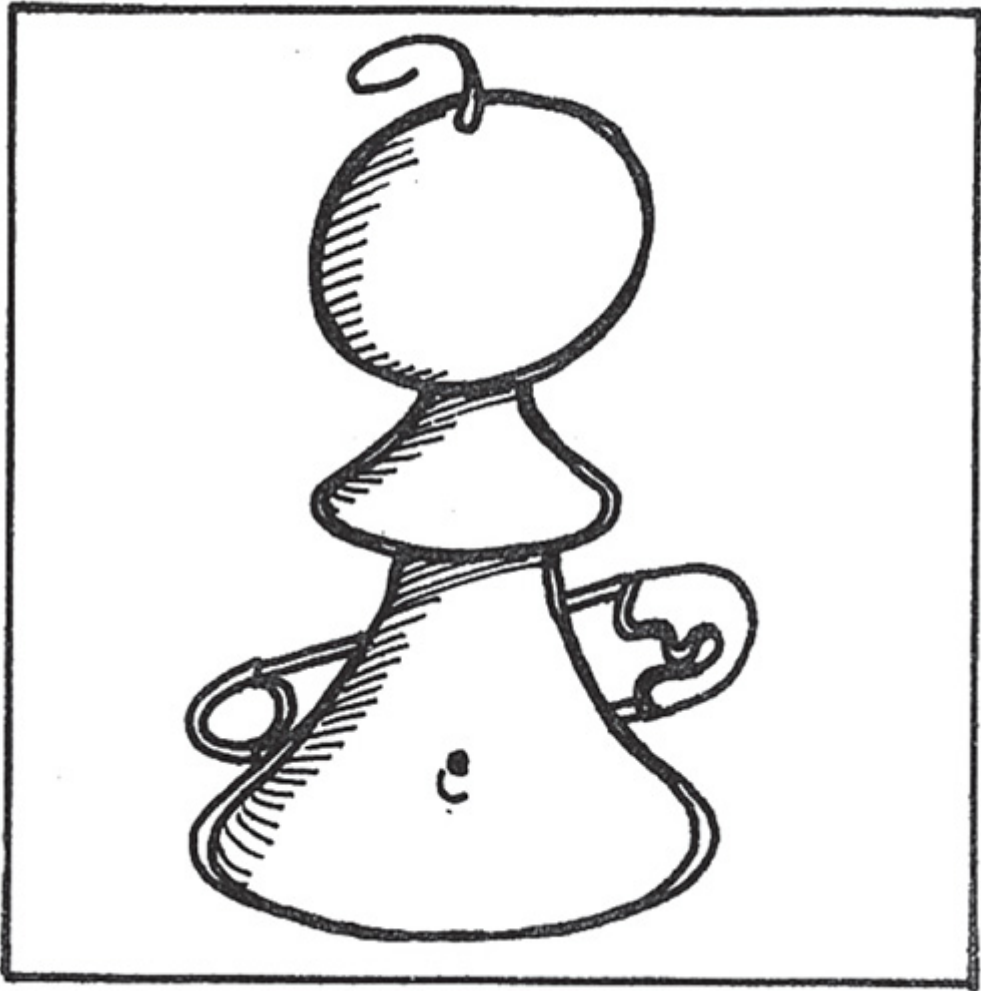
Some sacrifice has always been required for weekend chess warriors, but the effect is exacerbated in today's hyper-competitive environment. In the old days, if one solved some puzzles, brushed up on some opening lines, and got to a tournament, it often felt like you might get paired against someone with a more lackadaisical approach. Back then, even the chess professionals weren't so professional. Miguel Najdorf liked to tell a story of former World Champion José Raúl Capablanca spending more time at the bar talking to two women, than at the board during their 1939 game in Margate. Questions persist about Alexander Alekhine's sobriety, or lack thereof, during his 1935 World Championship upset loss to Max Euwe.



Capablanca-Najdorf, Margate 1939

As Najdorf stirred up complications with **23...a6**, he wondered, ‘Was it possible that he could play this way [barely thinking and constantly leaving the game to chat at the bar], without granting me the least amount of importance?’ As detailed in the revealing book, *Najdorf x Najdorf*, Najdorf achieved the moral victory of making Capablanca start to take the game seriously, and after the continuation **24. ♖xb6 ♜b3! 25. ♖xh6 ♜xc2 26. ♖h5 ♜xe4**, the game ultimately ended in a draw.

Meanwhile, at modern amateur tournaments, a parade of well-prepared opponents awaits you. Many of them are fast-improving kids, but the adults also have better opening knowledge and an increased resilience compared to prior eras. This means that when playing in a tournament, one should do so with clear goals. Are you trying to maximize your chess performance or to play some chess, see some friends, and escape from life for a weekend? If your goal is to have fun but not necessarily to maximize your performance, you probably don’t need anyone’s advice on achieving that. But if you are like Dean Ippolito, and trying to give yourself every edge that you can, then you should heed some of the advice he shared in Episode 307.



Dean was a Scholastic National Champion and a perennial New Jersey State Champion. As such an accomplished player, there was a time when Dean thought earning the grandmaster title was inevitable. By Dean's telling, he coasted a little too much when the Grandmaster title was more easily attainable for him, and in the current environment, he now knows that sacrifice and dedication are required if he still wants to become a grandmaster. Here is what he said in our 2022 interview:

*The most important thing that I tell my students is that if you're close to something, you have to put in the most effort you can, because if you don't do it, it will be a lot harder in the future. So now I'm trying again to earn the grandmaster title, to get back to where I was about twelve years ago. And, of course, because I ruined my opportunity, it's a lot harder now. That's fine, but it is a good lesson for anyone close to achieving something.*

I was really touched by the blend of past regret and current steadfastness in Dean's approach. Most of us were probably not as close as Dean to earning the highest title in chess, but we all must learn to live with regret and move forward, whether it be a chess regret, missed professional opportunity, or a botched romance.

Given his rekindling of old goals, Dean highlighted a few competitive adjustments, which are particularly important for middle-aged and older chess players. Bear in mind that Dean is a high-level, semi-professional player, but his advice would be helpful for players of all levels, and it definitely wouldn't hurt if a younger, ambitious player took them to heart as well.

### **IM Dean Ippolito's current tournament approach**

- 1) Eat well and don't drink during tournaments – Dean will no longer have a single alcoholic drink during a tournament. I recently played with Dean in a tournament at the Charlotte Chess Center, and I personally witnessed him exercise restraint in a social setting at a chess tournament. In this case, Dean's discipline was rewarded and he went on to win the tournament! Dean also avoids eating sugary foods. Dean said, 'Even in my early thirties, I didn't have this approach. But now, if you want to make progress, you have to have every little advantage working for you, and any bit of energy spent on something else is an extra percentage chance that you might blunder four hours into a game.'
- 2) Conserve energy – Normally a gym rat, Dean now skips the gym on days when he has two games. Of course, one should also try to sleep as much as possible, which can be challenging amidst a chess tournament's hectic schedule and emotional ups and downs.
- 3) Force yourself to sit at the board the entire game – Dean used to walk around and check on friends' games when it wasn't his move, but now forces himself to stay and concentrate during his

opponent's move. He estimates that this gives him 20-30 extra minutes of thinking time during a four-hour tournament game.

### **Don't over-optimize so much that you aren't enjoying yourself**

All three of Dean's tips are hard to argue with from a performance maximization point of view. However, we must be mindful that if we sacrifice too much, our hobby can become a chore. I share Dean's philosophy regarding sleep and exercises, but I will occasionally have a drink or two with friends or family during a tournament. I realize that it might slightly hinder my chess performance, but tournament chess is merely a hobby for me, and I am willing to accept that trade-off.

On the topic of trade-offs, one suggestion that Dean did not raise is the possibility of taking a 'strategic bye' during a tournament. One can usually request half-point byes for a given round before a tournament in order to plan rest or schedule around conflicting events. As we get older, some use byes merely to avoid exhaustion later in the day or in the tournament. This came up in my interview with Han Schut, who is a chess master and trainer in his fifties who also felt it was essential to minimize the number of days when one plays two long tournament games in a day.

When I interviewed Karen Boyd, she felt more conflicted about the matter. Karen, a common presence on her husband Ben Finegold's Twitch stream, is quite a dedicated chess player in her own right, and, by Ben's own admission, works much harder on her game and plays tournaments more frequently than Ben does. Karen is in her fifties and is aware that it might be best to take a bye to rest occasionally, but she sometimes doesn't due to the 'greed' she feels to play as much as possible. After all, why are we putting in so much work and traveling, and spending so much money if not competing in chess? Taking a bye and sitting in one's hotel room can feel like it opposes that goal.

But in chess, as in life, sometimes less is more, and for older chess players in long tournaments, it can make sense to take an

occasional bye. This also solves the issue of skipping exercise during tournaments, as if you skip a round and only play once per day, expending energy on exercise becomes more feasible. This advice can be trickier if you are attempting to win first place in a tournament and need a very high score, but for most players getting a half point in a round will not be too detrimental to your overall tournament performance. And for the younger players reading this, fatigue is likely less of an issue.

## **Nerves in tournament chess**

Another topic that comes up with some frequency on *Perpetual Chess*, is that of dealing with nerves in tournament chess. It is common for amateur players to get nervous the first time they play an OTB event. The ticking clocks, use of scoresheets, and the rooms filled with strangers can take some getting used to. As you get used to the tournament atmosphere, nerves may subside, but for many, they never completely go away. This is even true for elite players. I will never forget having the honor of interviewing former World Champion Viswanathan Anand, and hearing him reveal that despite his famously cool outward demeanor, he is, in fact, human. It left an indelible imprint on me when Vishy vividly described the feeling of forgetting his opening prep, because it is rare for such a superhuman chess player to sound so relatable. When discussing a scenario where he wasn't sure if he remembered his opening prep, Vishy said the following (Episode 165):

*And then you sit at the board, and you're in a state of... the word panic seems too weak, I would more say you are in a state of terror. Because almost every move scares the hell out of you, and you can't understand how it seemed so lifeless back home. And you tell yourself, 'Well, the computer said equal here, so it must be equal'... When you sit at the board, all of the questions that you didn't think of at home pop up at once, and clearly none of the answers do.*

Unfortunately, on the topic of prescriptions for dealing with nerves, Vishy did not offer as much advice. He did share the tried and true wisdom that one should get up from the board to reorient yourself once you have reached the time control and been allotted additional time. One can often feel a palpable relief when getting extra time on

the clock, so it pays to be extra vigilant to ensure not to get lax at that moment.

In the many conversations about how to deal with the feeling of nervousness, most guests simply preached patience. It is a common feeling to be nervous at the beginning of a game, but often those nerves will subside. When discussing the once-in-a-lifetime opportunity he had to play Magnus Carlsen at the 2016 Chess Olympiad, GM David Smerdon summed it up well. In Episode 30, David said, 'I don't think there's any advice that I can give on how to get over the nerves, because I'm a huge victim myself.' David was able to draw his game against the World Champion, so the nerves apparently didn't inhibit him too much! Kamryn Hellman, who has been playing tournaments for less than two years, summed up the experience well when she said that her pre-game jitters 'haven't gone away completely, but I've definitely gotten more comfortable playing over the board.' Both David Smerdon and Kamryn Hellman hit on the most practical solution to dealing with nerves: one must often learn to live with them. In *Chess for Zebras*, Jonathan Rowson shared some helpful reflections on dealing with butterflies and wrote, 'My feeling is that nerves are basically good for you, and if you feel no nerves in the game you are about to play, it generally is a bad sign.'



### **In summation**

- The days when you could ‘just show up’ to a tournament and expect to maintain your level are over.
- This means that if we are committing time and money to tournament chess, we should have very clear objectives, whether they be focused on enjoyment or performance maximization.
- If your goal is to maximize your performance, one is well advised to follow IM Dean Ippolito’s advice regarding rest, nutrition, and exerting maximum effort at the board.
- When it comes to getting nervous at the board, the nerves may never go away completely, but as you gain more experience, they often subside.

## **‘Old man chess’: playing against children**

*I wish I didn't know now what I didn't know then – Bob Seger,  
Against the Wind*

### **The mindset of a kid**

I was once an adolescent chess player. I loved playing against old guys like (current) me. I felt like I had an edge in the opening, I was tactically sharp, and as the game wore on, I thought they were more likely to miss something basic than I was. I cared not about ‘managing my energy’ and ate whatever I wanted in between rounds with nary a consequence. When the tournament day was over, I was not consumed with doubt. I slept like a baby because I basically was one.

My formative chess years were in the nascent days of the internet, so while I did not play online as much as today’s generation, I attended school chess club twice a week. I played for hours there on top of playing about twenty tournaments per year, both scholastic and open tournaments. Thanks mom and dad for supporting my expensive and time-consuming hobby!

In those days, I was not overly motivated to study chess in my personal time, but I did read some books on my own, and I scarcely needed to do so while often devoting 15+ hours per week devoted to chess already.

In 2023, the advantages of youth are accelerated. Kids can leverage their extra free time and lack of adult responsibility into even more chess time. They can get an online game without getting out of bed, 24/7, and can bring their fluid brains to bear on efficient tools like Chessable and Stockfish. Of course, adults get to use these tools too, but they don’t have as much time to make the most of them, and they may need to work a bit harder to remember what they study.

Now that I am an old guy, I still prefer to play against old guys and gals. When I play against a kid, I feel like they will likely know their openings better and be tactically sharper. We can make adjustments to hope to help our chances against kids, but these days even a master-level player will run into plenty of adolescent buzzsaws. Even Magnus Carlsen has been on the receiving end of some losses to phenoms like GM Rameshbabu 'Pragg' Praggnanandhaa and, infamously, to a nineteen-year-old GM Hans Niemann at the 2022 Sinquefeld Cup. That particular loss and its aftermath should be the subject of its own book though.

### **Why do we dislike playing against kids?**

But the Carlsen-Niemann kerfuffle does raise the question of why losing to kids, or teens, can be especially bothersome for some adults. Part of the issue, I think, is that now that kids often make up a much higher percentage of a tournament field than they used to, there is a feeling of relentlessness to playing them. In our 2022 interview, Ben Finegold summed this up well (Episode 280):

*It used to be, adults hated playing kids in the seventies and eighties, but they only had to do it once a tournament or once every two tournaments. And now it's every round, and those kids are good.*

I also think there is a feeling that our worldly wisdom should translate to superior chess moves. There may be a metaphor for the irreversibility of time and the ultimate demise that awaits us all. This is getting dark!

In the case of adult amateurs, there may also be some subconscious jealousy at work. Since kids often play with a fast and carefree demeanor, we feel like it's unfair how easily the game comes to them. I may be off-base with these suggestions, and I personally have been beaten by enough strong young players that I am already used to it. When Megan Chen was asked what the most challenging thing about returning to tournament chess in her twenties after some time away was, this is what she said (Episode 134):

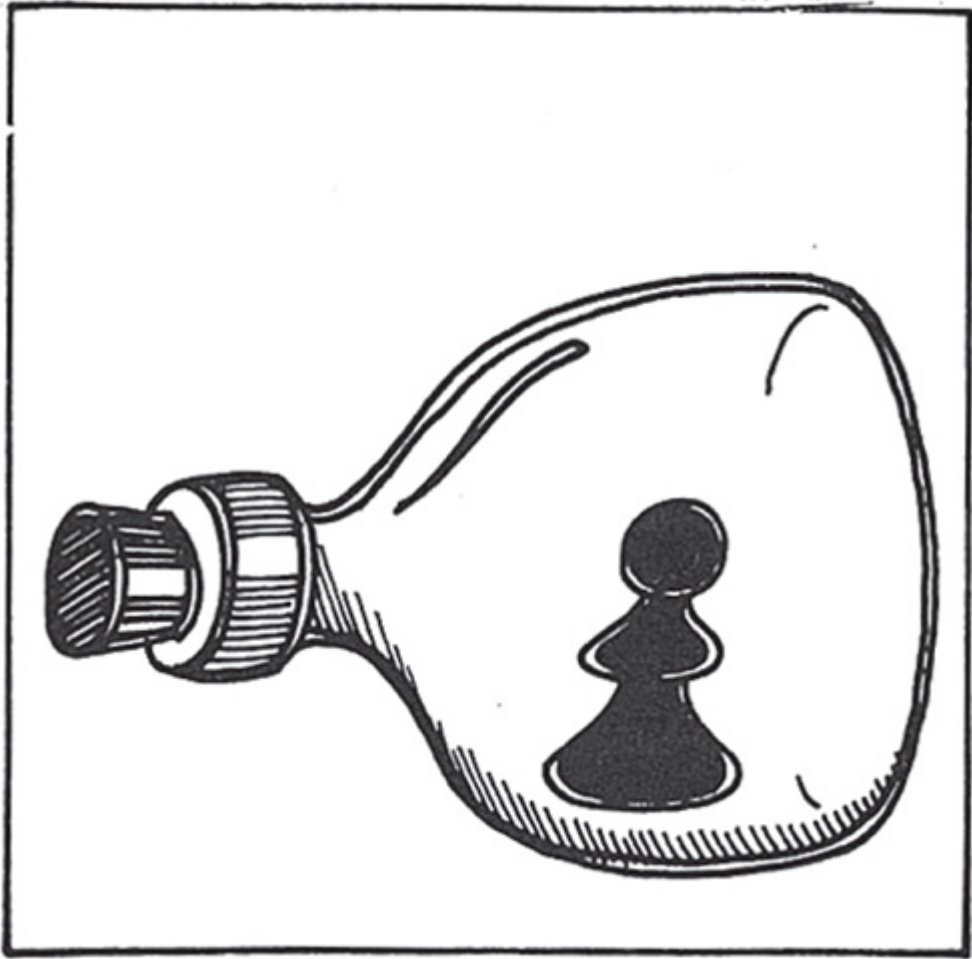
*The biggest challenge is getting over the psychological intimidation of the presence of kids at chess tournaments. And as funny as that sounds, I think that that can be a real struggle for a lot of adults. We can't help but notice that younger scholastic players tend to improve the fastest. They have so much energy, they have young brains and they're fresh.*

It may be true that kids' circumstances enable them to put in more hours than we can, but we should respect that they are, in fact, working hard on their games! And all of their work enables them to play faster than we do, along with a dash of the bravado of youth.

As chess enthusiasts, we should also remember that youth are the lifeblood of the game and the ticket to a brighter future for chess. The more strong young chess players we have, the more chess fans we will have twenty years from now. When paired with a kid, we may not beat them, but we can, at minimum, hope to model behavior for how to conduct oneself during and after a game. And when you lose a game, you can tell yourself that you are helping grow the game by ensuring the next generation's enthusiasm! Despite the inevitability of some losses to kids, there are a few approaches we can try to help tilt the scales back towards us a tiny bit.

## **The tendencies of and antidotes to these precocious ten-year-olds**

In my days as a professional poker player, a colleague and friend of mine used to say that when characterizing an unknown poker opponent who sits at your table, 'All stereotypes are true.' He meant that while each human is unique, with unpredictable tendencies, the reality of poker was that initially bucketing opponents based on observed characteristics such as age, manner of dress, and background was more effective than not doing so. I have noticed some tendencies of younger chess players as well. While it is true that you will occasionally face an ultra-patient, positional, young opponent, it is more likely that they will be tactical and at least a bit impetuous.



This inescapable fact can point you toward a few observed tendencies and potential antidotes for playing kids. Of course, the antidotes are merely ideas to help you tip the scales a bit, because many kids are hard-working, great chess players – and there is no shortcut or workaround to beating a great chess player. I have had some painful and instructive losses to promising youth chess players in recent years, so they could just as easily be writing about how to beat the likes of me! Nonetheless, here are some patterns I have observed:

- 1) Observation: Kids get a lot of reps in, so they often know their main lines quite well.

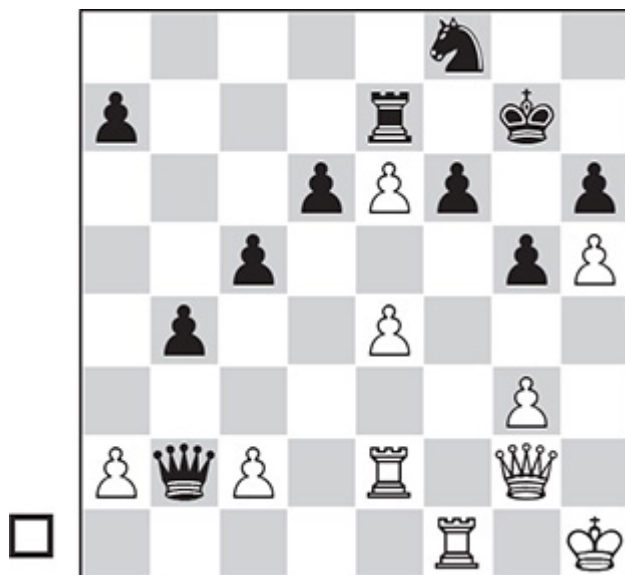
Antidote: Select less theoretical openings, spring the first surprise when possible. I have noticed that kids are particularly well-

versed in 1.e4 openings.

2) Observation: Kids often play quickly and instinctively.

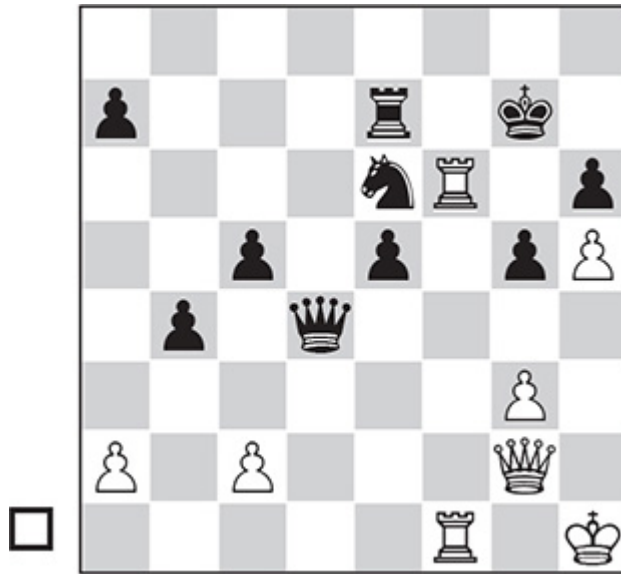
Antidote: Be patient and look to set devious traps, especially later in the game.

3) Observation: Kids are 'momentum players'. They are tactically sharp and are very comfortable attacking. I have had several painful losses where I get an opening or middlegame advantage against a kid, but there comes a moment where they are presented with a dynamic opportunity to take control. In these cases, to quote Alexander Hamilton in the musical of the same name, they 'are not throwin' away their shots.'



Wang-Johnson, Pittsburgh 2021

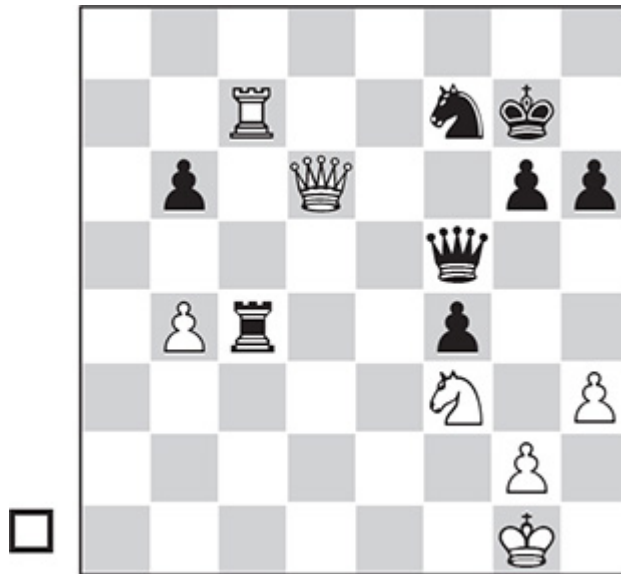
In this game, an ill-advised exchange sacrifice squandered my advantage, and after **40.h5**, I chose the wrong square for my knight with **40...♘f8** (see diagram), thinking that the e5-square was controlled enough. To quote GM Igor Zaitsev, my opponent was able to 'attack the strong point' and played **41.e5!!**. The move basically wins by force, as the sleeping white queen awakens with force, while the f-file opens in some lines. After **41...dxe5 42.♙ef2 ♖d4 43.♙xf6 ♘xe6**



Wang-Johnson, Pittsburgh 2021

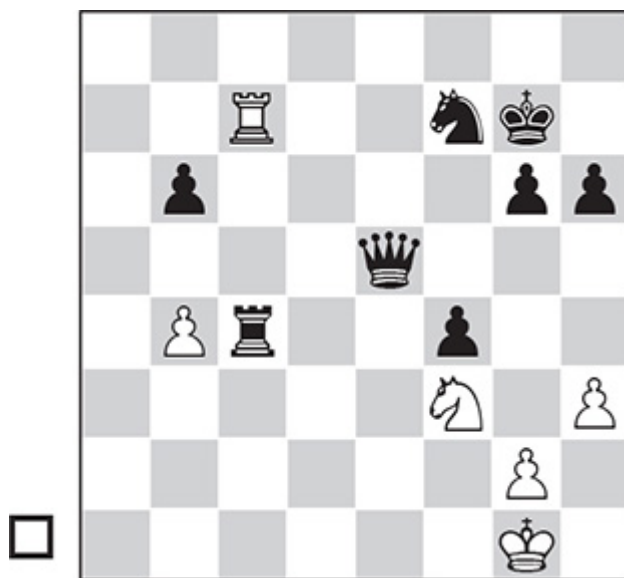
44. ♖xe6!, I resigned because of 44... ♖xe6 45. ♗b7+, checkmating.

Antidote: Try to keep them on the back foot and don't squander your own dynamic opportunities. Young players are often less comfortable being attacked.



Johnson-Prasanna, Princeton 2021

In this game, I had recovered from dropping a pawn in the opening and was beginning to gain some hope against my talented teenage opponent. In this position, she had just walked into a trap and captured a pawn on c4. It looks like I can't take the rook because the knight can take the queen, but I had a winning *Zwischenzug* up my sleeve and played **44.** ♖e5+, and after **44...** ♔xe5,



Johnson-Prasanna, Princeton 2021

played **45.** ♖xf7+! to win a piece, and eventually the game.

4) Observation: Kids are really good at chess.

Antidote: Respect their skills and try your best against them, but don't expect miracles. There is a reason grandmasters are getting younger and younger with each passing decade.

You may notice that many of these tips overlap and revolve around cultivating skills associated with what Ben Finegold has called 'old man chess'. The basic idea is to avoid sharper opening lines and tactical melees and to welcome endgames in many cases.

Unfortunately, even this advice may be changing. In our 2023 interview (Episode 335), WIM Natasha Regan relayed a story where she intentionally took a kid to the endgame based on this received

wisdom, but, she reported, 'It completely backfired, and the kid was really good at endgames!'

In my interview with top trainer and author GM Johan Hellsten (Episode 273), he also gave a bit of potentially helpful advice, suggesting that we avoid looking at our youthful opponents during tournament games because this might lead to underestimating them, 'which is the worst thing you can do.' I again want to stress that strategies like this do not guarantee that you will win the game, but they have the potential to tip the scales a bit. And if that fails, you can always try my friend FM Nate Solon's strategy...



Nate was joking, of course, but a more realistic option is to eventually pursue the path recently carved by GM Jesse Kraai. Once you turn fifty, you can play in senior events and be the kid again!

## In summation

- Kids are often great chess players, and we should feel no shame in losing to anyone of any age.
- They do have some shared tendencies that we can try to exploit.
- We might maximize our chances for success if we emphasize patience, positional play, and less concrete openings.
- Nonetheless, we all will lose our share of games, and we can take pride in contributing to the future growth of chess when we do. 😊

## Away from the board edges: rest, fitness and mindfulness

*Before entering a tournament, I make it a point to take a good, long sleep, but that is my only form of preparation.* – Harry Nelson Pillsbury, legendary American player of the 1890s to 1900s

### Who will make the mistake?

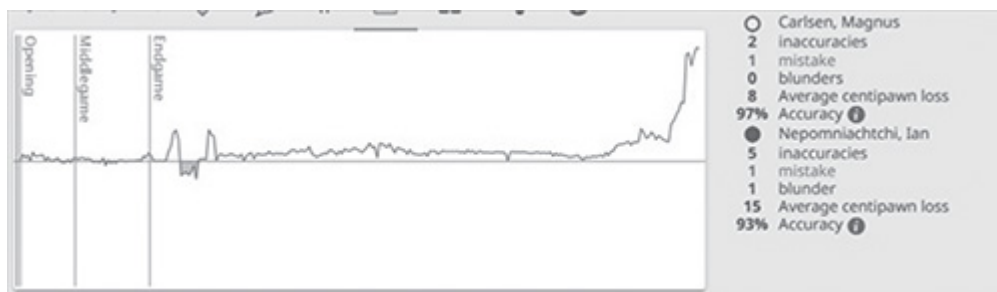
Of the hundreds of hours of chess talk I've engaged in on *Perpetual Chess*, one of the quotes I think about most is IM Christof Sielecki's simple observation that 'chess is a game of mistakes.' Christof explained (Episode 6):

*Basically, what it boils down to... is that wins in chess are always the result of mistakes being exploited. There's no such thing as the creation of something beautiful out of nothing. There's always some kind of mistake involved. Of course, you can have a great idea and you can try it out, but it will not work if there was no mistake before.*

Christof's point really resonated with me and was reinforced in an interview years later with top Dutch trainer and player GM Erwin l'Ami, who said (Episode 257), 'I think it's by now very safe to say that the game of chess is drawn objectively. [In fact,] the drawing margin is quite big. For example, you cannot mate with a bishop and king versus king.' As Erwin suggests, this means that it takes a significant mistake to lose a chess game, and no amount of brilliance will win you a chess game without a mistake from your opponent. So chess is not yet 'solved', but when the world's strongest engines square off, the vast majority of the games end in a draw. So what are the actual implications of these possibly obvious observations?

Believe it or not, they have a lot to do with health and fitness. A clear conclusion is that a crucial skill in a long chess game is to have the ability to outlast your opponent and keep them under pressure long enough that they will eventually make a mistake. Magnus Carlsen

has made a career out of this, as famously exemplified by his legendary 136-move win against Ian Nepomniachtchi in Game 6 of the 2021 World Championship match. At the club level, endurance can be even more critical than at the elite level. After all, us 'weakies', as Bobby Fischer would have called us, are making more mistakes to begin with, even when not fatigued!

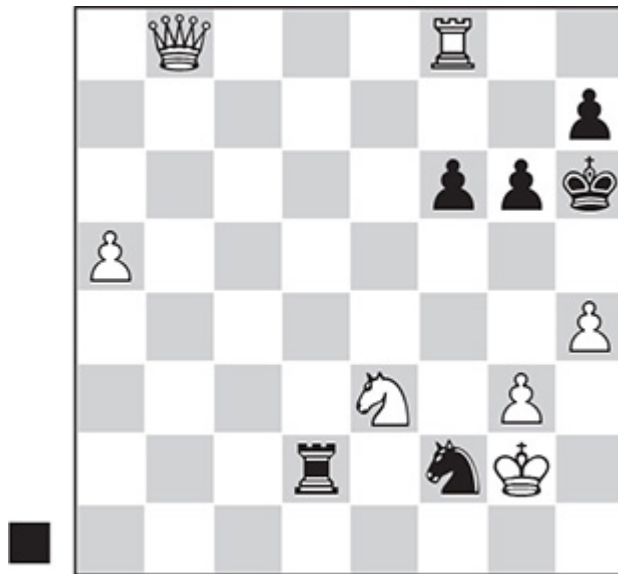


Here is the Lichess computer analysis of Magnus-Nepomniachtchi's historic Game 6 in 2021. It is not easy to play against 136 moves of probing, blunder-free chess!

Therefore, competitive chess players **must work to be in a condition such that our fatigue-induced mistakes will be minimal several hours into a game**. Obviously, I am not the first person to make such an observation, and it is no coincidence that modern elite players, like Magnus Carlsen and Fabiano Caruana, are pretty fit.

### Physical training as chess training

Before breaking through a lengthy plateau, CM Andrzej Krzywda made what he considered to be an overdue change to his approach to health and fitness. 'If you had asked me two or three years ago, I would have said that fitness is relatively unimportant for chess improvement... Now, I consider physical exercise as chess training as well.' Andrzej's conclusion has plenty of scientific backing, as many studies have shown that physical exercise can have 'enormous benefit on both cognitive functioning and well-being.' (Episode 36)



Mikko-Krzywda, Graz 2018

As Andrzej has built up his physical stamina, he has adopted a policy of not resigning. In this game, his endurance (or stubbornness!) improbably paid off. His opponent had just promoted a pawn to a queen on b8 (left diagram). After **1... ♖g4+ 2. ♔f3 ♗h2+**, Andrzej feigned indifference as his wearily opponent walked into a checkmate with **3. ♜f4??** (right diagram). After **3... ♜d4#!**, Andrzej had snatched victory from the jaws of defeat!

Philemon Thomas is another accomplished adult improver who attributed much of his success to focusing on physical fitness. Philemon conceded that he has a tendency to get obsessive about chess, and this would lead to a repeating cycle of burnout and breaks. Here is how Philemon explained it to me (Episode 173):

*I developed an unhealthy lifestyle, I was just playing chess and eating unhealthily. So I took some time off to get my health in order, to focus a lot on exercise and eating healthy. And then when I got those things in order, I returned to chess... When I came back, I developed a strong discipline and I just divided my love for exercise evenly, and I developed a balance for everything.*

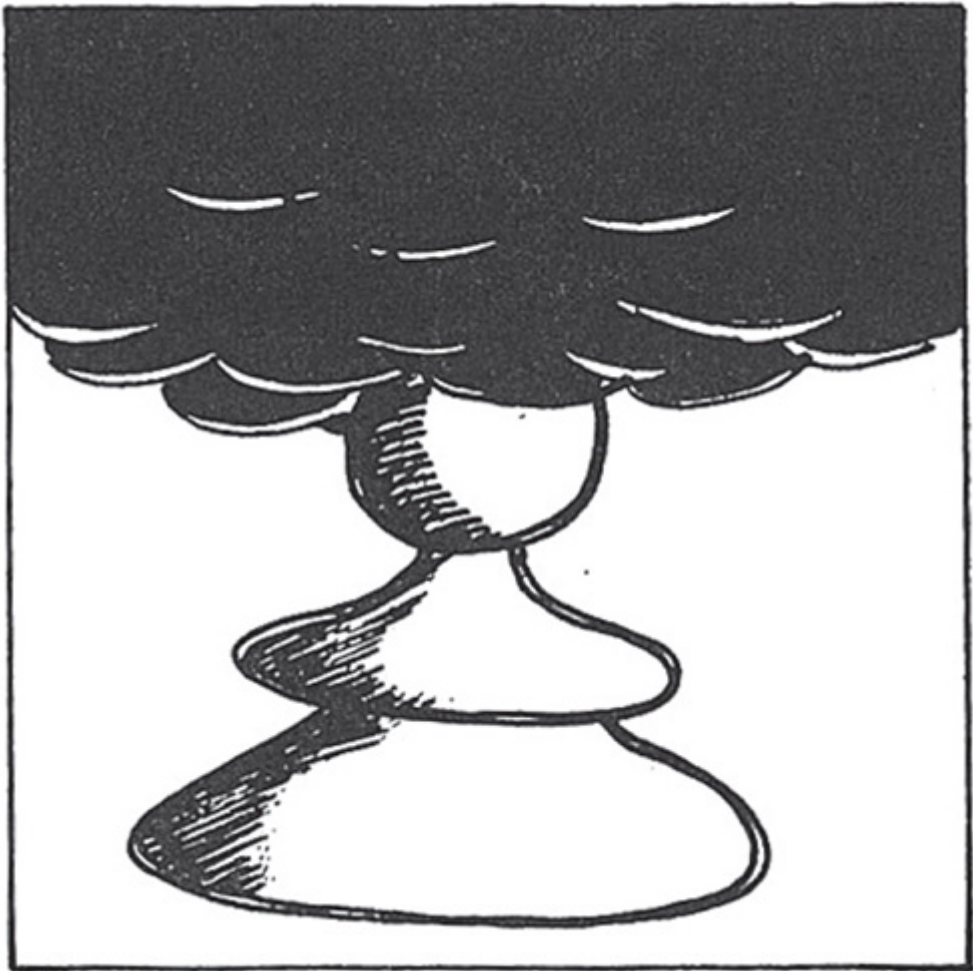
This balanced approach led to great results for Philemon, as he ultimately completed a twelve-year journey to the USCF Master title. Of course, in addition to success stories like Philemon's, some feel that inattention to physical fitness may impede their progress. Rising chess YouTube star NM Nelson Lopez got back into tournament chess when his *ChessVibes* YouTube channel began to find an audience. I chatted with him after he had recently played in his first tournament in eight years. An athlete as a kid, Nelson was surprised by the toll that adulthood and a comparative lack of exercise had on him. He said (Episode 267):

*One thing that I will say that I think played a big role [in a disappointing tournament], was working a full-time job for so many years prior to quitting. I haven't gotten a lot of physical exercise, so I'm not in the shape that I used to be. I used to play racquetball and soccer, and all sorts of sports. And I think mentally, being in good physical shape actually helps you with those longer games. For example, on one day I played two games for a total of nine hours. And I remember, at the end of those games, my brain was just tired. I was not thinking. Clearly, I was not coming up with good ideas. And so, I think fitness is a huge thing that I need to work on going forward.*

As a 46-year-old in decent but not great shape, I could not agree with Nelson more! As long tournaments continue, I feel the elevated risk of blundering, and sometimes, of course, the feared blunder actually happens. Unfortunately, despite the strong anecdotal evidence, there is little in the way of firm data regarding the importance of fitness for competitive chess performance. The bright side, though, is that even if supreme fitness doesn't turn out to help your chess, at least you will be very fit!

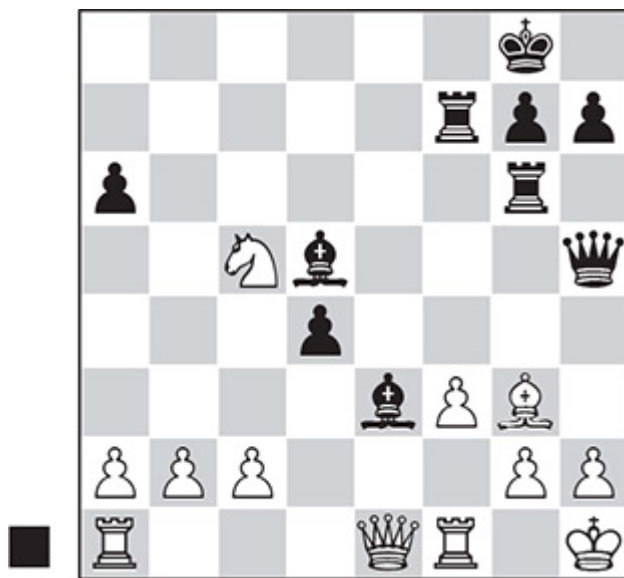
## **Fitness for the mind**

A 2018 study in *Behavioral Brain Research* concluded, 'Compared to our control group, we found that eight weeks of brief (thirteen-minute), daily meditation decreased negative mood state and enhanced attention, working memory, and recognition memory as well as decreased anxiety scores.' Does that sound like something that might help chess players? To my surprise, I have not interviewed as many advocates for meditation as one might expect in a mental sport, but there have been a few. Most notably, renowned trainer and author GM R.B. Ramesh is a big proponent. Ramesh works with many of India's top youths, including wunderkind Praggnanandhaa. Here is what Ramesh told me about meditation:



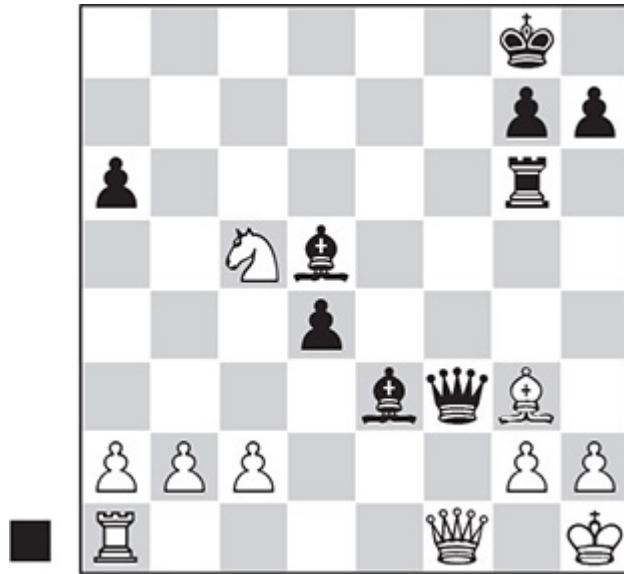
*I think it's extremely important that for a chess player who aspires to be professional, or to be extremely good at it, you need to be both physically and mentally tough to handle all the tension and the pressure... It is a very demanding profession. And to be a full-time chess player, you need to be emotionally strong and able to handle unexpected happenings. I think you need to be emotionally really strong and have your priorities in place. So, I have tried experimenting with meditation for young children who do ten or fifteen minutes daily. And I believe with the right priorities, that kind of training could really help. And being physically fit is also very important. It will especially help towards the final round, because it is usually the last couple of games that decide the overall outcome of an open tournament. So you need to be physically and emotionally tough. And I believe you have to do some form of training for this and you cannot leave it to chance. That's my view.*

I myself am an advocate of mindfulness and meditation, but I have had little luck in getting my own kids interested in it. When I asked Ramesh if Praggnanandhaa was hesitant to heed Ramesh's suggestion to try meditation, he said that Praggnanandhaa is very driven and places enough trust in Ramesh to do as he suggests. Pragg has made global headlines for defeating Magnus Carlsen a couple of times, so his professional habits appear to be paying off!



Kharchenko-Praggnanandhaa, Moscow 2016

If you meditate like Praggnanandhaa, perhaps you too will be able to play combinations like this! After **30... ♖xf3 31. ♗xf3 ♘xf3! 32. ♙f1** (32.gxf3 allows 32... ♘xf3#),



Kharchenko-Praggnanandhaa, Moscow 2016

Pragg played **32... ♗xg3!!** for the coup de grace. White resigned in view of **33.hxg3 ♖h6#**.

Former World Youth Champion GM S.P. Sethuraman felt that meditation helped him keep calm in tense moments. He told me (Episode 188):

*I'm an emotional person, and it reflects in my game as a chess player. I tend to get too excited about winning positions, and squander them. And I think a constant practice of meditation has helped me to calm down a bit. And at critical junctures, I can feel the difference now.*

While Sethuraman and Ramesh can speak of the benefits of meditation practices for professional-level players, I have been surprised that it has not been mentioned frequently among the many accomplished amateurs I have interviewed. A focused and rested brain is as important among amateurs as it is for grandmasters. NM Todd Bryant is a strong amateur who recently had a positive experience with meditating during a tournament. In a 2023 interview, he told me that while he used to cram openings right before a tournament round, in the National Open, he had tried doing short pre-game meditations using the Headspace app. Todd said, 'Instead of using all of this energy [cramming openings] and generating a

bunch of anxiety, this had a much more positive impact on my games.’

Dr. Benjamin Portheault is a performance coach who has worked with Great Britain’s Women’s Olympiad team. When I interviewed him for the *How to Chess* podcast, he made an important point about the importance of rest generally. He said, ‘It is much better to come to the board [for a tournament] rested than it is to do an additional bit of opening prep.’ And while we already highlighted the importance of rest during a tournament, it is equally important in daily life. Dr. Portheault said with a consistent rest schedule, ‘Your brain will better absorb the information that you give it.’ Prioritizing sleep is extremely important, as well as proper nutrition. Once the basic life skills of sleep, exercise, and nutrition are in place, Dr. Portheault can then work on the mental coaching aspects of chess. He is also an advocate of meditation:

*A regular meditation practice is needed to develop skills of awareness of one’s own thoughts and feelings. We learn to let thoughts come and go – they become like thieves entering an empty house.*

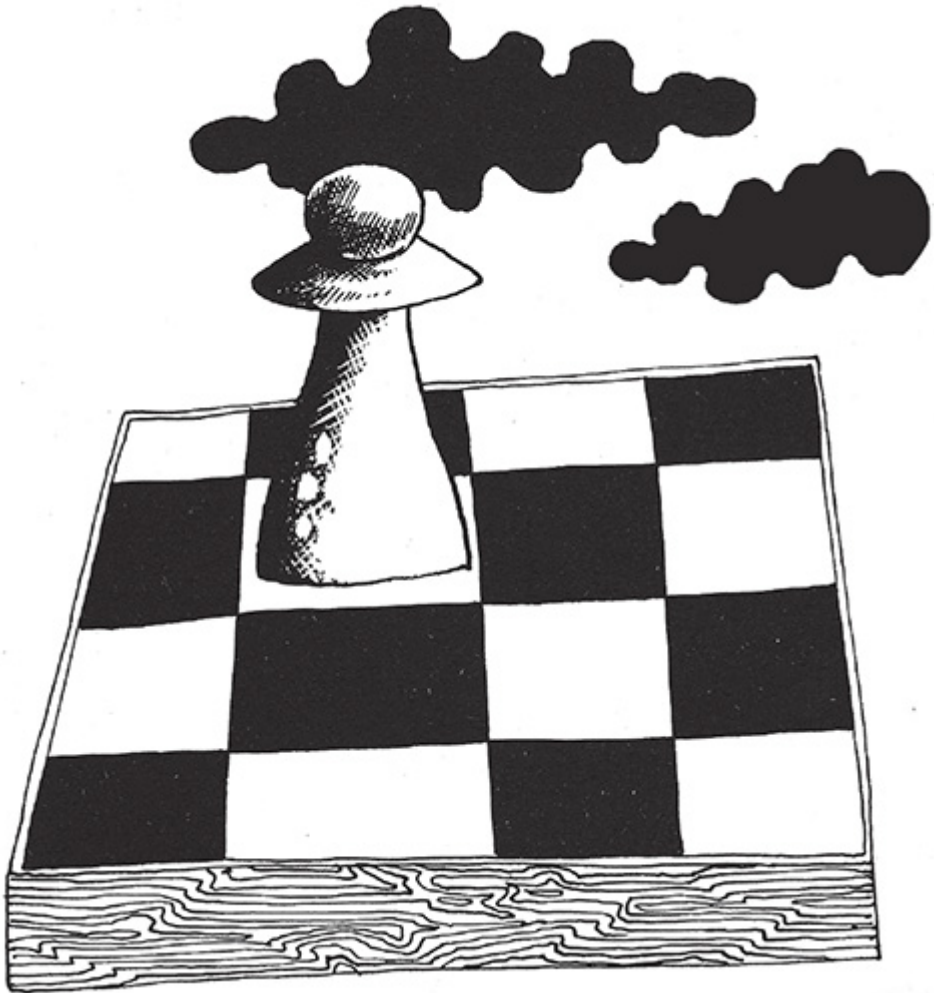
All of the aforementioned advice isn’t going to help if you are a terrible chess player, but when we all feel that we have so many chess weaknesses, it is easy to overdo chess study at the expense of doing the things that will make us healthier humans. Time is scarce for all of us, but a reasonably healthy lifestyle helps your chess and your life, while chess study primarily helps your chess.

## **In summation**

- Chess games are won and lost by mistakes, so you need endurance and sustained focus to maximize your chances of not screwing up.
- Regular rest, physical exercise and meditation can give you a competitive advantage.
- Plus, you should be prioritizing these things anyway!

**PART IV**

**Tools of improvement**



# Introduction to Part IV

## The old days

How did future GM Peter Svidler gain an edge over his youth competitors in late Soviet Leningrad circa 1990? Well, for one thing, despite his famously modest demeanor, Peter was a naturally gifted chess player, especially at chess tactics. But in the latter-day Soviet Union there were tons of talented players. As Peter has told it, he obtained another edge by gaining coveted access to a hefty periodical called *The Chess Informant*. (They were published by a Yugoslavian (now Serbian) publishing company of the same name.) *Chess Informants* are thick books with reams of chess games containing the latest theoretical opening developments, high-level annotations, and even some puzzles in the back of each edition. In the Soviet days, they published just twice per year, and back in those analog days, *Informants* were one of the primary ways to keep up with the top-level chess games that were taking place worldwide. If you could get your hands on an *Informant* before your competitor did, you might discover an opening novelty to spring on your opponent

Legends like former World Champions Garry Kasparov, Anatoly Karpov, and many others have praised these famed books. In addition to hidden treasures in the form of unexplored openings, they contained information on potential opponents and even tactical puzzles. And in late Soviet Leningrad, passion for chess was strong, but access to the outside world was limited. As a result, the *Informants* were hard to come by. Svidler said:

*We are a large city, and the whole city of Leningrad would get about fifty Informants. And there was a specific shop in the center of town. I can still sort of picture where it was... You had to apply for an Informant beforehand and if you applied early enough, one would be allocated to you.'*

Hearing Svidler say that, I can picture young Peter riding the St. Petersburg metro downtown and eagerly trudging through the snow to collect his coveted *Informant*. The *Informants* were generally light on prose, but one can imagine all of the stories behind the annotated games, tournament cross tables, and puzzles that appeared on their pages. Peter said that he did not solve a lot of tactics as a child, but he did look forward to tackling the puzzles in the back of the *Informant* in those formative chess years.

Fast forward to today, and we are all swimming in chess information. We get instant access to the games of the top players and can run a chess engine on our cell phones that can crush any of these try-hard humans. If you tune into Twitch, there is a decent chance that Super GM Hikaru Nakamura, one of the best blitz players in history, will be sharing his chess thoughts in real-time.

*Chess Informants* are still published for chess professionals and hardcore amateurs, and, in a nod to technological progress, they are now also offered in digital form. But these days, there are virtually unlimited tools that we can use to work on our games. *Informants* are no longer so unique. To work on our games today, we often don't even have to get out of bed.

Those wanting chess information in the modern era are constrained only by the number of hours in the day, and, despite many great free tools, by our budgets. But a handful of chess tools have risen above the fray to prove more indispensable than others and are used by ambitious amateurs and professionals alike. Many of you will be familiar with these tools, but there are so many potential uses of them, that I thought it might be helpful to provide a guide to some of their most helpful features. So here are the major chess learning tools discussed in Part IV of this book...

**Chapter 19** – What role do chess books play in an age of information abundance?

**Chapter 20** – What are the most indispensable functions of the fantastic chess-playing sites, Lichess.org and Chess.com?

**Chapter 21** – In terms of chess databases, how does ChessBase compare to the cloud-based, free Lichess studies?

**Chapter 22** – How can I incorporate chess engines into a study regimen?

**Chapter 23** – The number of variations in the Chessable's *Lifetime Repertoire* courses is overwhelming! Is it possible to use Chessable without drowning in variations?

**Chapter 24** – The amount of chess on YouTube is also overwhelming! Should I watch it, if so, how should I approach it?

## The enduring appeal of the printed word: chess books

*Collect books, even if you don't plan on reading them right away. Nothing is more important than an unread library.*

– John Waters, filmmaker

### **Chess books are uniquely beloved**

Listen, if you made it this far in *Perpetual Chess Improvement*, you probably don't need me to tell you what a chess book is. Chess books are venerated in the chess community and were indispensable learning tools for countless players. One of my favorite interview moments on *Perpetual Chess* was when I asked R.B. Ramesh for book recommendations (Episode 144), thinking he might give a suggestion or two. Instead, the renowned trainer launched into a lengthy soliloquy, rattling off twenty-plus chess book recommendations while barely pausing for breath. Such a response is not unusual when you ask any chess junkie for a single recommendation. It has been suggested that more books have been written about chess than about any other game, and I find this plausible, if not verifiable.



Part of the reason for this is that chess books were virtually the only chess improvement tool in town before the explosion of digital media. In addition to the high-level game analysis that books like Peter Svidler's beloved *Chess Informants* provided, there are books on every conceivable subgenre of chess. There were chess strategy guides like IM Jeremy Silman's *How to Reassess Your Chess*, puzzle books like Laszlo Polgar's *Chess: 5334 Problems, Combinations, and Games*, endgame books like GM Johan Hellsten's excellent endgame puzzle compilation, *Mastering Endgame Strategy*, which is not to be confused with Mihail Shereshevsky's classic *Endgame Strategy*, which is not to be confused with Dr. Frank Brady's riveting Bobby Fischer biography, *Endgame*, which is not to be confused with Dominic Lawson's recap of the Kasparov-Short World Championship match, also called *Endgame!*

But more than any other chess book subgenre, there are opening books. Opening books are beloved for the same reasons that openings are: in addition to helping us improve our games, they

contribute to our sense of identity and agency. I have been no exception to this phenomenon, and if I look at the cover of personally-formative opening books like *The c3 Sicilian* by IM Gary Lane or *Mastering the King's Indian Defense* by Pietro Ponzetto and IM Robert Bellin, I feel a sense of warmth and comfort. But that doesn't mean that these books would be very useful today. These days, engines are so strong, and theory develops so quickly, that digital courses and database work are increasingly replacing opening books, especially at the higher levels of chess, at which theory evolves faster.

### **But do kids love books?**

While many chess veterans love chess books, they likely are losing popularity among the younger generation. We already shared Jesse Kraai's story about attempting to give a book as a prize to a kid. R.B. Ramesh, who works with many of India's top young talents, struck a similar note when he told me, 'The younger generation is not very keen on reading from a physical book. The habit of reading chess books is slowly disappearing.'

Both Kraai and Ramesh are authors in addition to trainers, so one should not 'shoot the messenger' going by these two chess bibliophiles. And one cannot blame kids for eagerly embracing our new, hyper-efficient chess tools. But other conversations on the podcast have illustrated that there is still a place for learning from chess books, or at least for learning from prior masters via more modern tools. And for those who still love chess books, an extensive chess canon exists to explore and learn from.

And while chess books might be waning in popularity from a macro perspective, great new books are constantly coming out. In fact, today's books, which harness the power of engines and tend to use livelier language than many of the classics, are better than ever. Some of my favorite chess books of all time have come out in the past ten years. They include the works of Willy Hendriks, the timeless recollections of the legendary GM Jan Timman, the philosophical meanderings of GM Jan Markos, and the unique blend

of puzzle and insight provided by books like *Think Like a Super GM* by Philip Hurtado and GM Michael Adams as well as the recent works by GM Wojciech Moranda. I enjoy reading books so much that the question of whether they are the best use of my 'chess improvement time' is beside the point.

One generally does not read novels to build one's vocabulary, although it is a nice potential side effect. Similarly, in today's chess improvement landscape, when I sit down to read a chess book, I do not have illusions of toppling Magnus Carlsen tomorrow. Instead, I hope to be exposed to a new chess idea or two, to push the boundaries of my calculation abilities, or to form a connection between chess ideas I had not previously observed. Of course, if it helps me win a few games, all the better, but enjoyment and learning for its own sake are my primary objectives.

With that said, books have helped legions of chess players attain their titles, from Magnus Carlsen on down. As discussed before, if you are to read a chess book as a chess 'workout', be sure to treat it seriously. Here are a few tips for how to read chess books:

- Read actively and ask yourself questions.
- When puzzles are presented, write down the answers, a tip we highlighted from GM Jacob Aagaard in Chapter 3.
- Use a physical chess set to play through games in order to help engage muscle memory.

### **In summation**

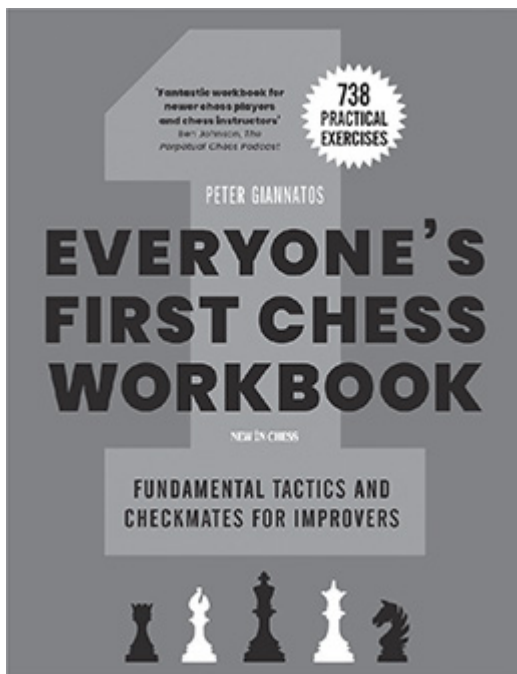
- Before the digital age, chess books were one of the only ways to disseminate chess knowledge widely. As a result, they are widely beloved and have been formative for countless chess talents.
- These days, there are other equally effective ways to learn chess, as explored throughout this book.
- Nonetheless, fantastic new chess books are being released all the time, and a subset of chess fans have a seemingly limitless appetite for them.

## Ben's book recommendations

In my dual roles as a student of chess and podcast host, I have read more than my share of chess books. I have reviewed more than thirty books on the *Perpetual Chess* book review series, *Chess Books Recaptured* (with the help of many gifted guest co-hosts), and I have read many more books in preparation for interviews. I am constantly impressed with how many great chess books are out there and am amazed that authors are continuously coming up with novel ways to convey ideas about our timeless game.

Below you can find some of my favorite books, sorted both by rating and by category. Apologies in advance to the many wonderful chess books I have forgotten to include or haven't read yet! This list can also be found on *The Perpetual Chess Podcast* website under 'Book Recommendations', and that webpage will be updated with new additions as time goes on. Within each category, books are roughly ranked by degree of difficulty.

### New to chess/under 1000 USCF rating



- *Learn to Play Chess Like a Boss* by GM Patrick Wolff – Formerly known as *The Complete Idiot's Guide to Chess*, this is a fantastic

choice to take you from learning that the bishop moves diagonally to covering basic strategic ideas and tactics. Wolff, a former U.S. Champion, has taken a particular interest in computers and chess, and also provides a helpful historical look at them.

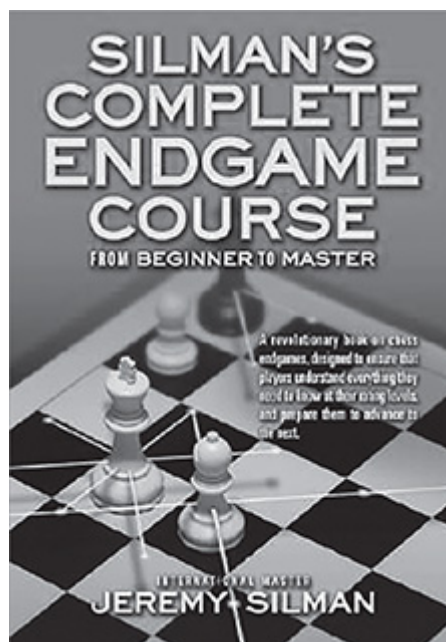
- *Everyone's First Chess Workbook* by FM Peter Giannatos – This book is primarily comprised of puzzles, but they are very well curated and do not make the mistake of throwing a new player straight into the deep end. The book has thorough explanations and great examples. I particularly like that some of its puzzles emphasize noticing an opponent's threats, an aspect of chess often overlooked in beginner books. This one is also available to study electronically on Chessable.
- *A First Book of Morphy* by Frisco del Rosario – Of all of the chess legends, Morphy's games are among the easiest for beginners to learn from because, 1) He played very principled chess, focusing on controlling the center and bringing out pieces rapidly, and 2) He played in the 1850s and 1860s, when his opponents often were not advanced enough to thwart his plans. This particular book is a bit quirky, but I am not aware of a better choice for explaining Morphy's superiority to newer chess enthusiasts.

### **1000-1300 USCF rating**

- *Winning Chess Strategies for Kids* by NM Jeff Coakley – Great, short lessons on core principles of chess, such as controlling the center, rooks occupying the seventh rank, executing basic checkmates, etc. Despite the 'for kids' title, this book is fantastic for enthusiastic learners of any age! (The book does have its fair share of cartoons geared toward kids.)
- *Instructive Chess Miniatures* by FM Alper Efe Ataman – A 'miniature' is a short chess game often ending in less than twenty moves. This is an expertly curated and well-explained selection of instructive gems. It includes some classics that you will see in many books if you stick with chess, and some lesser-known gems.

- *Logical Chess Move by Move* by Irving Chernev – A classic book that shares many famous games. This book is differentiated from some others, because the ‘move by move’ format means that there is an explanation of all moves, not just the noteworthy ones. The need to explain every move means that Chernev can’t help but repeat himself at times, but unlike many older chess books, Chernev showcases a timeless grasp of language and an infectious enthusiasm for the ideas illustrated by the greats.

## 1300-1600 USCF rating

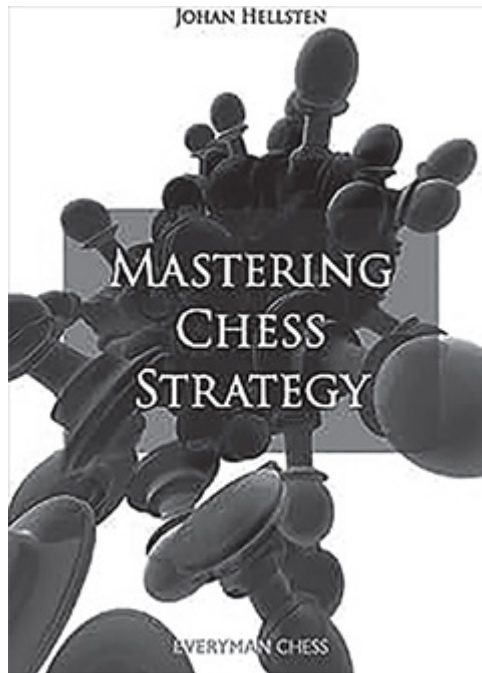


- *Silman's Endgame Course* by IM Jeremy Silman – This book stands out from all of the other endgame guides due to 1) It uses clear explanations and a readable style, and 2) It separates endgames by rating level, thus making it easy to know what to study. The material in this book goes all the way up to the master level, but 1300 is around the rating where you want to make sure it's on your bookshelf.
- *A Guide to Chess Improvement: The Best of Novice Nook* – An older book which was one of the first to address the challenges of adult chess improvement. NM Dan Heisman covers topics

ranging from managing one's time in chess to the most common mistakes that amateurs make. Dan has been teaching chess for decades and has his finger on the pulse of the common thought patterns of adult chess learners.

- *The Power of Pawns: Chess Structure Fundamentals for Post-Beginners* by GM Jorg Hickl – A modern and more readable answer to Aron Nimzowitsch's often-recommended *My System*. This book walks you through all of the types of pawn weaknesses, such as isolated and doubled pawns, and begins to teach you how to exploit them. It is recommended by 'friend of the pod' Neal Bruce as the best 'intro to pawn structure' book for amateurs.
- *Capablanca's Best Chess Endings* by Irving Chernev – Another classic by Irving Chernev. Capablanca had a unique clarity of playing style, and Chernev brings his endgames to life. One can learn from this book well beyond the 1600 level.
- *Practical Chess Exercises* by Ray Cheng – A great selection of 'find the best move' puzzles featuring tactics, endgames, and even puzzles related to moves that improve your pieces. Good puzzle selection and clear annotations make this a good choice. As with the Capablanca book, those above 1600 can also learn from this book.
- *Simple Chess* by GM Michael Stean – A fantastic positional primer which illustrates core concepts like outposts, weak pawns and open files. An inexpensive and short book, this classic offers a great return on invested time for novice to intermediate players.

## **1600-2000 USCF rating**



- *Endgame Strategy*, by Mikhail Shereshevsky – Unlike *Silman's Endgame Course*, or De la Villa's *100 Endgames You Must Know*, this book focuses on practical endgames rather than theoretical, meaning it teaches rules of thumb and principles rather than certain endgames to memorize. The original version had its fair share of analytical errors, but it has been updated, and engine checked, and a video version with Sam Shankland is even available on Chessable.
- *Mastering Chess Strategy* by GM Johan Hellsten – A legendary series of 'positional puzzles' with tons of material and clear explanations. With its wealth of material, Hellsten's *Mastering Chess* series is beloved by amateurs and chess trainers alike.
- *The Life and Games of Mikhail Tal* by Iakov Damsky and GM Mikhail Tal – Get into the mind of one of the most creative and intuitive attacking players ever!
- *How I Beat Fischer's Record* by GM Judit Polgar – The first book in an excellent trilogy. Polgar's chess genius and unparalleled passion for chess are on full display, with plenty of biographical details about her historic rise through the ranks.

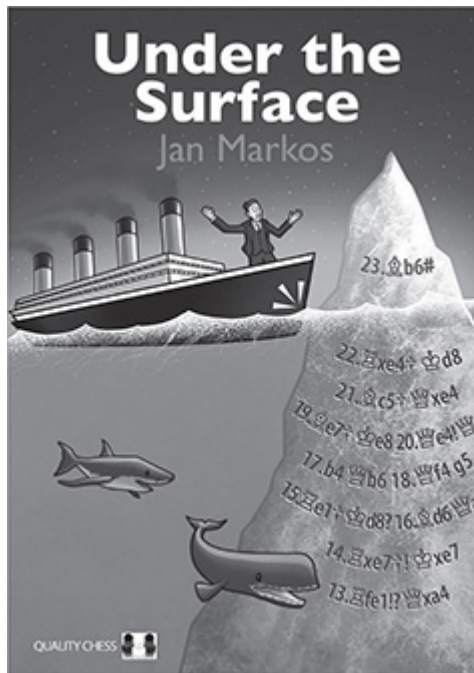
- *Chess for Life* by GM Matthew Sadler and WIM Natasha Regan – One of the first books that focused on how adults might approach chess differently from rising scholastic players. The chapters about FM Terry Chapman and GM Keith Arkell are particular favorites.
- *Chess Structures* by GM Mauricio Flores Ríos – As we have preached the importance of understanding opening plans rather than just memorizing moves, this book helps you identify typical plans in opening structures ranging from the Carlsbad to the King's Indian.
- *The Mammoth Book of the World's Greatest Chess Games* by FM Graham Burgess, GM John Emms, GM Michael Adams, GM Wesley So – A mind-blowing collection of some of the highest-quality chess games ever played, with great annotations and game selection.
- *The Seven Deadly Chess Sins* by GM Jonathan Rowson – *Zen and the Art of Motorcycle Maintenance* meets competitive chess. Rowson was a philosophy grad student at the time of writing and is extremely insightful on the common hangups that can limit one's chess growth. This book is more geared for tournament than online players.
- *Chess for Zebras* by GM Jonathan Rowson – Another classic by Rowson. For anyone who finds *Seven Deadly Chess Sins* a bit abstract for their taste, this is a more practical guide to chess improvement.
- *How to Study Chess on Your Own* by GM Davorin Kuljasevic – If you are a working adult this book will likely make you feel that your study efforts are inadequate, but it is filled with fantastic advice and analysis.

## **2000+ USCF rating**

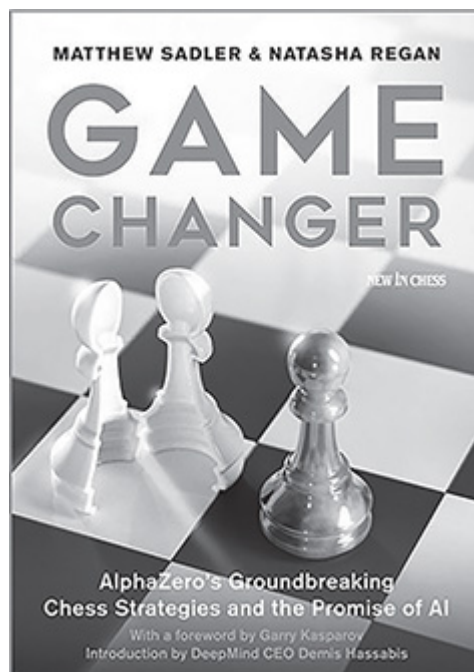
- *Timman's Titans* by GM Jan Timman – Part memoir, part game collection. Timman's poetic writing style and vivid recollections of life at the top of the chess world make this one of my all-time favorite chess books. Timman played some beautiful and

instructive games, but I would put this more in the 'reading for pleasure' category instead of 'reading for improvement'.

- *Pump Up Your Rating* by GM Axel Smith – 'Big Picture' guides to chess improvement are amongst my favorite chess subgenre, and this one is an absolute classic. Smith did the work and has the receipts of what it takes to improve to the grandmaster level. Filled with great advice and examples.
- *On the Origin of Good Moves* by IM Willy Hendriks – The always insightful author and trainer traces the evolution of chess and pinpoints some received chess history wisdom that is not necessarily correct. Part great puzzle book, part fascinating chess history.
- *Secrets of Practical Chess* by GM John Nunn – Part game collection, part practical guide to competitive chess. In this book Nunn shares tons of helpful advice regarding calculation, making plans, playing endgames and more. The book could be more organized, but the wisdom shared makes it worth digging up the gems.
- *Rewire Your Chess Brain* by IM Cyrus Lakdawala – If you are looking to enter the world of 'endgame studies', meaning composed chess puzzles, Lakdawala's book is a great place to start and will keep you busy for a long time.



- *Under the Surface* by GM Jan Markos – Another grandmaster/philosopher, Markos offers vivid metaphors of chess principles, poetic writing, and clear examples. This book is on the abstract side, so it may not be suitable for every reader.



- *Game Changer* by GM Matthew Sadler and WIM Natasha Regan – The AlphaZero neural network changed chess irrevocably, and Sadler and Regan are the perfect tour guides to show you the new terrain. They gush enthusiasm for the engine’s originality and present the ideas of a 3500-level player about as clearly as one could hope for.
- *Thinking Inside the Box* by GM Jacob Aagaard – One cannot go wrong with the works of Aagaard, but this is my favorite. It covers topics ranging from how to think at the board, to how to analyze your games, to how to approach studying chess. The chess concepts presented are pretty advanced, but Aagaard’s highly readable writing style makes this a great choice for any ambitious player.
- *Positional Decision Making in Chess* by GM Boris Gelfand – Another case in which I could select any of this author’s books, but Gelfand’s positional book shines brightest in my eyes. Gelfand offers great advice on how to coordinate one’s forces and to approach different pawn structures. This book has been recommended by countless strong players on *Perpetual Chess*.
- *Universal Chess Training* by GM Wojciech Moranda – The Polish national team member and high-level trainer dispenses a uniquely presented compilation of challenging chess puzzles. As one might encounter in a competitive game, there is little prompting for puzzle themes, but thorough explanations of each puzzle and meticulous and fresh puzzle selection help this stand out among a sea of puzzle books.

## **Books for kids**

- *Everyone’s First Chess Workbook* – see prior capsule.
- *Winning Chess Strategies for Kids* – see prior capsule.
- *Winning Chess Exercises for Kids* by NM Jeff Coakley – The most advanced of the Coakley books, this one has a unique blend of puzzles and is a great choice for a scholastic player in the 1300-1600 range.

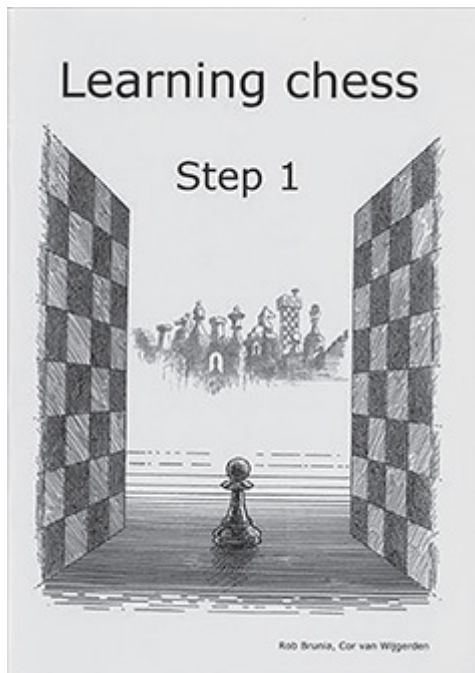
- *Coach Jay's Series* by Jay Stallings – Renowned American scholastic teacher Stallings has a multi-part series of instruction books and accompanying workbooks. These are an excellent choice for any self-motivated young chess enthusiast.

### **General interest/chess history/culture (chess bedside reading)**

- *The Anand Files* by FM Michiel Abeln – This book provides a riveting account of Anand's World Championship matches, taking you behind the scenes of the preparation, behind-the-scenes machinations, and opening choices in Anand's World Championship matches.
- *Mind Master* by GM Viswanathan Anand – An excellent companion to the prior book and an honest and revealing look at Anand's legendary career.
- *Chess Queens* by WGM Jennifer Shahade – A comprehensive and entertaining look at the world of women's chess through the eyes of a two-time U.S. Women's Champion. Shahade's book provides fascinating historical perspective as well as a look at today's champions.
- *All The Wrong Moves* by Sasha Chapin – An amateur player catches the chess bug, and chaos and epiphanies ensue. Fun reading.
- *The World Champions I Knew* by GM Genna Sosonko – Sosonko has written many enjoyable books about his first-hand interactions with Soviet-era chess legends. This one covers the biggest names of their era, so it is the most accessible of Sosonko's books.
- *Endgame* by Dr. Frank Brady – A deep dive into Bobby Fischer's meteoric rise and the sad early climax of his career. Well written and highly informative.
- *Bobby Fischer and his World* by IM John Donaldson – Another brilliant bio of the deeply flawed and fascinating American chess legend.

- *The Life and Games of Vasily Smyslov* by FM Andrey Terekhov – A beautiful tribute to the seventh World Champion. This book contains rich biographical details and insightful game analysis.

## Chess curricula



- *Learn Chess the Right Way Series* by GM Susan Polgar – This is a great series of courses that can help you advance from total beginner to 1100 or so. My favorite in the series is Book 3, which focuses on defending. Also available on Chessable.
- *The Chess Steps Method* by Rob Brunia and IM Cor van Wijgerden – One of the most ambitious chess curricula out there. *Chess Steps* are a six-step series of manuals and mini workbooks designed to take you from beginner all the way to 2200. More than thirty workbooks are available in total, with instructor's manuals accompanying each of the six 'steps'. The books showcase a thorough and brilliant selection of chess puzzles. The material for these courses are A+, but the books themselves are not arranged in a very intuitive manner, and there are no explanations for the puzzle solutions, so help from a coach or some independent work beyond the chess studying is

helpful. If you don't know where to begin with these, *Chess Steps* trainer NM Han Schut has a helpful intro on YouTube.

- *Chess: 5334 Problems, Combinations, and Games* by Laszlo Polgar – This is primarily a puzzle book, but the material contained is so voluminous that one might consider it a curriculum. The puzzles cover a wide range of difficulties, ranging from an easy mate-in-one, to puzzles that can challenge master-level players.
- *Build Up Your Chess* series by GM Artur Jussupow – The legendary Soviet-era player and trainer provides a comprehensive nine-course guide to chess improvement. One can start with these around the 1400 level, and they will keep you busy for many years. Caveat: this is the only recommendation I have not read (solely due to the scope of the endeavor, its a nine-volume series), but Jussupow has a sterling reputation, and many players and trainers I respect speak highly of this series.

## Plotting your moves: how to use the chess sites

*Process saves us from the poverty of our intentions.*

– Elizabeth King, Sculptor

### **Chess playing sites give you infinite options**

In modern times, any discussion of daily chess practice begins with Chess.com and Lichess.org. Both are fantastic sites with strengths and weaknesses. Lichess is a free, donation-driven, open-source site known for its sleek and clean playing interface and ultra-convenient ‘study’ feature. The Lichess study feature will be discussed in a separate chapter since this feature is more comparable to a chess database (cloud-based) than a chess website.

Chess.com, of course, needs no introduction. At the time of writing, it is the largest playing site in the world, with more than a hundred million users and ten million games played on the platform daily. And Chess.com allows you to play chess in every conceivable way. One can play daily chess (one move per day), rapid, speed, or bullet chess. One can play against bots (engines with distinct playing characteristics and sometimes faux personalities) or fellow humans. One can even play chess variants like ‘suicide chess’, ‘three check chess’, and the new hotness at the time of this writing, duck chess. (Don’t ask!) Lichess doesn’t offer quite as many whimsical chess variants or lessons and thus is often considered to cater to a slightly more serious audience, but both sites offer plenty of features for players of all levels. Beyond Chess.com and Lichess, one can also play on the Internet Chess Club, and the ChessBase playing site, among many other places, but no other site boasts the critical mass of players that Chess.com and Lichess do.

From a business perspective, Chess.com utilizes a 'freemium' model, where basic features are free, and different paid membership levels unlock a bevy of additional features. Paid customers can practice an unlimited number of chess puzzles and can access a vast video and lesson library, that features lessons ranging from how the bishop moves to a fascinating video series by GM Fabiano Caruana on how he approached his 2018 World Championship match against Magnus Carlsen. Chess.com also has constant online tournaments, various puzzle training options, and, of course, broadcasts ranging from elite chess events to casual chess streamers playing blitz.

But despite the countless bells and whistles, Chess.com and Lichess are, first and foremost, places to play chess. They offer leagues, and dedicated amateurs often play slower games, but the most popular forms of chess on the platform are rapid chess (ten minutes per player) and speed chess (five minutes per player). Online rapid chess is a good way to improve your game, especially if you can eliminate distractions, focus on the game, and be reasonably rigorous in your review. Rapid chess (or slower) coupled with a game review is particularly recommended for those below 1500 online or so. As we discussed previously, speed chess as a tool for chess improvement has historically been more controversial but has gained currency for intermediate-level players and up.

### **Play games that matter**

Lichess has many famous chess players who are fans of its site. Some use anonymous accounts, while others, such as GM Daniel Naroditsky, who plays as 'RebeccaHarris', make no secrets of their identity. In addition to the many Super GMs, dedicated amateurs, and blitz beasts who populate Lichess, the player 'German11' has also gained infamy.

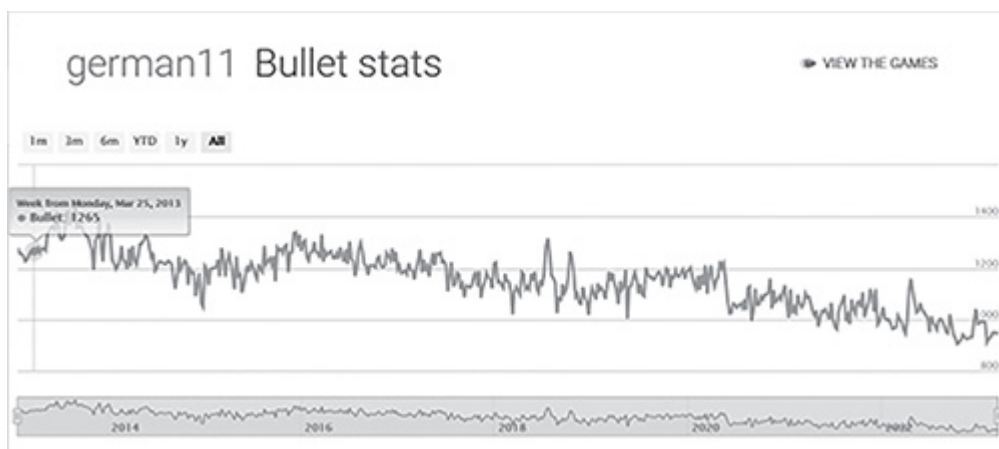
At the time of this writing, German11 has played over 400,000 games of bullet chess! You read that correctly! Details of German11's backstory are scarce, but he once posted in a Lichess forum that he 'is a retired pensioner who has lots of time and loves chess!' Ironically, German11 writes in his Lichess profile (in German)

‘Capablanca is my role model.’ Suffice to say that German11’s preferred approach, of playing bullet chess, all day, every day, is distinctly unCapablancon.



A screenshot of German11’s profile. Note the massive number of games played on the left panel.

If there was any doubt whether playing 400,000 bullet games would help your game, German11’s record suggests that it’s not an optimal approach for improvement. Since 2014, German11 has lost about 300 rating points, with many fluctuations within an overall downtrend in both their bullet and blitz ratings. It is hard to argue with such dedication to chess, and as long as German11 is enjoying playing, many others are certainly enjoying gawking at the sheer volume of hours played!



On the other hand, if you want to use the chess sites to improve, quality is more important than the quantity that German11 puts in. Lichess offers a team league called '45/45', and an individual one called 'Lone Wolf' that vets players carefully for anti-cheating and allows you to play slower rapid games that feel important. Dr. Nick Vasquez is a participant and proponent and said (Episode 286), 'You get one game per week, and you can research what openings they play on OpeningTree.com and prepare for them. It is a really interesting way to learn some openings, get prepped, and get a good game.' To get differentiated, three-dimensional chess practice, Nick transfers the online moves to a physical chess set when he plays these online league games.

Similarly, the Charlotte Chess Center runs a Corporate Chess League through Chess.com where you can have a similar experience while playing with work colleagues. For stronger titled players, Chess.com's 'Titled Tuesday' is another fantastic way to play meaningful games. Even though it is three-minute chess (with increment), any tournament which regularly features Carlsen and Nakamura will likely feel more important than a random bullet game played on one's phone.

### **Proceed with intent**

Aside from actual play, both sites offer many other ways to work productively on your game. Chess.com's targeted 'drills' help you convert material advantages, and as mentioned in Chapter 8, newer players should take advantage of the 'vision training' from Chess.com and Lichess to learn the board coordinates.

The key in whatever you do on both of these excellent sites is to plan how you use your time. Whether playing and reviewing a certain number of games, playing scheduled league or training games, or doing targeted, planned work from the 'Lessons features', it is vital to bring a plan and focus to what you do. Unless you just want to enjoy yourself as German11 does!

### **In summation**

- Chess.com and Lichess offer a dizzying array of chess options beyond just playing chess.
- This means that if one is focused on improvement, one should have a plan for how to engage with the sites, both for games and for learning/practicing.
- Leagues games and high-stakes tournaments can make playing online feel less than routine, which helps one's chances of improving.

## Databases for pros and amateurs: ChessBase and Lichess Studies

*My advice to younger players is to make a database with games and fragments titled something like 'My most beautiful games'. It's what I have done. It should have the most beautiful combinations you've ever played or the technical fragment that you think was really special. We play so many games and, unfortunately, most of them are not very good, and some of them are simply terrible. So when we do something we really are satisfied with, I think it's a good idea to put that in a special database.*

– IM Willy Hendriks (Episode 322)

### **The birth of ChessBase**

In 1986, a science journalist and chess enthusiast by the name of Frederic Friedel and a physics student and programmer named Matthias Wüllenweber showed Garry Kasparov a prototype of what was to become a chess program called ChessBase. Tired from a chess competition, the World Champion had been reluctant to indulge Friedel's brainchild, but once he obliged, Kasparov's tune changed. As Frederic Friedel told guest co-host Macauley Peterson in 2018 (Episode 82), once Kasparov had taken stock of what he was shown, he sat up and said, 'This is the most important development in chess study since the invention of printing!' Kasparov's words proved prescient.

These days, ChessBase is a vital tool for professionals to keep up with the latest in opening theory. Its flagship product, 'Mega Database', stores over 10.7 million games (as of 2023) from throughout chess history, and one can get a paid subscription to receive an additional 5,000 games a week as they are played. The database contains tournament games, World Championship games, simul games, and online games, with the earliest ones dating back to

the days of Gioacchino Greco. At its core, ChessBase is a database management software, and aside from the Megabase, one can also store smaller chess databases, such as ones for specific openings, high-level correspondence games, endgame studies, or ones of your own creation.

Before the internet took primacy, ChessBase was practically the only way to prepare openings for master-level opponents. One could access many of a prospective opponent's games to see their favorite opening or stylistic tendencies. You can ask the engine for the best moves at any moment and even see how different opening choices scored in high-level contests. In the early days of ChessBase, when humans were still better than engines, the default was to assume that the move most commonly played by grandmasters was the best, but now the almighty engine can even overrule the 'wisdom of crowds' and point out less frequent but superior opening choices.

ChessBase is full of other tools as well. For example, it can prepare 'Opening Reports', showing you an opening's most prominent practitioners and success rates in various lines, or one can search bishop vs knight endgames to see when each minor piece outshines the other. One can also search for specific games or matchups between players.

As discussed in Chapter 7, the 'training' mode or solitaire chess enables one to play through the games of the greats while playing 'guess the move', and the searchable database lets you find particular types of tactics or even checkmates that occurred on a particular square.

For all of its usefulness, ChessBase does have a few shortcomings.

- It requires a lot of memory and RAM on your PC.
- It is not readily available on Apple computers, although one can run ChessBase by using Apple software that lets you run Windows, such as Parallels.
- The product costs a few hundred dollars at a minimum.
- ChessBase is not especially user-friendly, and its software has a steep learning curve.

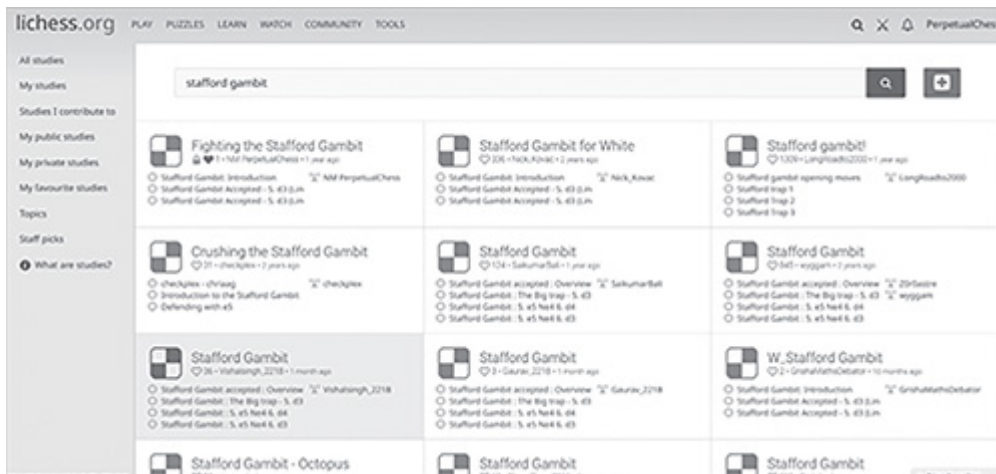
Despite these issues, for decades, ChessBase has reigned supreme as an indispensable chess tool for professionals. But in recent years, it has become more dispensable for club players who are now presented with a free alternative that offers some (but not all) of the same features.

## **Enter Lichess Studies**

In recent years, it is easier to get by without ChessBase due to the incredibly useful Lichess 'Studies' feature. (Chess.com also offers a similar feature called 'Library'.) The Lichess Studies feature enables you to create, organize, and share cloud-based chess databases with other Lichess users. In some respects, this is similar to ChessBase. As with ChessBase, one can store all of their games in studies and can also utilize 'opening trees' to find the most common responses to any opening sequence. In some ways Lichess Studies are more practical for amateurs because you can filter the massive library of games played on Lichess by relatively narrow rating bands. This indispensable feature enables you to study the moves your opponents are *likely to play*, rather than just what is best. Once you have used Lichess to create your opening repertoire, you can export it and upload it to Chessable if you would like to utilize Chessable's spaced repetition to review the lines. (There are YouTube videos that can help you with this process.) Unlike ChessBase, which can get laggy on a PC, the Lichess Studies interface is sleek, stored on the cloud, and free to use.

Any chess enthusiast can create a Lichess Study, and can keep the study private or make it publicly available for anyone to access. This means that in the communal spirit of Lichess, one can browse a vast library of Studies that have already been created. So whether you would like to see a summary of IM Eric Rosen's YouTube recommendations in his beloved Stafford Gambit, digitally review the games from Bobby Fischer's classic book *My Sixty Most Memorable Games*, or keep up with a super tournament like Tata Steel, there is a Lichess Study to help you. Despite the tremendous utility of Lichess Studies, it does have a few inevitable shortcomings compared to ChessBase:

- Each Study can only store 64 games. (But one can make as many Studies as needed, so this is a minor inconvenience.)
- Lichess Studies are not nearly as searchable as ChessBase. One can search for text within a title of a Study, but one cannot search across Studies for a specific position, a specific player matchup, or even for a specific player. This means that ChessBase or sites like Openingtree.com (if you know your opponent's online screen names) can be better tools for preparing for a specific opponent.
- The Lichess Master Database (FIDE over 2200) has 2.5 million games, so it is not as comprehensive as ChessBase.



If you search for 'Stafford Gambit' on Lichess Studies, you will find many publicly available, shared repertoires on the opening. On the other hand, you cannot (currently) search for every study that contains a specific move sequence or position.

## Which one should I use?

Depending on which bells and whistles you opt for, ChessBase costs hundreds of dollars, and it is probably not a must-have for anyone rated below 2000 FIDE. (Although if you are a chess teacher or someone who likes to look up their opponent's tournament games you might want to spring for it.) But ChessBase retains a rich place in the history of chess technology and, at minimum, is a fun tool to play around with for technophile chess enthusiasts. For professionals, ChessBase is still indispensable despite the

proliferation of online databases like Chessgames.com.

ChessBase's famed 'Megabase' still has the largest collection of games played and enables grandmasters to ensure that they are prepared for any opening that their opponent has played. Depending on the power of your personal PC, one can always integrate ChessBase with the latest Stockfish, Leela, or other engines to explore openings in great depth. For chess educators, ChessBase is also quite helpful, as one can run sophisticated queries to find tactical themes or specific imbalances in endgames.

ChessBase has many subscribers who eagerly await its annual upgrades, and I have been a ChessBase customer for decades. However, for all of its utilities, ChessBase is most popular as a tool for opening preparation, and deep opening preparation becomes vital only as one approaches the master level.

Lastly, a large part of the utility of Lichess Studies and ChessBase comes from their easy compatibility with chess engines. In this category, ChessBase does allow you to incorporate more engines than Lichess, but chess engines are such a crucial stand-alone tool that they also deserve their own chapter, starting on the next page!

## **In summation**

- As Garry Kasparov predicted, ChessBase and chess engines revolutionized chess learning.
- ChessBase is still a vital tool for chess professionals, and many master-level players also utilize ChessBase, particularly for opening preparation.
- With its ease of use and sharing, Lichess Studies is a fantastic supplement to ChessBase for players of all levels. The ability to see what opening moves are popular in an opening at the amateur level is especially useful.
- If you are rated below 1800 and are primarily looking for a way to store your games and to create opening repertoires, Lichess Studies is a more than adequate free alternative to ChessBase.

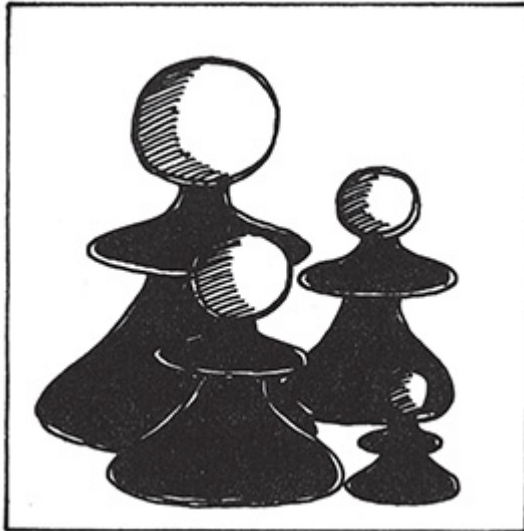
## **Engenious! Extracting lessons from Stockfish and Leela**

*Chess has been shaken to its roots by AlphaZero, but this is only a tiny example of what is to come.*

– Garry Kasparov, introduction to the 2019 book *Game Changer*

### **The evolution of home chess analysis**

As any attentive viewer of *The Queen's Gambit* could tell you, before there were chess engines, tournament games that could not finish after a certain number of hours were 'adjourned'. In these cases, one player would 'seal a move' where they wrote their next move in a position and store it in an envelope, and the other player was not informed what the sealed move was. Then both players could go home and analyze the adjourned position before resuming the game, typically on the next day. These adjournments made for some tense evenings, as a player could now study a position all night and possibly even enlist the help of a few friends. At times in chess history, tournament rules forbade receiving help from other players with analysis during adjournments, but this was a difficult rule to enforce.



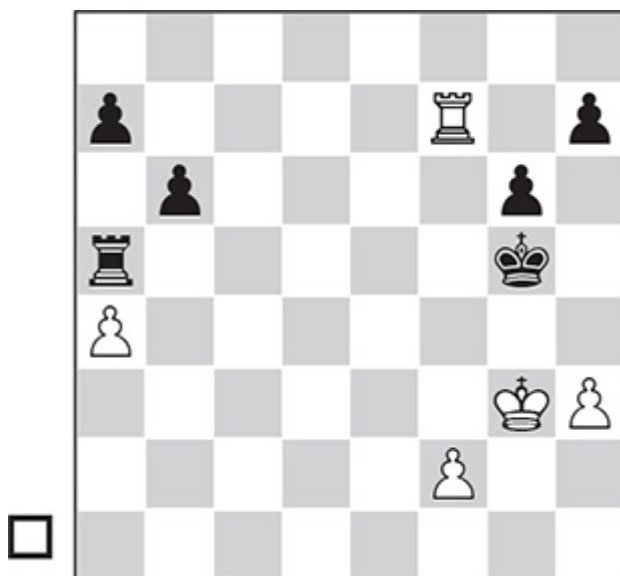
One of the most famous adjourned games in chess history occurred at the 1962 Chess Olympiad in Varna, Bulgaria. Two legends were tangling on board one of the USSR vs USA match, as 51-year-old former World Champion Mikhail Botvinnik played the 19-year-old phenom Bobby Fischer. Bobby was already considered a potential future World Champion and thus a potent threat to the Soviet hegemony. This game attracted such great interest that a demonstration board was set up on the street to accommodate an overflow of would-be spectators. To add to the folklore, this would turn out to be the only tournament game between the two legends.

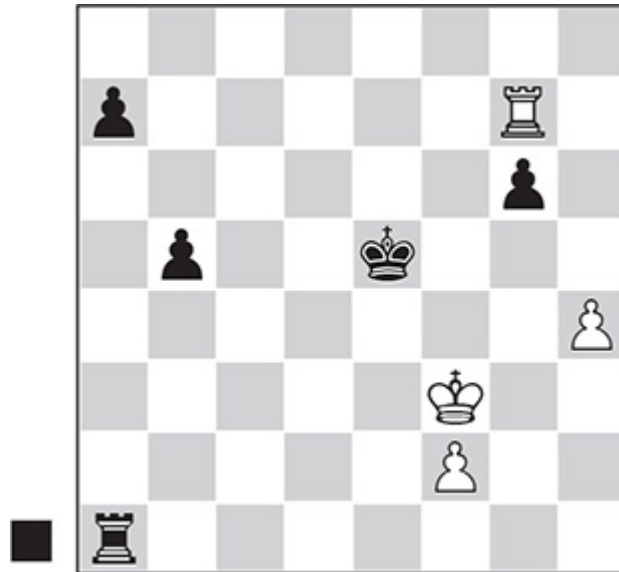
Bobby Fischer obtained an early advantage with Black in the game in question but squandered some opportunities and was forced to adjourn the game at move forty-five. Fischer was hoping to convert an extra pawn in a rook and pawn endgame and reportedly felt confident in his chances to do so. Rook and pawn endgames are notoriously subtle, and even among strong players, opinions differed in subsequent years on whether Fischer's position would have been a win with best play. But Fischer did not play his best. Shortly after the match, he wrote a letter in his inimitable style:

*In the second half [of the tournament], I really patzed up one game after another. Botvinnik could have resigned against me, but I fell into the most obvious silly cheapo you can imagine. He looked like he was dying throughout the game. He was gasping, turning colors and looked like he was ready to be carried out on a stretcher. But when I blundered and he*

*caught me in his trap, he was the old Botvinnik again. He buffed his chest out, strode away from the table as if he were a giant.*

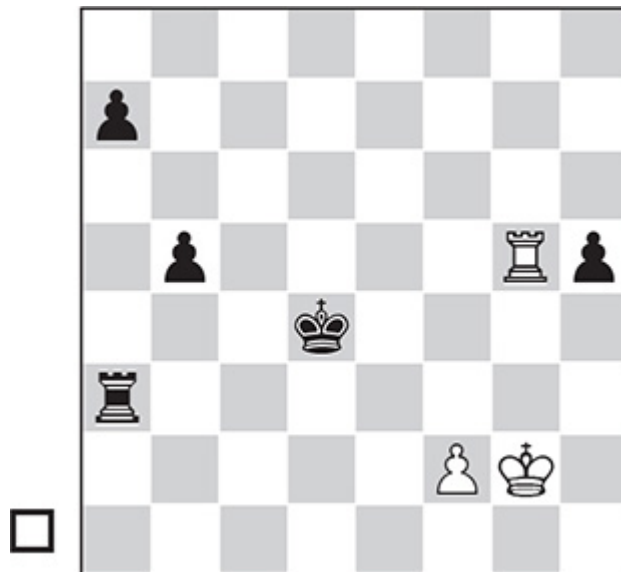
The prior night, Botvinnik and his Soviet compatriots were determined to rescue the position, and they made sure that they made the most of the study opportunity that an adjourned game presented. Botvinnik referred to it as 'one of the most prolonged adjournment analysis sessions of my career'. No less than seven world class players were set to work on looking for resources in Botvinnik's position, including former World Champions Mikhail Tal and Vasily Smyslov. According to the legend, deep into the night, renowned player and theoretician GM Efim Geller found the unorthodox idea that ultimately surprised Fischer and helped save the draw.





Botvinnik-Fischer, Varna ol 1962

47. ♖xh7 was the counter-intuitive idea, ceeding Black connected passed pawns, that Efim Geller suggested to Botvinnik's analysis team. The game continued 47... ♖xa4 48.h4+ ♕f5 49. ♖f7+ ♕e5 50. ♖g7 ♖a1 51. ♕f3 b5 (right diagram). Hours after initially discovering 47. ♖xh7, Geller came up with 52.h5!, with the idea that after 52...gxf5 53. ♖g5+ ♕d4, White would play



Botvinnik-Fischer, Varna ol 1962

**54. ♖xb5**, and disconnect Black's pawns again and reach a drawn endgame. The highly technical rook and pawn endgame took more twists and turns from this point, with Fischer, Botvinnik and others arguing for years about whether it was drawn with best play at various critical moments.

Today's engines and tablebases confirm that the game continuation is drawn, but that 54. ♖xh5 would have been losing with best play.

Fischer, for his part, did not study the adjourned position as deeply, but had high hopes of a win when he returned to the board the next day. Fischer was unable to convert, and here is how Botvinnik famously described the final moment, 'With his face as white as a sheet, Fischer shook my hand [after agreeing to a draw] and left the hall with tears in his eyes.' When Fischer subsequently heard about Botvinnik's vast adjournment team, he voiced displeasure at the outside assistance but did not formally protest.

So what does that story have to do with engines? Obviously, the whole scenario is impossible today because digital chess clocks with faster time controls obviate the need for adjournments, and almighty chess engines certainly change how one would approach an adjournment were they to happen. These days, rather than employing a team of seven Soviet grandmasters to analyze an adjourned game, one could turn on Stockfish and head to the bar.

### **The power of Stockfish and Leela**

At the top levels, engines have fundamentally altered the game, especially in the opening phase. They have pointed many roads to equality or near equality for Black, so White now places greater value on surprising the opponent. Here is what Axel Smith told me about the topic (Episode 225):

*Before the computer, there was not as much theory as today, so finding concrete lines and more theory paid off... But nowadays, many lines are worked out [to ensure a draw]. And if you want to surprise your opponent, it's harder to do it. Now, the top players are more trying to surprise the opponent and get a playable position instead of trying to prove an advantage with White.*

When I interviewed Fabiano Caruana in 2022, I asked him if the rapid pace at which engines were changing the game was a trend that he expected to abate. Fabiano was unsure, because he had seen such an astronomical change in the five years preceding our interview. Here is what Fabiano said in Episode 294 about two of the strongest chess engines, Stockfish (an extremely strong traditional chess engine) and Leela (an open-source 'neural network' that approaches chess learning more experientially than a traditional engine):

*I think the main revolution started in 2017, when Google invested in AlphaZero for chess. And then we started using the Leela engine, which was a very strange engine to use because it would sometimes outplay Stockfish in normal positions. [For example] Stockfish would evaluate a position as better for one side. Leela's alternate suggestions would imply, 'That's completely incorrect!' And then slowly, as we analyzed, we realized that Leela's analysis was better... And now Stockfish has incorporated the way that Leela learns chess. And so these engines just keep getting better and better. But we started using Leela to analyze, and in 2018 before the match [for the World Championship against Magnus Carlsen] there are moments I remember where my team members' eyes would light up. It was like a revelation to them. And we just had a different outlook on entire opening systems overnight. It was quite remarkable. So a lot of the opening knowledge of five years ago just seems archaic at this point.*

GM Patrick Wolff is a former U.S. Chess Champion and an author who has taken a particular interest in the rise of chess engines. In our 2020 interview (Episode 189), he estimated that in recent decades engines had gained about 400 rating points every ten years. As Fabiano alludes to, these last 400 points have left humans in the dust, even while we as a species also continue to improve at the game.

And with the great power of these engines comes great responsibility for those working on finding new opening ideas. Top players like Fabiano and Anish Giri exude curiosity about openings, and this innate curiosity sometimes helps them gain a competitive advantage against their Super GM peers. But of course, they also have people helping them. In 2019, I had the pleasure of interviewing GM Erwin l'Ami, who has been helping Super GM Anish Giri with openings for many years, and previously worked with former World Champion

Veselin Topalov. He has been charged with coming up with lots of new opening ideas, as well as, presumably, spot-checking Giri's existing vast repertoire, so it was fascinating to hear what l'Ami's relationship with chess engines was like. In 2019, Erwin told me, 'Engines are running 24/7 in my house.' In the years following that interview, I started to hear of more and more top players accessing top engines by renting the use of remote engines via 'cloud computing', so when I got to interview Erwin again two years later, I asked him whether it was true that top players and their teams were now running engines via the cloud. He said: 'I think the days where you have these massive machines at home are sort of finished.' How quickly things change!

### **Engines for amateurs**

While the evolution of engine use at the top level is fascinating, these superpowered engines may not have a direct impact at the amateur level. Nonetheless, the impact of engines and modern tools reverberates across the chess food chain. For example, opening book and Chessable authors are able to give more precise suggestions in their materials by using today's engines. On this note, in our 2021 interview, Super GM, award-winning author, and engine expert GM Matthew Sadler pointed out that, 'Many of the books I grew up with actually contained very bad analysis!' In contrast, Sadler said that today's players can read books that 'are not only correct from the thematic point of view, but from the tactical point of view as well.'

Aside from the 'downstream' benefits of stronger engines, chess amateurs can benefit tremendously from them while using them individually. Here are some of the top ways amateurs can use engines:

- 1) Game review** – As mentioned in Chapters 2 and 3, the mere availability of game review functions after each game is a paradigm-shifter. In the old days, it was not unusual to lose a game and not really know why you lost. You may or may not have

had the opportunity to do a post-mortem with the opponent or a stronger player, and thus you may not have been able to maximize the ability to learn from your losses. If you are newer to chess, you may not be able to extract every subtle lesson that an engine has to offer, but at a minimum, reviewing a game with an engine allows you to pinpoint the major turning points in a game. It can be challenging for a less experienced amateur to understand engine suggestions, but it gets better with practice. A useful shortcut to keep in mind when using ChessBase or Lichess Studies is that 'X is next'. – This means that when reviewing a game, if you type the letter 'X', it will show you the best move for your opponent in the current position (as if you passed on your turn, which, of course, is not allowed). As we mentioned in Chapter 5, this is quite helpful for figuring out the other side's threat or plan.

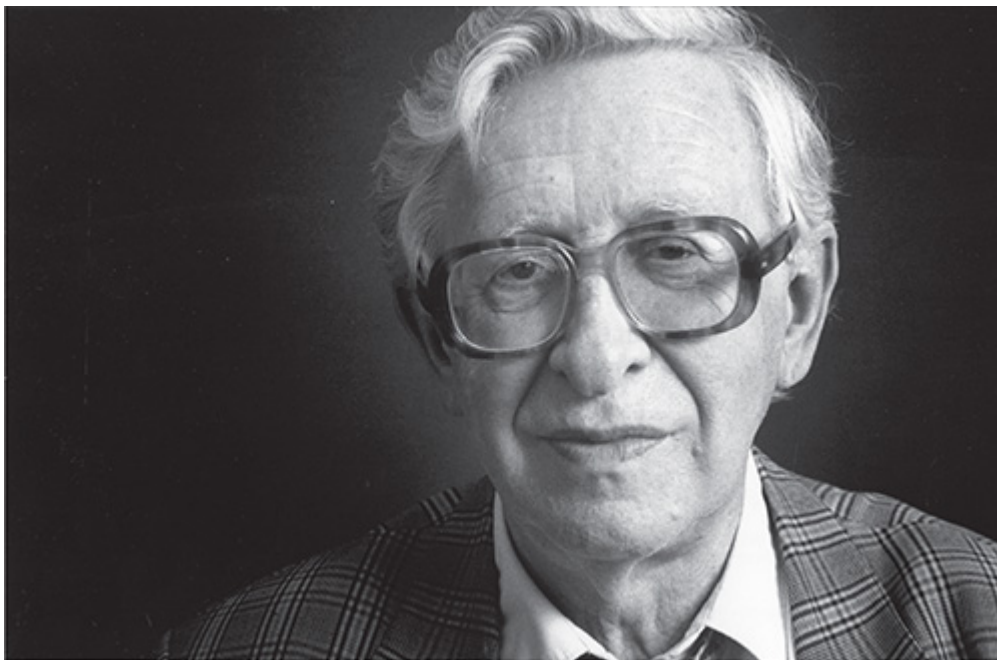
- 2) **Opening practice** – As mentioned in the previous chapter, engines are of the highest use to master-level players, but it certainly cannot hurt that you can get 3000+ level move suggestions at the click of a mouse in your pet opening. For those who don't mind playing against engines, they can then practice their openings of choice to their heart's content. The amateur-level 'Maia' bots (neural network bots which are available at varying rating levels and are designed to mimic the play of humans) are widely available on Lichess and are good choices to practice against for amateur players.
- 3) **Practicing converting advantages** – As little as twenty-five years ago, if one wanted to practice something like a specific rook and pawn endgame or the two bishops checkmate, one likely needed a sparring partner. These days we all have silicon sparring partners who are always available. As NM Han Schut pointed out to me, if a student is having trouble converting an advantage against an engine, they can always switch sides and try to learn from how the engine realizes the advantage against you. In addition to practicing/reviewing positions from your own

games with engines, Chess.com/drills and Lichess.org/practice have some great preloaded positions to learn and practice.



**Are you confident you can beat a 3200 level engine in this winning position as White? On Chess.com/drills (with a paid membership), you can practice this and other endgames as much as needed. Lichess.org/practice also has many excellent free positions to practice.**

**4) Practice evaluating positions** – When I asked Matthew Sadler (Episode 258) how he would recommend that club players utilize engines, he replied that we could all use engines to learn to become better evaluators of positions. When making this suggestion, Matthew mentioned that one of the creators of Leela estimated that the engine plays at a 2500 level without calculating at all! This means there is fertile ground for humans, including strong grandmasters like Sadler, to actively work to develop the skill of evaluating positions. GM Eugene Perelshteyn and FM Nate Solon heard this interview and subsequently wrote the excellent primer *Evaluate Like a Grandmaster*, which provides a great way for intermediate-level players to begin to work on this skill.



**Boris Spassky famously said of Vasily Smyslov, 'I call him "Hand", because his hand knows exactly on which square to put which piece at a given moment; he does not have to calculate anything.' These days, it is Leela who possesses the magic 'hand' and can play well without calculating.**

### **The last frontier for chess engines**

Despite the tremendous utility of engines as a learning tool, they still have room to improve. One issue is that they are not very good at accounting for the 'degree of difficulty' when evaluating a position. For example, they tell you a position is winning whether there are twenty treacherous roads to victory, or a single, simple one. This issue has become more noticeable in recent years, because engines will often give one side a large numerical advantage despite a material balance. Of course, when an engine says a position is winning with best play, it is right, but it does not always know the challenges amateur humans might feel in trying to realize these advantages.

But in my mind, the final frontier for engines will come when they can explain their move suggestions and variations using language accessible to players of lower levels. There are already products available with this capability, but there is plenty of room to improve.

The advent of Chat-GPT suggests to me that this problem could be solved relatively soon, maybe even by the time you read this book.

Given the rate of change in artificial intelligence and chess engines, this chapter runs the risk of being obsolete by the time it is printed, but the bottom line is that engines are an incredibly powerful tool, and every chess player should invest some time in learning how to make the most of them. You will sometimes hear trainers advise against players becoming 'slaves to engines', and it is true that one must fight the tendency to turn your brain off when you turn the engine on. But in my opinion, when the strongest players in the world (computers) offer unlimited free availability to help teach you, you should learn how to take advantage of their generosity. But there are always trade-offs, and the rise of engines does deprive us of some dramatic stories surrounding adjourned chess games!

### **In summation**

- Engines have changed chess study irrevocably.
- This is most evident at the grandmaster level, but amateurs can make tremendous strides in their games using engines.
- One must fight the temptation to stop thinking independently when consulting an engine.
- It is worth investing time to learn how best to incorporate engines when it comes to preparation and game review. As with openings, a key principle in engine use is to try to understand why moves are suggested, and to favor moves you do understand when you are not sure about others.

## Learning without drowning in variations: optimizing Chessable

*Practice that's spaced out, interleaved with other learning, and varied produces better mastery, longer retention, and more versatility.*

– Peter C. Brown, *Make it Stick*

### The origins of Chessable

David Kramaley was a polyglot and between-jobs computer programmer who was also a passionate chess amateur. As David worked on his game, he became frustrated with the learning tools available in chess. Specifically, David had used the language learning app Duolingo to help him learn languages and thought something similar might help people learn chess openings.

In our 2017 interview (Episode 99), David told me:

*Based on my language learning, I was aware of spaced repetition, and I thought that something similar should exist for chess. Nothing out there at the time fit what I was seeking... I had some spare time, so I spent a few days just coding a basic prototype of this and using it myself.*

These were the humble beginnings of Chessable, now one of the world's leading chess education sites. It lets you 'pitch the frequency' of its algorithm, which quizzes you based on your available study times and retention abilities.

Chessable has many useful features, but it is in the realm of learning openings where it has truly revolutionized chess learning. There are opening courses suited to players of all levels and authors ranging from amateurs to Super GMs like Anish Giri and Wesley So. Authors harness tools such as high-level engines and grandmaster games to distill the information you need to play an opening. Chessable's spaced-repetition-based 'Movetrainer' technology then quizzes you

to help you memorize the sequences. And as many a grizzled tournament veteran will tell you, people really know their openings these days!

Toward the top level, one can look no further than rising star GM Abimanyu Mishra for testimonials about the efficacy of Chessable. When Abimanyu made global headlines for becoming the youngest grandmaster in chess history, he discussed his training regimen in some interviews. He told Andrew Kaufman in an interview for the Chessable blog:

*I used a line from Peter Svidler's Grünfeld [Chessable course] in the game to get my final grandmaster norm. Thanks to the opening preparation I got from the course, I had about a fifty-minute time advantage just out of the opening, and it was a huge help in getting the win. Anish Giri's Najdorf and French repertoires were also great, but Sam Shankland's 1.d4 was really excellent. Before taking that course, I was an 1.e4 player and switched to 1.d4 after taking that course. I've played the last seventy games or so with 1.d4, and it's how I got to Grandmaster.*

Abimanyu Mishra is obviously a special chess player, but even for many non-professionals, Chessable has become a popular tool. However, it is not embraced or even liked by every single chess player. Some players may prefer to learn openings from their chess databases or books, or videos, and the site is occasionally criticized for encouraging too much opening memorization, especially for club players. I understand this criticism and have found myself using it for too much mindless memorization at times. Over time, I have found an approach to using Chessable that I find to be helpful to my opening study, but there are plenty of players who prefer other methods of opening study.

### Course Settings

Video:  
Enabled ▾

Learn:  
Everything ▾

Quiz:  
Immediately ▾

Study:  
All Moves ▾

Review:  
Whole Variation ▾

Reps:  
1 ▾

Depth:  
Full Depth ▾

These settings for Chessable opening courses are a good starting point, although, of course, you can tweak them as you develop your own learning preferences.

## How to learn openings on Chessable

As discussed in Chapter 5, those who caution against opening memorization without understanding are wise to do so. Furthermore, Chessable's famed *Lifetime Repertoire* courses often possess staggering levels of theoretical detail. That does not mean that one should try to memorize an entire course. In fact, in my 2023 interview with Chessable CEO Geert van der Velde (Episode 327), he told me, 'A Chessable *Lifetime Repertoire* is supposed to be a comprehensive manual, not something that you study front to back.' Nonetheless, with so much material in each course, it can be hard to know how to approach them. With that in mind, here is my advice about how to approach learning Chessable opening courses. This

advice primarily applies to those who are rated over 1500, or those below that rating who have decided to make openings a priority:

- Begin a Chessable course by watching its intro video and by learning its 'Quickstarter Chapter'. The goal of the Quickstarter Chapters is self-evident from their names, they typically contain only the most popular lines in each variation and can often be learned in a week or two.
- Within each opening course that you own (or design), select the 'All Moves' setting, rather than 'Key Moves'. (This can be found on the right-hand side of the page, which lists the chapters in a course.) This setting means that you will often have to repeat the first handful of moves in an opening when reviewing, but the alternative is to suddenly be quizzed on an opening position without seeing the preceding moves that got you to that position.
- Select the 'Quiz Immediately' setting (instead of 'Quiz After Learn'). This setting means that when you start a course, you are guessing moves even before they are demonstrated to you. NM Todd Bryant, who is a former Chessable programmer and current Chessable power user, told me, 'This setting helps ensure that I am learning more actively instead of just parroting robotically.'
- Once you have learned the Quickstarter Chapter, you can switch to a plan of occasional review, coupled with learning additional lines as you encounter them in your games.
- Whenever you encounter a move you don't understand, make it your mission to learn *why* it is played. There may be some trial and error involved, but this can be done by asking your coach, fooling around with an engine, or even leaving a question for the Chessable author on the page where the line is given. I have even heard stories of chess amateurs tuning into smaller chess Twitch streams of titled players and peppering them with questions. The streamer is happy to have someone to engage with, and the student is happy to learn.
- When you encounter a new move in an opening, you can use the [Chessable.com/explore](https://chessable.com/explore) feature to input the moves you have

seen and find out which courses cover those moves.

- How many moves you should learn when starting a course depends on your rating, but it's reasonable to start at 8-10 moves deep, and add as you progress and see lines more frequently. Obviously, as you get toward the master level, your prep may go much deeper than ten moves.
- Maintain a moderate daily regimen of some opening review, and play frequently in order to be 'pop quizzed' on various openings and to see which lines are popular.

The screenshot shows a chessboard with a position from the King's Indian Defense. The board is set up with White pieces on a1, b1, c1, d1, e1, f1, g1, h1 and Black pieces on a8, b8, c8, d8, e8, f8, g8, h8. The position is 1. d4 e5 2. c4 g6 3. Nc3 Ng7 4. e4 d6 5. Ne2 O-O 6. Nf3. To the right of the board is a table titled 'Lifetime Repertoires: King's Indian Defense - Part 2'.

Move	Variations	Games	White / Draw / Black
e5	47	147	50% / 20% / 24%
g6	1	68	43% / 25% / 32%

At the bottom of the interface, there are navigation buttons and a text input field containing the move list: 1. d4 e5 2. c4 g6 3. Nc3 Ng7 4. e4 d6 5. Ne2 O-O 6. Nf3.

When you go to [Chessable.com/explore](https://Chessable.com/explore), enter a position, and click the 'Search Courses for Position' button, you will see all of the courses that cover the position in question.

## What about courses beyond openings?

Some classic books, like *Seven Deadly Chess Sins* and *The Art of Attack in Chess*, are also available on Chessable, but my personal preference is to save my Chessable use for things I am trying to memorize rather than merely learn about. Aside from an extensive opening review, the main courses I recommend are ones like *The Checkmate Patterns Manual*, or, if you are into endgames, a guide like *100 Endgames You Must Know*. In courses like these, repetition

and practice are of more value than when you are merely shown an instructive game. And plenty of people enjoy Chessable merely for its vast video library, which can be treated as stand-alone learning tools, albeit as an expensive hobby.

Finally, this is probably as good a place as any to advise against the ‘eyes bigger than your stomach’ phenomenon that one can experience when ordering at a restaurant. Chessable has more excellent courses than one could reasonably learn. For a club player who spends a handful of hours per week on chess, it is best to emphasize depth over breadth. Focus on learning your openings in some detail rather than constantly switching them. As IM Greg Shahade advised, choose quality openings, practice them frequently, and stick with them. (Although this advice may need to be tweaked if you repeatedly face the same opponents and wish to surprise them occasionally.)

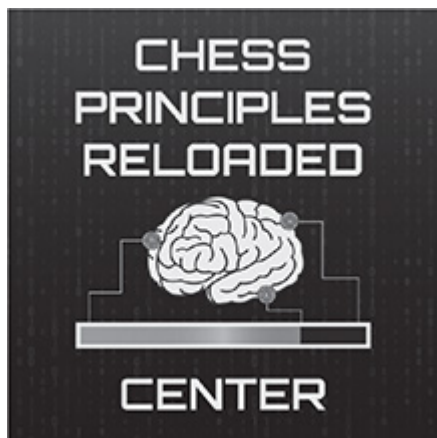
### **In summation**

- Chessable has made it easier than ever to remember your opening lines.
- But Chessable has also provided more lines than ever to learn.
- This suggests one should place added emphasis on ‘pruning’ lines and comprehensively learning the basics via the Quickstarter sections.
- Once you have learned the basics of an opening, try to learn by reviewing or learning a line each time you encounter one in an online game. Make sure that you work to understand why the move is recommended!
- Chessable is also helpful for learning checkmate patterns and basic endgames, but I don’t like it as much for reviewing game collections.

### **My recommended Chessable courses**

Below, I will give some course recommendations. However, I consider opening courses to be too individual to give my own recommendations. I will say that the opening courses of IM Christof

Sielecki, GM Simon Williams, and IM Alex Banzea are generally very highly regarded. Here are some of my favorite Chessable courses in the non-opening category:



- *Chess Principles Reloaded* by IM Andras Toth – If you are in the category of an Under 1600 player who is not studying a lot of opening theory, this is a great big-picture overview to opening principles. Andras provides clear examples and entertaining commentary for someone looking to advance from novice to intermediate. Toth is one of YouTube’s most entertaining presenters so you may want to spring for the video version of this course.  
Suggested Chess.com rating range – 1000-1600
- *Learn Chess the Right Way – Mastering Defensive Technique* by GM Susan Polgar – For newer chess players, your main job is to learn how not to screw up. This course is one of the best resources for learning to stop your opponent’s threats. (Also available as a book.)  
Suggested Chess.com rating range – 0-1100
- *Survive and Thrive: How to Blunder Less and Defend Better* by FM Dalton Perrine – A (significantly) more advanced version of Polgar’s *Defensive Technique* course. Noticing your opponent’s threats is a skill!  
Suggested Chess.com rating range – 1400-2200



- *Forcing Chess Moves* by FM Charles Hertan – Popular *Perpetual Chess* guests from FM James Canty to FM Peter Giannatos have extolled the virtues of this challenging tactics work. This is a good choice for an 1800 trying to level up her tactics game. (Also available as a book.)  
Suggested Chess.com rating range – 1700-2300
- *Visualize 1* by John Neely ('Benedictine' on Chessable) – If you are learning chess as an adult and trying to boost your visualization skills, Benedictine's *Visualize* series is a great choice. He teaches you to see ahead on the chessboard one step at a time.  
Suggested Chess.com rating range – 1200-1600
- *The Checkmate Patterns Manual* by Raf Mesotten – This course by 'CraftyRaf', in my opinion, is Chessable at its best. The pattern selection is excellent and varied, and the spaced repetition format is great for drilling these fundamentals. (Also available as a book.)  
Suggested Chess.com rating range – 700-1600
- *Everyone's First Chess Workbook* by FM Peter Giannatos – The name says it all. If you are getting your feet wet and want a primer on basic tactics (and defense!), this is your course. (Also available as a book.)  
Suggested Chess.com rating range – 0-1100

- *Mastering Chess Strategy* by GM Johan Hellsten – The *Mastering Chess* series is indispensable for intermediate players who want to grow their positional skills. Hellsten offers a vast array of instructive positions, so you get good bang for your buck. (Also available as a book.)  
Suggested Chess.com rating range – 1500-2200

## **Chess YouTube: choosing your content amidst a sea of presenters**

*Everything about my channel, the interface, the length of the video, the content I choose, everything is basically tailored by the viewers... I do create everything, and I decide where something goes, But every suggestion, every message, every comment – it all factors in the final product.*

– Antonio Radic, aka ‘Agadmator’ (Episode 160)

### **My mixed relationship with chess video**

You may not be surprised to hear the chess podcaster say this, but video is not my native medium. I tend to daydream more frequently when watching something than when reading a book or listening to a podcast. When my wife and I watch detective shows, I often need to pause for her to explain a plot point. I get distracted by my phone or sometimes just zone out for minutes at a time. These days, when I watch a movie, I often keep the ‘plot summary’ on Wikipedia open to read as I watch. Unfortunately, this isn’t as easy to do with chess videos.

When I fire up ‘Chess YouTube’, I start with a single browser tab open, intense focus, and a resolution that this time will be different. By the time the video is over, I have twelve tabs open and have clipped my nails, but I have learned nothing about chess. On the bright side, I may have read an interesting article about the elections in Brazil while the chess video was playing in an unobserved tab.

This is a long way of saying that I may not be the best person to give Chess YouTube advice, at least if your goal is to improve your game. Nonetheless, you are reading this book, so I will try to help as best I can. After all, I know what’s popular on Chess YouTube, and through my interviews with YouTube consumers and creators, I think I have a good sense of what makes a good chess channel.

With this background in mind, I will share some advice on how to approach learning about chess on YouTube, with the caveat that I am slightly less informed on this topic than when recommending books, Chessable courses, or when distilling chess improvement advice.

### **Three tips for using YouTube for chess improvement**

- 1) Proceed with intent** – The geniuses at Google/YouTube are masters at pulling you into a content vortex where each successive video you watch is more entertaining than the previous one. It may not be more informative, though. So, as with other methods of chess study, it helps to have a plan. If you want an overview of a particular opening, you might want to go straight to a ‘Hanging Pawns’ or IM Eric Rosen video. If you want to learn to play some basic endgames, go straight to IM John Bartholomew’s series; you get the idea.
- 2) Emphasize active learning** – This is where I struggle compared to other learning methods. When watching a video, make sure you are following every move. Ask yourself questions about the position shown; if the answer is not revealed, try to figure it out for yourself. When they ask you to pause the video, you should actually pause the video. If you want to maximize your learning potential, you could get out a chess set and play the demonstrated moves on the chessboard. As discussed previously, this helps your chances of retaining the information you learn.
- 3) Take notes!** – One cannot be expected to remember everything on the first attempt. You could write using a pen or paper, or, if digitally inclined, update a Lichess Study as you go.

### **The best chess YouTubers to improve your game**

This will always be somewhat subjective, but I hear about favored chess YouTubers nearly every time I interview an amateur player for *Perpetual Chess*. Rather than list them all, here are ten of my

personal favorites, along with some recommended series and for which rating audience they are best suited.

Top 10 Chess YouTubers for improving your game (in alphabetical order) are:

- IM Andras Toth – Andras’ background as a school teacher is evident, as he is equal parts entertaining and informative. Andras works hard to distill complicated chess concepts to their bare essence and showcases a ‘no-nonsense’ style where he isn’t afraid to call a stupid move stupid. Hey, we all make them from time to time!
- WFM Anna Cramling – The popular and likable Twitch streamer does a lot of chess videos that are more entertainment-oriented, but some listeners have alerted me to the fact that Anna is a gifted teacher and is excellent at explaining basic chess concepts to those rated below 1400 or so.
- IM John Bartholomew – John is a great communicator with a clear presentation style, and as a strong IM he can help the vast majority of Chess YouTube consumers improve their games, including myself. I recommend his *Chess Fundamentals* series for those rated below 1400, and his *Climbing the Rating Ladder* series for all players up to his level.
- ‘Chess Dojo’ – Three creators for the price of one! IM Kostya Kavutskiy, IM David Pruess, and GM Jesse Kraai offer a wide range of video content for various levels, including recorded lessons and game reviews. Two of my favorite series are Kostya’s ‘Post Mortem’ reviews of his tournament games and Jesse’s book reviews and inimitable ‘Philosophy of Chess’ video think pieces.
- NM Dan Heisman – The perennially underrated author and longtime chess trainer is great at understanding and giving names to an amateur’s common mistakes.



**Daniel King**

- GM Daniel King – This might be my personal favorite channel. His no-frills analysis of professional chess draws on his vast chess knowledge and wealth of experience to educate you about high-level chess and chess history.
- GM Daniel Naroditsky – ‘Danya’ is unfairly talented as a commentator, a world-class blitz/bullet player, and an excellent teacher to boot. His ‘speed runs’ through the entire rating landscape are especially legendary, and Danya is a rare grandmaster who can explain advanced chess concepts in a way that is understandable to a broad audience.
- IM Eric Rosen – The ultra-likable International Master has a wide variety of quality content, but is likely best known for sharing helpful opening tricks and traps in hitherto obscure openings like the Ponziani and Stafford Gambit.
- ‘Hanging Pawns’ – Croatian chess enthusiast Stjepan Tomic provides fantastic ‘big picture’ overviews of various openings. His channel is a great choice for those rated 1000-1600.
- Saint Louis Chess Club – Another channel that provides a vast array of teachers under its umbrella. From old-school Ben Finegold videos (he moved to his own channel in recent years) to Yasser Seirawan sharing stories, to Jonathan Schrantz breaking down concepts for amateurs, the St. Louis Chess Club has an incredible roster of gifted teachers pass through its halls and

posts it all for free. Most of their videos are best suited to those rated over 1200 or so.

## Using YouTube for fun

Because YouTube is not my favorite medium, I also put the question of favorite content creators to Twitter. I was particularly interested in whether people come to chess YouTube for entertainment or learning.



I was surprised that most respondents did not utilize YouTube as a primary learning tool. Many mentioned that they used the aforementioned tools like Chessable, game analysis, etc., for improvement, and viewed chess YouTube more as a passive distraction. Many said that YouTube was less than 20% of their overall 'chess time'. Perhaps there is some selection bias in my Twitter followers, but I expected a higher number given the huge followings of the biggest Chess YouTubers.

In any event, YouTube has many very entertaining chess channels, and it shines brightest in providing passive entertainment, updates on the GM Hans Niemann drama, or in helping one keep up with tournaments through the game recaps of the likes of Agadmator, Levy Rozman, and their many imitators. This book is primarily about chess improvement, but if you are looking for some 'chess escapism', I will mention a few of the most entertaining chess channels. Of course, you can learn plenty about chess from these folks, but it certainly doesn't hurt that they will make you laugh along the way.

Top five most entertaining Chess YouTubers (in alphabetical order):

- GM Ben Finegold – Running jokes, catchphrases and harsh truths pepper Finegold’s games and chess news analysis. Since I have interviewed Ben five times, I am particularly impressed at his endless array of stories. And by the way, I had Ben listed here even before he agreed to write the foreword to my book!



**Dina Belenkaya**

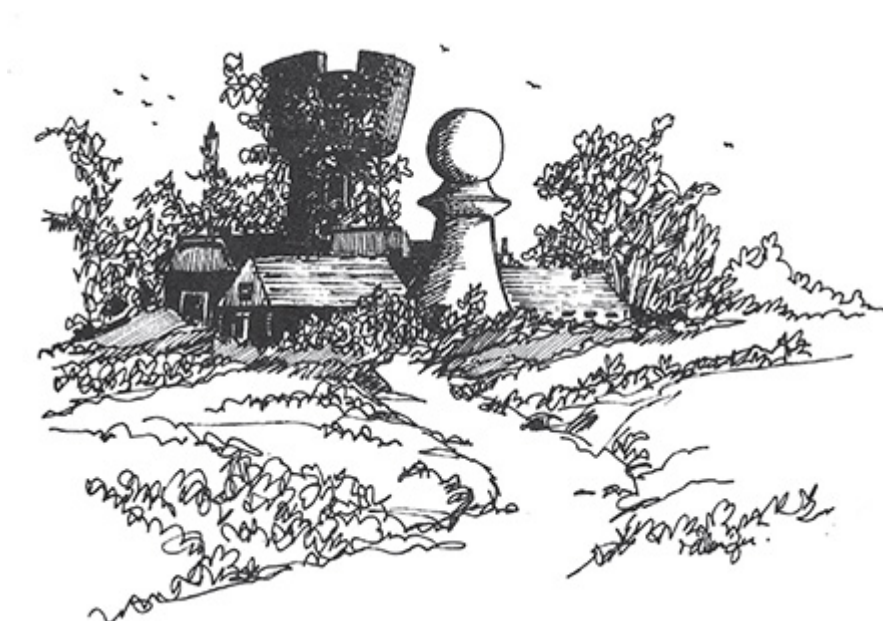
- WGM Dina Belenkaya – Dina has been streaming for a couple of years, but is recently emphasizing her YouTube videos more. It is not easy to be funny in a second language, but Dina’s English and humor are Super GM level.
- GM Hikaru Nakamura – What is most entertaining about Hikaru is the sheer wonder of the chess brilliance he displays, particularly his calculating ability. But Hikaru’s unique vocabulary and decor, involving juicers and pineapples, doesn’t hurt either.
- IM Levy Rozman – Duh. You probably don’t need me to tell you about ‘Gotham Chess’. His videos chronicling his pursuit of the grandmaster title will always be my favorites, but he is often at his funniest in the ‘Guess the Elo’ series.
- GM Simon Williams – ‘The Ginger GM’ boasts deep opening knowledge of an attacking chess repertoire. He always manages to land an off-color joke or two while informing you.

## **In summation**

- Chess content on YouTube is excellent for learning and even better for entertainment and keeping up with chess news.
- If you are using Chess YouTube for learning, be sure to be purposeful about what you consume.
- As with all things chess, active learning beats passive learning.
- Whatever your chess interest, you are guaranteed to be able to find quality free content on YouTube.

## PART V

# Final thoughts on incorporating chess study into your life

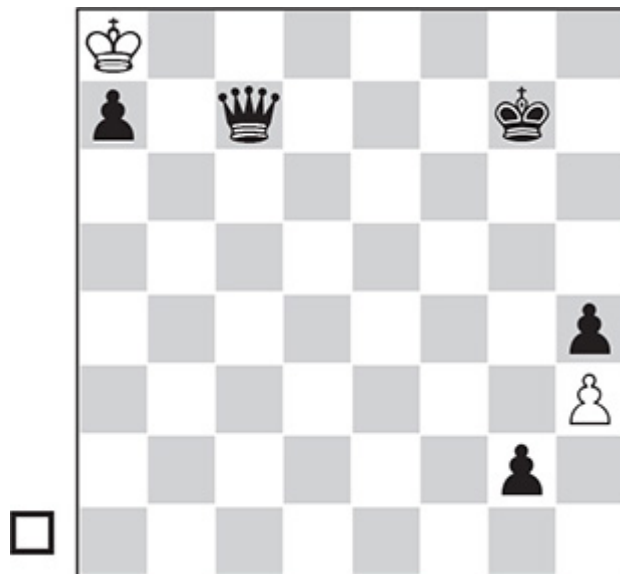
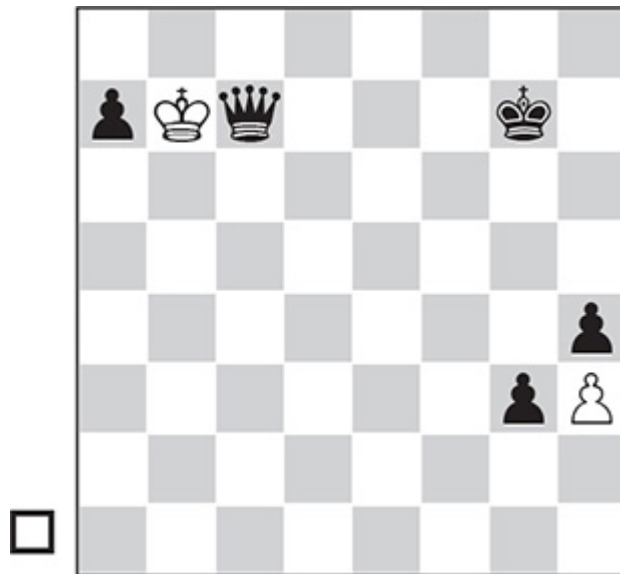


## Introduction to Part V

Well, dear reader, if you have made it this far, you are that rare chess book consumer who might actually finish a book that you started. In chess terms, at this stage of the book you are up a queen, and you just need to avoid the 'Eric Rosen' stalemate traps! We just have two chapters to go.

**Chapter 25** – In which I (sort of) answer a question I often ask of *Perpetual Chess* guests, yet personally would prefer to dodge – how should I divide my chess study time?

**Chapter 26** – In which I unmask the killer! Just kidding, I review some key lessons from the book and send you on your way.



Rosen-Pächtz, Chess.com 2020

Here is one of IM Rosen's legendary stalemate tricks, captured *live* on Chess.com's 'I am not a GM' Championship broadcast. In a frenetic time scramble, then IM Elisabeth Pähtz (she is now a grandmaster!) played **56... ♟xc7+** (left diagram) in order to eliminate Eric's passed pawn and to focus on promoting her g-pawn. Anticipating his opponent's next pre-move (this is when you queue a move in advance before it's your turn in order to save time on the clock), Eric didn't play the 'best' **57. ♔xc7**, but went **57. ♔a8!**... and

after the pre-move **57...g2??** (right diagram) was played, the game ended in a sad (for Elisabeth) stalemate. There are many famed videos of Eric pulling similar shenanigans on YouTube, so be careful with pre-moves against him!

## Quantity vs quality: how to divide study time

*For each of my students, every single training plan is different because every single player is different.* – GM Wojciech Moranda (Episode 203)

### How to divide chess study time

One of my recurring questions for top trainers and accomplished improvers is the evergreen question, ‘How do you recommend one should divide their study time?’ Some have even suggested that many amateurs prefer debating this question to actually studying chess! And as someone whose job is to discuss questions like these rather than to study or compete in chess, I certainly cannot cast aspersions.

When I ask this question of a guest, invariably, the question recipient begins with the correct answer, ‘It depends,’ before venturing any further. After all, chess is a very complex game, and it is not easy to give a ‘one size fits all’ answer.

To further complicate things, many of the top players I interviewed did not pursue chess in such a regimented manner during their chess development. The typical GM or IM started chess as a kid and frequently played in tournaments. Beyond that, experiences vary, but they invariably involve a lot of playing chess. Many were members of a school chess club or received regular coaching. Others were self-motivated from the beginning and devoured chess literature or crushed tactics books from a young age.

Those born after 1980 or so were also able to make use of internet resources. For example, IM Yaacov Norowitz was an early adopter of the Internet Chess Club and estimated that he played over 12,000 online games with his fellow online chess legend, GM Hikaru Nakamura. But most of these young players were not

designing spreadsheets to track their time and instead did what felt like fun.

As adults, we don't feel like we have this luxury. We are fully aware of our ticking clocks when we play a competitive game and in life. This reality means that we are much more inclined to micro-manage every minute than we might have been in our carefree younger days. By now, you may have noticed that I am dodging the question that this chapter is framed around. As my guests do, I will ultimately answer, but first, I will present a list of questions to ask yourself when you are trying to figure out on your own how to divide your study time:

- 1) **What are my strengths as a chess player?** – As IM Andras Toth told me in Episode 211, 'If I have a student who has an excellent tactical sense, I am more than happy to cut back on the tactics.' They might want to spend more time analyzing their games or studying endgames.
- 2) **What are my weaknesses?** – 'Weakness is the absence of strength,' as the renowned author and trainer GM R.B. Ramesh likes to say. I take this to mean that a weakness in your game can be temporary, and if an aspect of your game is clearly holding you back, you should allow additional time to study it. As in so many things chess, Hikaru Nakamura provides an instructive example of this phenomenon. He was known primarily for his tactical prowess in his early years as a prodigy. Now a veteran, Hikaru's years of work have made him just as well known for his defensive prowess. In 2022, GM Fabiano Caruana said of Hikaru: 'We know his [Nakamura's] quality in terms of defense is unmatched. He's one of the greatest defenders, not only of his generation but in the history of chess.'
- 3) **Most importantly, you should ask yourself, 'Why am I playing chess anyway?'** – The brilliant author and philosopher, GM Jan Markos lobbed this one at me when I asked him about dividing study time (Episode 239). He continued, 'Do I want to enjoy myself, or do I want to achieve success? Do I want to be a

professional someday? What's my motivation?' Jan's questions cut to the core of our identities and likely require some soul-searching. Jan suggested that if we are motivated by ego, we may find it challenging to sustain that motivation. On the other hand, if we have a deeper reason for pursuing chess, we may be able to draw on that reason as a reserve whenever inspiration inevitably starts to flag. Furthermore, if our answer is that we love the game and just want to have fun with it, that suggests that we may not need a rigid regimen filled with arduous chess activities.

Once you have answered those three questions, you still need a framework from which to operate. In this case, I think GM Noël Studer's '1/3rd Rule' framework is a good place to begin. On the insightful *Next Level Chess* blog, Noël suggests spending one-third of your chess time working on each of:

- 1) improving tactical vision and calculation;
- 2) playing and analyzing your games;
- 3) other aspects of the game, such as openings, endgames, or positional chess, depending on an evaluation of your strengths and weaknesses.

What I like about Noël's approach is that it operates from a principle of regret minimization. It is diverse enough to touch many aspects of the game but sufficiently targeted that each segment of the study can make a difference.

The variety of study methods that Noël suggests is important because it limits the chances that we are wasting colossal amounts of time. Dr. Christopher Chabris implicitly made a case for a regret minimization-based framework when he joked (Episode 187), 'We know that we are wasting 50% of our chess improvement study time, but we don't know which 50%.'

Counter to Noël's fairly rigid 1/3rd rule, players from GM Jan Gustafsson to GM Erwin l'Ami have suggested merely spending our time on the aspect of chess we enjoy most. As Erwin put it, 'There is no perfect way to get better at chess,' so you might as well make

sure you are enjoying yourself. This advice is particularly applicable if one has already determined that their objective is to enjoy themselves instead of to advance their Elo for professional or personal reasons.

As I think of my chess study approach (when I am not working frantically to finish a book), it is a blend of Noël and Erwin's guidance. With my limited goals, I have decided that I won't be studying technical endgames because I do not enjoy them and have no ambitions to be a chess professional. I enjoy playing and reviewing blitz games and think they help my openings, particularly in Chess.com's Titled Tuesday, which offers the feeling of 'high stakes chess games'. Beyond that, I do not love calculation work, but I know it's good for me, so I do some every day when in a groove. I view it similarly to physical exercise in that I may not look forward to doing it, but I will be glad that I did it. Lastly, of course, I love chess books and read them as much for pleasure as for improvement. So my ideal chess study time breaks down to something like: 25% Chessable/opening work, 25% blitz and game review, 25% calculation, and 25% reading chess for fun/podcast preparation. This estimate does not include tournament chess, which for me, if I can manage it, is a discrete weekend event about eight times per year. If a weekly nightly tournament game were feasible for me (like in a local round-robin tournament or league), it would be a large part of my chess regimen.

Whether you land on Noël Studer's '1/3rd rule' or Erwin l'Ami's '100% do what you enjoy rule', there is one fundamental, unfortunate truth you must grapple with. **The number of chess study hours you have available to divide is far more important than how you divide them.**

This inconvenient truth was put most succinctly by IM Willy Hendriks, first in his book, *Move First, Think Later*, and again in our 2023 interview.

**Quantity is the best quality**

When I asked Willy Hendriks if he had an overriding chess philosophy, he thought for a beat and said, 'Quality is based on quantity.' Hendriks went on to say (Episode 322):

*I know you want me to tell you the big secret, but the big secret is that there are no secrets at all... You really have to work hard and do lots of different things, but nowadays there is so much good material that I think everyone can get the most out of their talents.*

I might tweak Hendriks' phrase to say that 'Quantity is the best quality', but I strongly agree with the sentiment, and it suggests the underlying truth that makes improving as an adult such a challenge. Even more than neuroplasticity and unfettered minds, what kids possess that adults don't, is time. This fact enables them to pursue chess from multiple angles, often for hours per day, and often without special attention to how to 'make the most' of that time. Unfortunately, awareness of this fact does not give you extra hours in the day, and additional time is one thing that this book cannot give you. But at least we can tell you the truth: as an adult, you must work harder and smarter if you hope to break through a plateau.

As I reflect on the amateurs I have interviewed who achieved the most success, they all put in a ton of time as well, at least given their life circumstances. I think of IM Kåre Kristensen, learning to study chess on the go. He may not have been able to follow Dr. Andrew Huberman's suggestions for triggering neuroplasticity while studying chess on his computer at his son's tennis practice, but he did what was feasible under the circumstances, and frequently competed OTB to fulfill the 'heavy lifting' aspect of his training. Players like JJ Lang, Megan Chen, and Andrew Zinn took advantage of circumstances that enabled them to compete in many tournaments. It didn't hurt that all three players were in their twenties, when they may still be on the right side of the chess aging curve.

Towards the other end of the age spectrum, senior players I have interviewed, like FM Terry Chapman and FM Doug Eckert, were able to take advantage of early retirements and compete vigorously, with impressive success to show for their efforts. In between those ages, if we aren't able to or are unwilling to make the sacrifices required to

invest a lot of time in chess, we simply can't expect miracles. And even if we make significant sacrifices to study a lot, it is no guarantee of success. Chess is a beautiful game irrespective of rating gain and results, and it's a good thing because we often won't get the results we want!

### **In summation**

- Before we attempt to divide our chess study time, it's helpful to do some soul-searching about our motivation for pursuing chess.
- If you decide that chess improvement is an integral part of your motivation, GM Noël Studer's '1/3rd Rule' is a good framework to begin with for dividing study time. We can tweak the formula from there based on an honest assessment of our priorities, strengths, and weaknesses.
- We may wish it weren't the case, but the amount of hours we can spend on chess is far more critical than exactly how we spend those hours.

## For the love of chess: parting advice and reminders

*The future belongs to he who has the bishops.*  
– Siegbert Tarrasch, *The Game of Chess*

### Reviewing and expounding on the four indispensable pillars

We have talked a lot about chess since the book began with the four pillars of chess improvement. Do you remember what they are? Pause the book if you would like to try to remember, or if you would like to simply enjoy the reading, please continue... They are:

- **Play** (serious games)
- **Analyze** them
- Do **Tactics** daily
- Find a **Community**

If you would like a handy mnemonic, you can switch the ‘C’ and the ‘T’ and remember PACT. Or if you know someone named PAT C, think of them. Let’s begin our review with a reminder from the esteemed GM Jacob Aagaard about the importance of daily practice from our 2020 interview (Episode 166):

*If you really want advice on how to make training effective, it’s to do something every day. There are various reasons for that. First of all, there is the whole momentum thing – inertia is physics. An object in motion tends to stay in motion. While an object is standing still it requires a lot more energy to get into motion. That’s why it’s so difficult to start doing things. It’s physics, it’s natural, it’s basic. When you do something every day, it becomes easier to continue to do something every day.*

*The second thing which people don’t consider at all, is that your brain is changing when you’re sleeping, so doing half an hour six days a week is not just much more effective than doing three hours once a week. It’s more effective than doing five hours once a week, because you’re changing your brain, continuously developing. So if you want to learn something, if you look at a little chess every day, you will have a much better result than with big practice sessions.*

Aagaard discussed the importance of doing something challenging if you have limited time. It could be endgame studies, studying games of Mikhail Tal or Judit Polgar, or testing a favorite opening trick. If possible, set the chess up on a physical board.

The more time that you have, the more you can hope to achieve with that time. And additional time offers more opportunities to vary your study routine. For example, if you are playing a lot of faster time controls, a daily practice of Puzzle Rush can be helpful. But if you are doing daily work that stretches your brain, you are engaged in an activity that virtually all of the brightest chess minds agree just might, possibly, someday, help you raise your rating. A few more reminders, if I may...

**1) Play games that matter to you as frequently as you can! –**

The beauty of chess is that the most fun chess-related activity (actually playing chess) is also one of the best ways to improve. (As opposed to studying, reading books, watching videos, etc.) But as we discussed in Chapter 3, the games should matter to you, and extracting a lesson or two to carry forward every time you lose is helpful.

Over-the-board tournament games achieve this aim splendidly, but if that's not feasible, there are ways to up the stakes in online games. Big tournaments like Chess.com's Titled Tuesday bring out the best in titled players, but the Lichess 45/45 and Lone Wolf leagues give players of all levels a game they can prepare for, plus, in some cases, the added feeling of community provided by team chess.

As IM John Donaldson said, sixty serious games a year is a great benchmark, but it wouldn't hurt to play many more if you have the time. Most of today's champions, including Magnus Carlsen and Hikaru Nakamura, played chess obsessively as kids. Likewise, most of the most-improved amateurs I interviewed found a way to compete frequently. GM Ben Finegold summed it up well in our first interview (Episode 9):

*Some people just want a magic formula. They're like, 'You're a grandmaster, give me two sentences so I can beat everybody.' But the two sentences are 1) Work hard, and 2) Play*

*players better than you.*

**2) Analyze the games** – The beauty of playing serious games is you will want to analyze them when you lose! If I play a bullet game on my phone on a boat with a beer in my hand, I might not care why I lost, and I might not review it afterward. But if I drive for ninety minutes to play a five-hour tournament game that I spent a week preparing for, no one will have to tell me that I should analyze my mistakes in that game. And that analysis and some ‘meta-analysis’ of recurring issues in my play will point the way to slowly, hopefully, someday, improve a tiny bit. And the more serious games you play, the more tiny, and sometimes painful, lessons you will learn. Repeat until dead.

**3) Find a community. Improving at chess is too hard to pursue alone.** – I love my wife, but I am not overly interested in how her weekly ballet classes go. We are in our forties, so it’s a win if she has fun and does not get injured. In a similar vein, my wife, and my kids, for that matter, don’t care how I did at the World Open. I find it grounding that those I love most are indifferent to my chess results. But if you are investing a lot in chess, you’ve got to find someone else who cares a bit about your results, or at least someone who suffers alongside you and can discuss the game with you afterward. In childhood development, they call it ‘parallel play’, when, around the age of two, kids are not inclined to play together but are aware enough of peers to begin to play next to each other. Competing in a chess tournament (team events aside), is a very individualistic endeavor. Still, having a friend to engage in parallel play within the same tournament or league is a nice feeling.

But it is also important to find chess contemporaries and micro role models. What does the local player 200 points higher rated than you know? Might she be willing to discuss it? Coaches with a genuine interest in your results are worth their weight in gold.

Online communities are also decent substitutes for or supplements to real-life chess friends. Whether you find your

fellow chess warriors via Twitter (#chesspunks), Discord, or Chess.com Forums, chess is an individual game that is most enjoyable with a group nearby. Ideally, the friends you make in online forums will ultimately lead you to real-life/OTB friendships.

### **Make time for your favorite aspects of chess**

In Part II of this book, we reviewed the many study methods that one could potentially skip or deemphasize depending on personal circumstances. For example, if rated below 1500, you should probably make time for learning basic endgames and drilling checkmate patterns. If you have time, doing some work on visualizing the board should also pay long-term dividends. If rated higher than 1500, speed chess and opening review start to become more important. **Whether it be openings, endgames, speed chess, blindfold chess, or even bughouse, if there is a particular aspect of chess that brings you joy, you should make time for it.** Otherwise, why are we even doing this?

### **The greatest gift that chess provides**

For all of the beauty of a well-conceived combination and the thrill of victory a game can provide, a sense of community is the best gift that chess can bestow. Although I am a USCF Master, I have not achieved much as a chess player. I rarely end up playing for first place in a tournament, and most of my games are marred by mistakes. That is going to be the case for most people. Even if you are the lucky champion that gets to lift the trophies and travel the globe playing chess, it is more fun to do it with friends.

And I hope that if you did not already know it, this book has helped to drive home the point that despite many successful stories, it can be extremely challenging to improve at chess as an adult. It is common for an adult to devote large numbers of hours to chess study without seeing results. The more hours you invest in chess, the better your chances of improvement, but sacrifices are always involved, and there are no guarantees that more time spent on chess will equal more rating.

Personally, I have come to accept this reality, and it is baked into my approach to chess study. I try to do enough chess study where improvement is not unimaginable but I also know it might not happen. At least I may not improve if we are measuring ourselves by that cruel and heartless calibrator – rating. But chess can allow us to improve in other ways. For example, it can give us discipline, focus, purpose, or community even if it does not give us rating points.

I still pursue and love chess, and it will always be a part of my life. Many of my best friends are chess players. Chess can also provide a ready-made community when you set sail to a new place. I am proud that *Perpetual Chess* has been listened to in nearly every country in the world, because there are chess players everywhere!

I want you to get better at chess, and I hope this book gives you some new tools and focus to achieve that. But as in so many walks of life, the ultimate joy should come from the journey, ideally pursued with some kindred spirits. Good luck, and thanks for reading!

## CHAPTER 27

# Games

### Game 1

**Krzysztof Banasik** 2228

**Andrzej Krzywda** 2258

Złota Wieża 2018

---

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♘xd4 ♘f6 5.♙d3 d6 6.0-0 a6 7.c4 b6 8.♘c3 ♘b7 9.b3  
♘bd7 10.♚e2 ♙e7 11.♙b2 ♚c7 12.♞ac1 ♞c8 13.♞h1 ♚b8 14.f4 h5 15.f5 e5 16.♘c2  
h4 17.♘d5 ♘h5 18.♘xe7 ♞xe7 19.♘e3 ♘g3+ 20.hxg3 hxg3+ 21.♞g1 ♞h1+ 22.♞xh1  
♞h8+ 23.♞g1 ♞h1+ 24.♞xh1 ♚h8+ 25.♞g1 ♚h2#

### Game 2

**John Donaldson** 2420

**Joel Benjamin** 2555

Seattle 1986

---

1.♘f3 ♘f6 2.c4 g6 3.♘c3 ♙g7 4.e4 d6 5.d4 0-0 6.♙e2 e5 7.0-0 ♘c6 8.d5 ♘e7 9.b4  
♘h5 10.g3 f5 11.♘g5 ♘f6 12.f3 c6 13.♙e3 ♙h6 14.♞h1 f4 15.gxf4 exf4 16.♙xf4  
♘fxd5 17.♘xd5 ♘xd5 18.♘e6 ♙xe6 19.♙xh6 ♘f4 20.♙xf8 ♚xf8 21.♚d2 ♞e8 22.♞g1  
♚f6 23.♞ad1 d5 24.cxd5 cxd5 25.♙b5 ♞f8 26.♚d4 ♚f7 27.♞c1 ♘h3 28.♞g3 ♚f4  
29.♞d1 ♞c8 30.♙d7 ♙xd7 31.♚xd5+ ♞f8 32.♚xd7 ♘f2+ 33.♞g1 ♞c2 34.♚d8+ ♞g7  
35.♞d7+ ♞h6 36.♞xg6+ 1-0

### Game 3

**Oliver Chernin** 2204

**JJ Lang** 2005

New York 2018

---

1.c4 c5 2.♘c3 ♘c6 3.♘f3 g6 4.g3 ♙g7 5.♙g2 ♘h6 6.d4 cxd4 7.♘xd4 0-0 8.0-0 ♘xd4  
9.♙xh6 ♘xe2+ 10.♚xe2 ♙xh6 11.♞fd1 ♞b8 12.♞d3 b6 13.♞ad1 d6 14.♘b5 ♙a6  
15.a4 ♞e8 16.b3 ♚d7 17.h4 ♙b7 18.♙d5 ♙xd5 19.♞xd5 ♙g7 20.h5 a6 21.♘a3 ♞bc8  
22.hxg6 hxg6 23.♘c2 ♞c5 24.♘b4 a5 25.♘c2 ♞ec8 26.♘e3 ♙f8 27.♞5d3 ♞h5  
28.♚f3 ♚h3 29.♚g2 ♚xg2+ 30.♞xg2 ♞cc5 31.♘d5 ♞c6 32.♞e3 ♞e5 33.♞xe5 dxe5  
34.♞e1 e6 35.♘f6+ ♞g7 36.♘e8+ ♞g8 37.♞xe5 ♙c5 38.♘f6+ ♞f8 39.♘g4 ♞e7  
40.♞f3 ♞d6 41.♞e2 f6 42.♞e4 f5 43.♞e5 fxg4 44.♞g5 ♞f6 45.♞xg4 ♞d4 46.♞xd4  
♙xd4 0-1

Game 4

Garry Kasparov 2770  
Anatoly Karpov 2730

Tilburg 1991

---

1.e4 e5 2.♘f3 ♘c6 3.d4 exd4 4.♘xd4 ♘f6 5.♘xc6 bxc6 6.e5 ♖e7 7.♖e2 ♘d5 8.c4 ♘a6 9.b3 g6 10.f4 f6 11.♙a3 ♗f7 12.♗d2 ♘b6 13.c5 ♙xf1 14.cxb6 axb6 15.e6 dxe6 16.♙xf8 ♖d8 17.♖b2 ♙xg2 18.♖xg2 ♗xf8 19.♖xc6 ♖d6 20.♖c3 ♗g7 21.♘d2 ♖hd8 22.0-0-0 ♖e8 23.♖xc7+ ♖8d7 24.♖c2 ♖b8 25.♘c4 ♖d5 26.♖f2 ♖c7 27.♖xb6 ♖xf4+ 28.♖e3 ♖g4 29.♖dg1 ♖h4 30.♖g3 e5 31.♖h3 ♖g4 32.♖g1 ♖d1+ 33.♖xd1 ♖xd1+ 34.♗b2 h5 35.♖g3 ♖h1 36.♖f2 h4 37.♖g2 ♖xg2+ 38.♖xg2 g5 39.a4 ♗g6 40.a5 e4 41.b4 h3 42.♖g3 ♖h7 43.a6 f5 44.♖a3 1-0

Game 5

Sri Vibhav Bondalapati 2042  
Michael Franco 1853

Chicago 2023

---

1.e4 c5 2.♘f3 e6 3.c3 ♘f6 4.e5 ♘d5 5.d4 cxd4 6.cxd4 d6 7.♙e2 ♙e7 8.0-0 0-0 9.♘c3 ♘xc3 10.bxc3 b6 11.♘d2 ♙b7 12.♙f3 ♙xf3 13.♖xf3 ♘d7 14.exd6 ♙xd6 15.♘e4 ♙e7 16.♙b2 ♘f6 17.c4 ♘xe4 18.♖xe4 ♙f6 19.♖fd1 ♖c8 20.♖ac1 ♖d7 21.♖c2 b5 22.c5 ♖d5 23.♖b3 ♖fd8 24.♖xb5 ♖b8 25.♖e2 ♖xa2 26.♖c2 h6 27.h3 ♖d5 28.♖cd2 ♖b3 29.♖a6 h5 30.♖c2 ♖xb2 31.♖xb2 ♙xd4 32.♖bd2 ♖xc5 33.♖e2 g6 34.♗h1 e5 35.f4 ♖b8 36.f5 ♗g7 37.♖c2 ♖d6 38.♖dc1 gxf5 39.♖c6 ♖d5 40.♖d2 f4 41.♖d1 ♖b3 42.♖xh5 ♖xc6 43.♖xc6 ♖b1+ 44.♗h2 ♙g1+ 45.♗h1 ♙f2+ 46.♗h2 ♙g3#

Game 6

Luis Paolo Supi 2572  
Magnus Carlsen 2863

Chess.com 2020

---

1.e4 d5 2.exd5 ♖xd5 3.♘f3 ♙g4 4.♙e2 ♘c6 5.♘c3 ♖d7 6.h3 ♙xf3 7.♙xf3 0-0-0 8.0-0 ♘d4 9.a4 ♖b8 10.♘b5 ♘xf3+ 11.♖xf3 a6 12.c4 e5 13.d4 exd4 14.♙f4 axb5 15.axb5 ♙d6 16.♖a2 ♖f5 17.♖fa1 ♗c8 18.♖c6 1-0

Game 7

Genrikh Kasparyan  
Koryun Manvelyan

Erevan ch-ARM 1939

---

1.d4 g6 2.b3 ♙g7 3.♙b2 d6 4.e4 f5 5.exf5 ♙xf5 6.g3 ♘c6 7.♙g2 ♖d7 8.f4 0-0-0 9.♘f3 a5 10.♘c3 ♘f6 11.♖d2 ♘e4 12.♘xe4 ♙xe4 13.a4 ♖he8 14.♙c3 b6 15.0-0-0 ♖b7

16. ♖he1 ♗d5 17. ♜e2 e5 18. ♜de1 exf4 19. ♜xe8 ♜xe8 20. ♝xf4 ♞a6 21. ♝h4 ♜h8  
22. ♜d1 ♝c8 23. ♜d3 ♗e6 24. d5 ♗xc3 25. ♜xc3 ♗xd5 26. ♜xc6 ♗xc6 27. ♝c4+ ♞b7  
28. ♝xc6+ ♞xc6 29. ♚e5+ ♞c5 30. ♚d3+ ♞d4 31. ♞d2 1-0

Game 8

Veselin Topalov 2740

Alexei Shirov 2710

Linares 1998

---

1. d4 ♗f6 2. c4 g6 3. ♚c3 d5 4. cxd5 ♚xd5 5. e4 ♚xc3 6. bxc3 ♗g7 7. ♗b5+ c6 8. ♗a4 0-0  
9. ♚e2 ♚d7 10. 0-0 e5 11. f3 ♝e7 12. ♗e3 ♜d8 13. ♝c2 ♚b6 14. ♗b3 ♗e6 15. ♜ad1 ♚c4  
16. ♗c1 b5 17. f4 exd4 18. ♚xd4 ♗g4 19. ♜de1 ♝c5 20. ♞h1 a5 21. h3 ♗d7 22. a4 bxa4  
23. ♗a2 ♗e8 24. e5 ♚b6 25. f5 ♚d5 26. ♗d2 ♚b4 27. ♝xa4 ♚xa2 28. ♝xa2 ♗xe5 29. fxg6  
hxg6 30. ♗g5 ♜d5 31. ♜e3 ♝d6 32. ♝e2 ♗d7 33. c4 ♗xd4 34. cxd5 ♗xe3 35. ♝xe3 ♜e8  
36. ♝c3 ♝xd5 37. ♗h6 ♜e5 38. ♜f3 ♝c5 39. ♝a1 ♗f5 40. ♜e3 f6 41. ♜xe5 ♝xe5  
42. ♝a2+ ♝d5 43. ♝xd5+ cxd5 44. ♗d2 a4 45. ♗c3 ♞f7 46. h4 ♞e6 47. ♞g1 ♗h3  
48. gxh3 ♞f5 49. ♞f2 ♞e4 50. ♗xf6 d4 51. ♗e7 ♞d3 52. ♗c5 ♞c4 53. ♗e7 ♞b3 0-1

Game 9

Alexei Shirov 2610

Ulf Andersson 2625

Biel 1991

---

1. ♚f3 c5 2. g3 g6 3. ♗g2 ♗g7 4. 0-0 ♚f6 5. d3 ♚c6 6. a3 0-0 7. c3 b6 8. b4 ♗b7 9. ♗b2  
♝c7 10. ♚bd2 d5 11. b5 ♚a5 12. c4 dxc4 13. ♗e5 ♝d7 14. dxc4 ♜ad8 15. ♗c3 ♚e4  
16. ♗xa5 bxa5 17. ♚xe4 ♗xe4 18. ♝xd7 ♜xd7 19. ♜ad1 ♜fd8 20. ♜xd7 ♜xd7 21. ♚e5  
♗xe5 22. ♗xe4 ♜d2 23. e3 e6 24. f4 ♗b2 25. ♜f2 ♜d1+ 26. ♜f1 ♜xf1+ 27. ♞xf1 ♗xa3  
28. ♞e2 ♗c1 29. ♗c2 f5 30. ♞f3 ♞f7 31. e4 fxe4+ 32. ♞xe4 ♞f6 33. ♗d1 ♗b2 34. ♗c2  
♗d4 35. ♞f3 h6 36. ♗d1 g5 37. h3 ♗c3 38. fxg5+ ♞xg5 39. ♞e4 ♞f6 40. h4 ♗e1 41. ♞f4  
e5+ 42. ♞f3 h5 43. g4 hxg4+ 44. ♞xg4 ♗xh4 45. ♞xh4 ♞f5 46. ♞g3 ♞e4 47. ♞f2 ♞d3  
48. ♞e1 ♞xc4 49. ♞d2 ♞b4 50. ♞c2 e4 51. ♗g4 a4 52. ♗f5 e3 53. ♗e6 c4 0-1

Game 10

Anna Muzychuk 2539

Ori Kobo 2445

Gibraltar 2020

---

1. e4 c5 2. ♚f3 ♚c6 3. ♚c3 e6 4. d4 cxd4 5. ♚xd4 ♝c7 6. f4 a6 7. ♚xc6 ♝xc6 8. ♗d3 b5  
9. ♝e2 ♗b7 10. ♗d2 ♗c5 11. a3 ♚e7 12. 0-0-0 0-0 13. h4 f5 14. g4 d5 15. gxf5 exf5 16. exd5  
♚xd5 17. ♚xd5 ♝xd5 18. ♜he1 ♝f7 19. ♗c3 ♜fe8 20. ♗e5 ♜e6 21. ♝f1 ♜f8 22. ♝h3  
♜h6 23. ♗xf5 ♝xf5 24. ♜d7 ♜g6 25. ♝b3+ ♞h8 26. ♜xb7 ♗f2 27. h5 ♜g3 28. ♝d5 h6  
29. ♜e2 ♜g1+ 30. ♞d2 ♗h4 31. ♝d4 ♜c8 32. ♗xg7+ ♞g8 33. ♝xg1 ♜xc2+ 34. ♞e3  
♝h3+ 35. ♞d4 ♗f2+ 36. ♜xf2 ♜c4+ 1-0

Game 11

Gorgiev, 1929

---

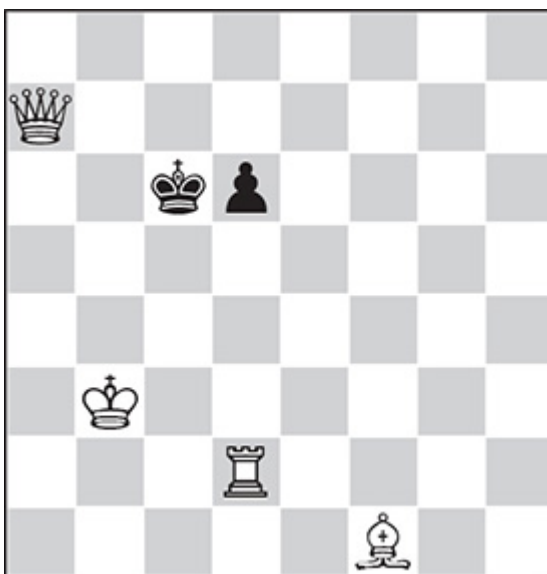


1. ♖a6 ♗g5 2. ♜f3 ♘d8 3. ♜a8 ♗g6+ 4. ♚c1 ♘c7 5. ♜c8 +-

Game 12

Wurzburg, 1932

---



1. ♖e2 ♚d5 2. ♗g2#

Game 13

**N.R. Sridhar**

**Viswanathan Anand**

Tamil Nadu 1982

---

1.d4 ♘f6 2.c4 g6 3.♘c3 d6 4.e4 ♘g7 5.f3 0-0 6.♘e3 e5 7.d5 c5 8.♘d3 ♘h5 9.♘ge2 f5  
10.exf5 gxf5 11.♚d2 a6 12.0-0 ♘d7 13.♚h1 ♘df6 14.♚c2 e4 15.fxe4 ♘g4 16.♘g1 f4  
17.e5 ♘xe5 18.♘h7+ ♚h8 19.♚g6 ♚f6 20.♚xh5 ♚h6 21.♚f7 ♚xh7 22.♚g6 ♚h6  
23.♚f7 ♘e6 24.dxe6 ♚xh2+ 25.♘xh2 ♚h4 0-1

Game 14

**Bobby Fischer**

**Attilio di Camillo**

Washington DC 1956

---

1.e4 e5 2.♘f3 ♘c6 3.♘b5 a6 4.♘a4 ♘f6 5.0-0 b5 6.♘b3 d6 7.c3 ♘g4 8.h3 ♘h5 9.d3  
♘e7 10.♘bd2 0-0 11.♚e1 ♚d7 12.♘f1 ♘a5 13.♘c2 h6 14.g4 ♘g6 15.♘g3 ♘h7  
16.♘f5 ♘b7 17.d4 exd4 18.cxd4 ♘d8 19.♘xe7+ ♚xe7 20.d5 c5 21.♘f4 ♘b7 22.♘g3  
♚fe8 23.a4 ♚f6 24.axb5 axb5 25.♚g2 ♘g5 26.♘xg5 hxg5 27.♚xa8 ♚xa8 28.e5 ♘xc2  
29.♚xc2 dxe5 30.♘xe5 ♚d8 31.d6 c4 32.♚e4 ♘c5 33.♚c6 ♘d3 34.♚e3 ♚c8 35.♚b7  
♚b8 36.♚d5 ♘b4 37.♚c5 ♘d3 38.♚d4 ♚b6 39.d7 ♚b7 40.♘c7 ♘f4+ 41.♚f1 1-0

Game 15

**Courtney Frey**

1813

**Stjerneanis**

1791

Lichess Rapid 2023

---

1.e4 e5 2.♘f3 d6 3.♘c4 h6 4.d4 exd4 5.♘xd4 ♘d7 6.0-0 ♘e7 7.♚h5 g6 8.♚d5 ♘e6  
9.♘xe6 fxe6 10.♚xb7 ♘d7 11.♘xe6 ♘c5 12.♚c6+ ♚f8 13.♘c4 ♘f6 14.♘c3 ♚b8  
15.♘d5 ♘xd5 16.♚xd5 ♚h7 17.♚g8#

Game 16

**Nikola Mitkov**

2461

**Vinesh Ravuri**

1990

Pro Chess League 2018

---

1.e4 e5 2.♘c4 ♘f6 3.♘c3 ♘c6 4.d3 ♘a5 5.♘ge2 ♘xc4 6.dxc4 ♘e7 7.0-0 d6 8.b3 0-0  
9.h3 ♘e6 10.f4 exf4 11.♘xf4 c6 12.a4 ♚c7 13.♘e3 ♚ad8 14.♘d4 ♘d7 15.♘xe6 fxe6  
16.♚g4 ♘f6 17.♚xe6+ ♚h8 18.♘xf6 ♘xf6 19.♚ad1 ♚a5 20.♚f3 ♚c5+ 21.♚h1 ♘h5  
22.♚xf8+ ♚xf8 23.♚xd6 ♚f1+ 24.♚xf1 ♚xd6 25.♚d1 ♚e7 26.♚d3 h6 27.♚g1 ♘f4  
28.♚g3 ♚c5+ 29.♚f1 ♚e5 30.♚f3 ♘e6 31.♚e1 ♘d4 32.♚f2 ♚g3 33.♘d1 ♘xc2+  
34.♚d2 ♘d4 35.b4 ♚a3 36.♘e3 ♚xb4+ 37.♚d3 ♘e6 38.♘f5 ♚b1+ 39.♚e3 ♚b6+

40. ♖f3 ♘d4+ 41. ♜g4 ♘xf5 42. ♜xf5 ♜d4 43. ♜f4 g5+ 44. ♜f3 ♜d3+ 45. ♜f2 ♜xe4  
46. ♜f8+ ♜g7 47. ♜a8 ♜xc4 48. ♜g1 ♜xa4 49. ♜b8 ♜d4+ 50. ♜h1 ♜d1+ 51. ♜h2 ♜d6+  
0-1

Game 17

George Berg 2000

Ben Johnson 2120

New York 2022

---

1.e4 c5 2. ♘f3 ♘c6 3.d4 cxd4 4. ♘xd4 ♘f6 5. ♘c3 e5 6. ♘db5 d6 7. ♘g5 a6 8. ♘a3 b5  
9. ♘xf6 gxf6 10. ♘d5 ♘g7 11.c3 f5 12.exf5 ♘xf5 13. ♘c2 0-0 14. ♘ce3 ♘e6 15. ♘d3 f5  
16.0-0 ♘e7 17. ♘xe7+ ♜xe7 18. ♘xf5 ♘f7 19. ♘e4 ♜ad8 20. ♘d5 ♜h8 21. ♘f5 ♜f6  
22. ♘xg7 ♜xg7 23.a4 ♜g8 24. ♘xf7 ♜xf7 25.axb5 axb5 26. ♜e2 ♜c4 27. ♜xc4 bxc4  
28. ♜fe1 ♜b8 29. ♜e2 ♜f7 30.g3 ♜g7 31. ♜a6 ♜d7 32. ♜c6 d5 33. ♜xe5 ♜xb2  
34. ♜g5+ ♜f7 35. ♜f5+ ♜e7 36. ♜f3 ♜c2 37. ♜g2 ♜d6 38. ♜c8 ♜b6 39. ♜c7+ ♜d6  
40. ♜xh7 ♜b3 41.g4 ♜cxc3 42. ♜f6+ ♜e5 43.g5 ♜c1 44. ♜e7+ ♜d4 45.g6 ♜bb1 46.g7  
♜g1+ 47. ♜h3 c3 48. ♜f4+ ♜c5 49. ♜c7+ ♜d6 50. ♜xc3 ♜xg7 51. ♜g4 ♜f7 52. ♜g2  
♜b2 53. ♜f3 ♜e7 54.h4 ♜h7 55. ♜h3 ♜f7 56. ♜f3 ♜h7 ½-½

Game 18

Raymond Kearsley 1548

Hans Henning Lübberding

Benidorm 2022

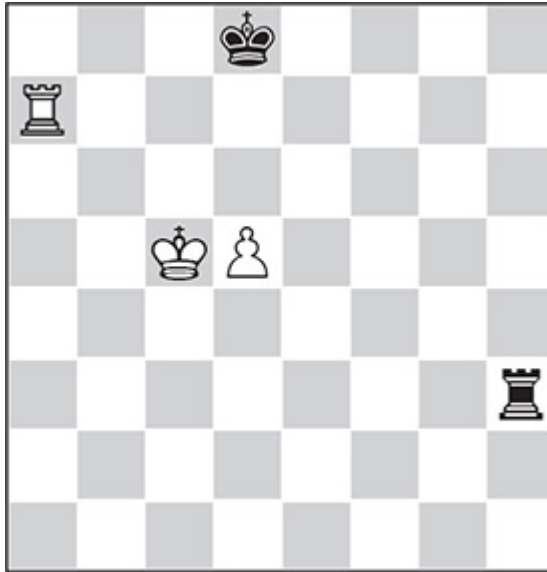
---

1.e4 e5 2. ♘f3 ♘c6 3.c3 ♘f6 4.d4 ♘xe4 5.d5 ♘c5 6.dxc6 ♘xf2+ 7. ♜e2 ♘b6 8. ♜a4  
♘f2 9. ♘g5 f6 10. ♘e3 ♘xe3 11. ♜xe3 ♘xh1 12. ♘bd2 dxc6 13. ♘e2 ♘e6 14. ♜xh1 0-0  
15. ♜d1 ♜e7 16. ♘c4 ♜fd8 17. ♘xe6+ ♜xe6 18. ♜b3 ♜xb3 19.axb3 ♜d5 20.c4 ♜d7  
21. ♜c1 b6 22.b4 ♜ad8 23. ♜c3 f5 24. ♘b3 e4 25. ♘fd4 c5 26.bxc5 bxc5 27. ♘xf5 ♜d3+  
28. ♜xe4 ♜xc3 29.bxc3 ♜e8+ 30. ♜d3 ♜e5 31. ♘e3 ♜f7 32. ♘a5 ♜e8 33. ♘d5 ♜d8  
34. ♜e4 ♜e8+ 35. ♜f4 ♜e2 36. ♜f3 ♜a2 37. ♘c6 a5 38. ♘e5+ ♜e6 39. ♘d3 ♜d6 40. ♘c1  
♜c2 41. ♘e2 a4 42. ♘e3 ♜b2 43. ♘d1 a3 44. ♘c1 ♜b1 0-1

Game 19

Philidor, 1777

---



1... ♖h6 2.d6 ♖h1=

Game 20

**Emmanuel Lasker**

**José Raúl Capablanca**

Havana Wch FIDE 1921 (m/10)

1.d4 d5 2.c4 e6 3.♗c3 ♗f6 4.♕g5 ♕e7 5.e3 0-0 6.♗f3 ♗bd7 7.♖c2 c5 8.♖d1 ♖a5  
 9.♕d3 h6 10.♕h4 cxd4 11.exd4 dxc4 12.♕xc4 ♗b6 13.♕b3 ♕d7 14.0-0 ♖ac8 15.♗e5  
 ♕b5 16.♖fe1 ♗bd5 17.♕xd5 ♗xd5 18.♕xe7 ♗xe7 19.♖b3 ♕c6 20.♗xc6 bxc6  
 21.♖e5 ♖b6 22.♖c2 ♖fd8 23.♗e2 ♖d5 24.♖xd5 cxd5 25.♖d2 ♗f5 26.b3 h5 27.h3 h4  
 28.♖d3 ♖c6 29.♖f1 g6 30.♖b1 ♖b4 31.♖g1 a5 32.♖b2 a4 33.♖d2 ♖xd2 34.♖xd2  
 axb3 35.axb3 ♖b6 36.♖d3 ♖a6 37.g4 hxg3 38.fxg3 ♖a2 39.♗c3 ♖c2 40.♗d1 ♗e7  
 41.♗c3 ♖c1+ 42.♖f2 ♗c6 43.♗d1 ♖b1 44.♖e2 ♖xb3 45.♖e3 ♖b4 46.♗c3 ♗e7  
 47.♗e2 ♗f5+ 48.♖f2 g5 49.g4 ♗d6 50.♗g1 ♗e4+ 51.♖f1 ♖b1+ 52.♖g2 ♖b2+ 53.♖f1  
 ♖f2+ 54.♖e1 ♖a2 55.♖f1 ♖g7 56.♖e3 ♖g6 57.♖d3 f6 58.♖e3 ♖f7 59.♖d3 ♖e7  
 60.♖e3 ♖d6 61.♖d3 ♖f2+ 62.♖e1 ♖g2 63.♖f1 ♖a2 64.♖e3 e5 65.♖d3 exd4 66.♖xd4  
 ♖c5 67.♖d1 d4 68.♖c1+ ♖d5 0-1

Game 21

**Magnus Carlsen**

**2852**

**Hikaru Nakamura**

**2768**

Airthings Masters 2023

1.e4 c5 2.♗f3 d6 3.♕b5+ ♗c6 4.0-0 ♕d7 5.♖e1 ♗f6 6.h3 a6 7.♕f1 g5 8.d4 g4 9.d5  
 gxf3 10.dxc6 ♕xc6 11.♖xf3 ♖g8 12.♗c3 ♖g6 13.♗d5 e5 14.b4 cxb4 15.♗xb4 ♕d7  
 16.c4 ♖c8 17.♖h2 ♕h6 18.♖b1 ♖f8 19.♗d5 ♗xd5 20.♕xh6+ ♖xh6 21.exd5 b5

22.cxb5 axb5 23. ♖xb5 ♖xb5 24. ♜xb5 ♜xa2 25. ♜eb1 ♞g7 26. ♜b8 ♞c2 27. ♜1b7 ♞g6 28. ♜b4 ♞h5 29. ♞xh5 ♜xh5 30. ♜g4+ ♞f6 31. ♜b6 ♜xf2 32. ♜xd6+ ♞e7 33. ♜a6 ♜d2 34. ♜a7+ ♞f6 35. ♜a6+ ♞f5 36. ♜g7 f6 37.d6 ♜g5 38. ♜xg5+ ♞xg5 39. ♞g3 h5 40. ♞f3 h4 41. ♞e3 ♜d4 42. ♜a8 ♜xd6 43. ♜g8+ ♞f5 44. ♜g4 ♜d4 45. ♜g8 ♜a4 46. ♜h8 ♞g6 47. ♜g8+ ♞f7 48. ♜h8 ♞e7 49. ♜h7+ ♞e6 50. ♜h6 ♜b4 51. ♞f3 ♜c4 52. ♞e3 ♜f4 53. ♜h8 ♜c4 54. ♜h6 ♜b4 55. ♞f3 ♞f5 56. ♜h5+ ♞g6 57. ♜h8 f5 58. ♞e3 ♞g5 59. ♜g8+ ♞f6 60. ♜f8+ ♞e6 61. ♜e8+ ♞d6 62. ♜d8+ ♞e7 63. ♜h8 ♜e4+ 64. ♞f3 ♜c4 65. ♜h6 ♞f7 66. ♞e3 ♞g7 67. ♜e6 ♜c3+ 68. ♞d2 ♜c5 69. ♞e3 ♜a5 70. ♞f3 ♜a3+ 71. ♞f2 e4 72. ♜b6 ♜a2+ 73. ♞f1 e3 74. ♜e6 ♜f2+ 75. ♞g1 f4 76. ♜a6 ♞f7 77. ♜b6 ♜a2 78. ♜b1 ♞f6 79. ♞f1 ♜f2+ 80. ♞g1 ♜c2 81. ♞f1 ♞e5 82. ♜b8 ♜f2+ 83. ♞g1 f3 84.gxf3 ♜xf3 85. ♞g2 ♜f2+ 86. ♞g1 ♜f7 87. ♜b2 ♞e4 88. ♞g2 ♞d3 89. ♜b3+ ♞d2 90. ♜b2+ ♞c3 91. ♜a2 ♜g7+ 92. ♞f1 ♜g3 93. ♜a4 ♞d3 94. ♜a3+ ♞e4 95. ♜a8 ♜xh3 96. ♜e8+ ♞f4 97. ♜f8+ ♞g5 98. ♜g8+ ♞f5 99. ♜f8+ ♞e5 100. ♜e8+ ♞d4 101. ♜d8+ ♞c4 102. ♞e2 ♜g3 103. ♜h8 h3 104. ♜h4+ ♞d5 105. ♜h8 ♞e5 106. ♜h7 ♞f5 107. ♜h8 ♞f6 108. ♜h6+ ♞e5 109. ♜h8 ♞d6 110. ♜h6+ ♞e7 111. ♜h8 ♞f7 112. ♜h7+ ♞g8 113. ♜h6 ♞g7 114. ♜h4 ♞f7 115. ♜h7+ ♞e6 116. ♜h8 ♞f5 117. ♜f8+ ♞e4 118. ♜e8+ ♞d4 119. ♜d8+ ♞c3 120. ♜c8+ ♞b4 121. ♜h8 ♞b5 122. ♜h4 ♞c6 123. ♜h8 ♞c5 124. ♜c8+ ♞d5 125. ♜d8+ ♞c6 126. ♜c8+ ♞d7 127. ♜h8 ♞e7 128. ♜h7+ ♞e8 129. ♜h8+ ♞e7 130. ♜h7+ ♞e8 131. ♜h8+ ♞f7 132. ♜h7+ 1/2-1/2

Game 22

Vereslav Eingorn 2560

Alexander Beliavsky 2625

Kyiv ch-URS 1986

1.d4 ♗f6 2. ♗f3 g6 3.c4 ♗g7 4. ♗c3 d5 5. ♞b3 dxc4 6. ♞xc4 0-0 7.e4 ♗g4 8. ♗e3 ♗fd7 9. ♞b3 ♗b6 10. ♜d1 ♗xf3 11.gxf3 e6 12.d5 ♞e7 13.dxe6 fxe6 14. ♗h3 ♜e8 15.f4 ♗c6 16.0-0 ♗a5 17. ♞c2 ♗ac4 18. ♗c1 ♗d6 19. ♗g2 c6 20.a4 a5 21.b3 ♗f7 22. ♗e3 ♗d7 23. ♗e2 ♗f6 24. ♜d2 ♜ad8 25. ♜xd8 ♜xd8 26. ♗b6 ♜a8 27. ♜d1 ♗h6 28. ♞c4 ♗d7 29. ♗e3 e5 30. ♗h3 ♗f8 31. ♗c5 ♞h4 32. ♗e6 ♗xe6 33. ♞xe6 ♜d8 34. ♜xd8+ ♞xd8 35.fxe5 ♗f8 36. ♗xf8 ♞xf8 37.f4 g5 38. ♞f5 gxf4 39.e6 ♞g5+ 40. ♞f2 ♞xf5 41.exf5 ♗d6 42. ♞f3 ♗xf5 43. ♞xf4 ♗h4 44. ♞g5 ♗g2 45. ♞f6 ♗e3 46.h3 ♗d5+ 47. ♞e5 ♞e7 48. ♗g3 ♗e3 49. ♗e4 b5 50. ♗c3 bxa4 51. ♗xa4 ♗d5 52. ♗c5 ♗c7 53.h4 h5 54. ♞f5 ♗d6 55. ♗b7+ ♞e7 56. ♗c5 ♞d6 57. ♗b7+ ♞e7 58. ♗xa5 ♗xe6 59. ♗xc6+ ♞d6 60.b4 ♗g7+ 61. ♞g6 ♗e6 62. ♞f5 ♗g7+ 63. ♞g6 ♗e6 64. ♗a7 ♞d5 65. ♞xh5 ♞c4 66.b5 ♞c5 67. ♞g6 ♞b6 68. ♗c6 ♞xb5 69. ♗d4+ ♗xd4 70. ♞f6 ♗c2 71.h5 ♗e3 72. ♞g5 ♗c4 73.h6 1-0

Game 23

Fabiano Caruana 2721

Viktor Korchnoi 2544

Gibraltar 2011

1.e4 e5 2.♘f3 ♘c6 3.♙b5 a6 4.♙a4 ♘f6 5.d3 d6 6.c3 ♙e7 7.0-0 0-0 8.♚e1 ♘d7 9.♙e3 ♘b6 10.♙b3 ♚h8 11.♘bd2 f5 12.♙xb6 cxb6 13.♙d5 g5 14.h3 g4 15.hxg4 fxg4 16.♘h2 ♙g5 17.♘c4 b5 18.♘e3 ♙xe3 19.♚xe3 ♚f6 20.♚e1 ♘e7 21.f3 ♘d5 22.exd5 ♚g8 23.♚g3 gxf3 24.♚xf3 ♙f5 25.♚f1 ♚g5 26.♚h1 ♚h6 27.♚f2 ♚ag8 28.♚e1 ♚g6 29.♚e3 ♙xd3 30.♚g1 e4 31.♚h3 ♙xd5 32.♚d7 ♚g5 33.g4 ♚h6 34.♚f7 ♚5g7 35.♚xg7 ♚xg7 36.♚d8+ ♚g8 37.♚b6 ♚f6 38.♚xb7 ♚f8 39.♚a7 b4 40.♚h3 ♚g7 41.♚e3 bxc3 42.bxc3 ♚xc3 43.♚h5 d5 44.g5 ♚a1+ 45.♚g2 ♙f1+ 46.♚g3 ♚e5+ 0-1

Game 24

**Gregory Kaidanov** 2420

**Viswanathan Anand** 2500

Moscow 1987

---

1.e4 c6 2.d4 d5 3.exd5 cxd5 4.c4 ♘c6 5.cxd5 ♚xd5 6.♘f3 e6 7.♘c3 ♚d8 8.♙d3 ♘f6 9.0-0 ♙e7 10.a3 0-0 11.♚e1 b6 12.♙c2 ♙a6 13.b4 ♙c4 14.b5 ♘a5 15.♘e5 ♚c8 16.♚e3 ♚c7 17.♚g3 ♚e8 18.♙h6 ♙f8 19.♙g5 ♙e7 20.♙xf6 ♙xf6 21.♙xh7+ ♚xh7 22.♚h5+ ♚g8 23.♘e4 ♙d5 24.♚h3 ♚f8 25.♚xf7+ 1-0

Game 25

**Bobby Fischer**

**Pal Benko**

New York ch-USA 1963

---

1.e4 g6 2.d4 ♙g7 3.♘c3 d6 4.f4 ♘f6 5.♘f3 0-0 6.♙d3 ♙g4 7.h3 ♙xf3 8.♚xf3 ♘c6 9.♙e3 e5 10.dxe5 dxe5 11.f5 gxf5 12.♚xf5 ♘d4 13.♚f2 ♘e8 14.0-0 ♘d6 15.♚g3 ♚h8 16.♚g4 c6 17.♚h5 ♚e8 18.♙xd4 exd4 19.♚f6 ♚g8 20.e5 h6 21.♘e2 1-0

Game 26

**David Howell** 2622

**Ali Bitalzadeh** 2400

Wijk aan Zee 2009

---

1.e4 c5 2.♘f3 e6 3.c3 ♘f6 4.e5 ♘d5 5.d4 cxd4 6.cxd4 d6 7.♙c4 ♘c6 8.0-0 ♙e7 9.exd6 ♚xd6 10.♘c3 ♘xc3 11.bxc3 0-0 12.♚e1 b6 13.♘g5 h6 14.♘e4 ♚c7 15.♚g4 ♚h7 16.♙xh6 ♚xh6 17.♚h3+ ♚g6 18.g4 1-0

Game 27

**Harry Nelson Pillsbury**

**C.O. Wilcox**

New Orleans blindfold sim 1900

---

1.e4 e5 2.♟f3 ♟f6 3.d4 ♟xe4 4.♞d3 d5 5.♟xe5 ♞e7 6.0-0 0-0 7.c4 ♞e6 8.♝c2 f5  
9.cxd5 ♞xd5 10.♟c3 ♟xc3 11.bxc3 g6 12.c4 ♞c6 13.d5 ♞d7 14.♞h6 ♜e8 15.♜ae1  
♞f6 16.f4 ♟a6 17.c5 ♟b4 18.♝b3 ♟xd3 19.♝xd3 c6 20.♟xd7 ♝xd7 21.d6 b6 22.♞g5  
♞xg5 23.fxg5 bxc5 24.♝c4+ ♞f8 25.♝xc5 ♜ad8 26.♜xe8+ ♜xe8 27.♜c1 ♜d8  
28.♜d1 ♜e8 29.h4 ♜e6 30.♝d4 ♞g8 31.♝c4 ♞f8 32.♝xe6 1-0

Game 28

Nicholas Vasquez

Elena Novik

1396

Phoenix Rapid 2021

---

1.e4 c5 2.♟f3 ♟c6 3.♞b5 ♟f6 4.♟c3 e5 5.♞xc6 bxc6 6.♟xe5 ♝e7 7.d4 ♞a6 8.♞e3  
cxd4 9.♞xd4 ♝b4 10.a3 ♝xb2 11.♟d5 ♝b7 12.♜b1 ♝c8 13.♟xf6+ gxf6 14.♟d3 ♞e7  
15.0-0 ♝c7 16.♝f3 0-0-0 17.♞xf6 ♞xf6 18.♝xf6 ♞xd3 19.cxd3 h5 20.♜b3 h4 21.h3  
♜dg8 22.♜fb1 ♜h7 23.♝b2 ♜xg2+ 24.♞xg2 ♜g7+ 25.♝xg7 1-0

Game 29

Elijah Logozar

2055

Alireza Firouzja

2702

Chess.com 2019

---

1.e4 c5 2.♟f3 d6 3.d4 cxd4 4.♟xd4 ♟f6 5.♟c3 a6 6.♞c4 e6 7.♞b3 ♟bd7 8.f4 ♟c5 9.f5  
e5 10.♟de2 ♞e7 11.♟g3 b5 12.♟h5 ♟xb3 13.♟xg7+ ♞d7 14.axb3 ♞b7 15.♟h5 ♟xh5  
16.♝xh5 b4 17.♟a4 f6 18.♝f7 ♞xe4 19.♝e6+ ♞e8 20.♞e3 ♜c8 21.♟b6 ♜xc2  
22.♜xa6 ♜xg2 23.♟d5 ♞xd5 24.♝xd5 ♜xb2 25.0-0 ♝d7 26.♜a7 ♜d2 27.♝xd2 ♜g8+  
28.♞f2 ♝xf5+ 29.♞e1 ♝b1+ 30.♝d1 ♝e4 31.♝e2 f5 32.♜xe7+ ♞xe7 33.♜f3 ♞e6  
34.♝c4+ ♝xc4 35.bxc4 f4 36.♞f2 ♞f5 37.♜b3 ♜b8 38.♞d2 ♜a8 39.♞d3 ♜a2 40.♞b6  
♜xh2 41.♜xb4 ♜h3+ 42.♞c2 ♜h2+ 43.♞b3 f3 44.♞a4 f2 45.♜b2 f1Q 46.♜xh2 ♝xc4+  
47.♞a5 ♝c3+ 48.♞a6 ♝a1+ 49.♞b7 ♝g1 50.♜f2+ ♝xf2 51.♞xf2 ♞e4 0-1

Game 30

José Raúl Capablanca

N.N.

New York 1918

---

1.e4 e5 2.♟f3 ♟c6 3.♟c3 ♟f6 4.♞b5 ♞b4 5.0-0 0-0 6.d3 d6 7.♞g5 ♞g4 8.♟d5 ♟d4  
9.♟xb4 ♟xb5 10.♟d5 ♟d4 11.♝d2 ♝d7 12.♞xf6 ♞xf3 13.♟e7+ ♞h8 14.♞xg7+ ♞xg7  
15.♝g5+ ♞h8 16.♝f6#

Game 31

Bach Ngo

2332

Levy Rozman

2334

1.d4 ♘f6 2. ♘f3 e6 3.c4 ♘b4+ 4. ♘d2 ♚e7 5.g3 ♘xd2+ 6. ♚xd2 ♘c6 7. ♘c3 d5 8. ♘g2 dxc4 9.0-0 0-0 10.e4 ♖d8 11. ♖ad1 ♖b8 12. ♚e3 b5 13. ♖fe1 ♘b4 14. ♖e2 ♘g4 15. ♚d2 ♘f6 16. ♘e5 ♘d7 17. ♘f3 ♘f6 18. ♚g5 h6 19. ♚h4 ♚f8 20.g4 ♘d3 21.g5 ♘h7 22.gxh6 gxh6 23. ♚g3+ ♚g7 24. ♚xc7 ♘d7 25. ♖e3 ♖bc8 26. ♚a5 b4 27. ♘e2 ♘xb2 28. ♖b1 ♘d3 29. ♘e1 ♚h8 30. ♘d3 cxd3 31. ♖xd3 ♖g8 32. ♖g3 ♚f6 33. ♚xb4 ♘g5 34. ♚d2 ♘c6 35. ♚e3 ♘a8 36. ♘f4 ♖c4 37.h4 1-0

Game 32

**Mikkel Antonsen** 2470  
**Kåre Kristensen** 2355

Copenhagen 2015

---

1.d4 d5 2.c4 e6 3. ♘f3 c5 4.cxd5 exd5 5.g3 ♘c6 6. ♘g2 ♘f6 7.0-0 ♘e7 8. ♘c3 0-0 9.b3 ♘e4 10. ♘b2 ♘f6 11.e3 ♘g4 12. ♘e2 ♖e8 13.h3 ♘xf3 14. ♘xf3 cxd4 15.exd4 ♚b6 16.h4 ♖ad8 17. ♚g2 h6 18. ♖e1 ♘e5 19. ♘f4 ♘xf3 20. ♚xf3 ♘e5 21. ♘d5 ♚c6 22. ♖xe4 ♚xd5 23.dxe5 ♚xd1+ 24. ♖xd1 ♖xd1 25. ♖e2 ♖ed8 26. ♘c3 ♖8d3+ 27. ♖e3 h5 28. ♚e2 ♖xe3+ 29. ♚xe3 ♚h7 30. ♚e4 a6 31. ♘d4 ♚g6 32.f4 ♖e1+ 33. ♘e3 f5+ 34.exf6 ♚xf6 35.f5 b5 36.b4 ♖e2 37. ♚f4 ♖xa2 38. ♘d4+ ♚f7 39. ♚g5 a5 40. ♚xh5 0-1

Game 33

**Li Chao** 2703  
**Kevin Goh Wei Ming** 2426

Zhaozhuang Ach tt 2012

---

1.d4 ♘f6 2.c4 g6 3. ♘c3 d5 4. ♘f3 ♘g7 5.cxd5 ♘xd5 6.g3 ♘b6 7. ♘g2 ♘c6 8.e3 0-0 9.0-0 ♖e8 10.d5 ♘e5 11. ♘d4 ♘g4 12.f3 ♘d7 13.f4 ♘g4 14. ♚c2 ♘ec4 15.b3 e5 16.fxe5 ♘xe5 17.h3 ♘d7 18. ♘b2 ♚g5 19. ♘e4 ♚xe3+ 20. ♚f2 ♘xd5 21. ♘c5 c6 22. ♖ad1 ♚xf2+ 23. ♚xf2 ♘c8 24. ♖fe1 ♘f8 25. ♘a6 ♘b4 26. ♘xb4 ♘xb4 27. ♖e2 ♘d7 28. ♘f3 ♘xf3 29. ♖xd7 ♖xe2+ 30. ♚xe2 ♘e1 31. ♘h1 ♖e8+ 32. ♚d1 ♘a5 33.b4 ♘xb4 34.g4 h6 35. ♘f6 ♘a5 36. ♖xb7 ♘d3 37. ♘xc6 ♖e1+ 38. ♚c2 ♘b4+ 39. ♖xb4 ♘xb4 40. ♘d5 ♘c5 41. ♚d3 ♖e3+ 42. ♚c4 ♘b6 43. ♚b5 ♖xh3 44.a4 ♖g3 45.a5 ♘e3 0-1

Game 34

**ZheniaSemyanko** 1757  
**fisensee** 1637

Lichess Standard 2021

---

1.d4 d5 2.c4 c6 3.cxd5 cxd5 4. ♘c3 ♘f6 5. ♘f3 ♘f5 6. ♘f4 e6 7.e3 ♘b4 8. ♚a4+ ♘c6 9. ♘e5 ♘xc3+ 10.bxc3 0-0 11. ♘xc6 bxc6 12. ♘a6 ♚d7 13.0-0 ♘e4 14. ♖fc1 g5 15. ♘g3 h5 16. ♚a5 ♘xg3 17.hxg3 ♖ab8 18.c4 ♖b2 19.cxd5 exd5 20. ♖c5 h4 21.gxh4 gxh4 22. ♚c3 ♖c2 23. ♚b4 ♖xc5 24. ♚xc5 ♖b8 25. ♖c1 ♖b6 26. ♘e2 h3 27.a4 hxg2 28.a5

♖b2 29.♙f3 ♜b5 30.♞xc6 ♞xc6 31.♞xc6 ♙e4 32.♙xe4 dxe4 33.a6 ♜a5 34.♞xg2 f5  
35.♞g3 ♞f8 36.♞f4 ♞e8 37.♞e6+ ♞d7 38.♞e5 ♜xa6 39.♞xf5 ♜a2 40.♞xe4 ♜xf2  
41.♜a5 ♞c7 42.♜xa7+ ♞b6 43.♜a1 ♜f7 44.d5 ♞c5 45.♜c1+ ♞d6 46.♜c6+ ♞d7  
47.♞d4 ♜f1 48.e4 ♜d1+ 49.♞e5 ♞e7 50.d6+ ♞d7 51.♜c7+ ♞d8 52.♞e6 1-0

Game 35

**Hikaru Nakamura** 2775  
**Ian Nepomniachtchi** 2779

Berlin ct 2022

---

1.e4 e5 2.♙f3 ♙f6 3.♙xe5 d6 4.♙f3 ♙xe4 5.d4 d5 6.♙d3 ♙c6 7.0-0 ♙e7 8.c4 ♙b4  
9.♙e2 0-0 10.♙c3 ♙f5 11.a3 ♙xc3 12.bxc3 ♙c6 13.♜e1 ♜e8 14.♜a2 ♙f8 15.cxd5  
♞xd5 16.c4 ♞e4 17.♙f1 ♞g4 18.h3 ♜xe1 19.♞xe1 ♞e4 20.♜e2 ♞d3 21.♜b2 ♞e4  
22.♜e2 ♞d3 23.♜e3 ♞b1 24.d5 ♙e7 25.♙d2 ♞a1 26.♙b3 ♞f6 27.♙d2 ♙g6 28.♙a5  
b6 29.♙c6 ♙d7 30.♙c3 ♞d6 31.♙b4 ♞f6 32.♙c3 ♞d6 33.♙b4 ♞f6 34.♙c3 ½-½

Game 36

**Neal Bruce** 1712  
**Andrew Piotrowski** 1623

Boston 2016

---

1.e4 c5 2.c3 d5 3.exd5 ♞xd5 4.♙f3 ♙c6 5.d4 cxd4 6.cxd4 ♙g4 7.♙e2 ♙xf3 8.♙xf3  
♞xd4

A47

Game 37

**James Canty** 2158  
**Liordis Quesada Vera** 2347

Lichess 2022

---

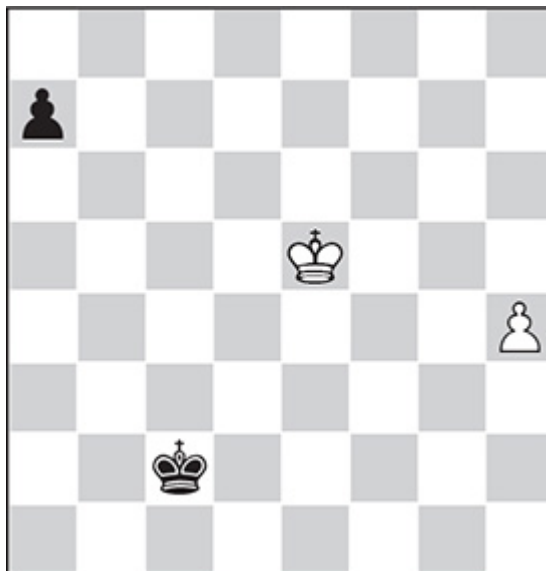
1.♙f3 ♙f6 2.b3 b6 3.♙b2 ♙b7 4.e3 g6 5.d4 ♙g7 6.♙bd2 0-0 7.♙d3 d6 8.♞e2 c5 9.0-0-  
0 cxd4 10.exd4 ♙d5 11.h4 ♙f4 12.♞e3 ♙xd3+ 13.♞xd3 ♙d7 14.h5 ♙f6 15.hxg6 hxg6  
16.♙g5 ♞d7 17.d5 ♞g4 18.♙de4 ♙xd5 19.♙xf6+ ♙xf6 20.♙xf6 exf6 21.♙h7 ♞f4+  
22.♞b1 ♙xg2 23.♞c3 ♞e5 24.♙xf6+ ♞g7 25.♜xd6 ♜fe8 26.♜h7+ 1-0

Game 38

**Jonathan Poe (fictional)**  
**Joshua Waitzkin (as depicted)**

'Searching for Bobby Fischer', 1993

---



1...a5 2.h5 a4 3.h6 a3 4.h7 a2 5.h8♙ a1♙+ -+

Game 39

**Glenn Gaasland**

**Magnus Carlsen**

**2072**

Norway 2001

1.d4 ♘f6 2.c4 e6 3.♘c3 ♘b4 4.♙c2 0-0 5.a3 ♘xc3+ 6.♙xc3 b6 7.♘g5 ♘b7 8.f3 d5  
 9.e3 ♘bd7 10.♘d3 h6 11.♘h4 ♙e8 12.♘g3 ♗c8 13.c5 bxc5 14.dxc5 d4 15.♙xd4 e5  
 16.♙c3 e4 17.c6 exd3 18.♘f2 ♘d5 19.cxd7 ♙xd7 20.♙xd3 ♙e6 21.0-0-0 c5 22.♙c4  
 ♗fd8 23.e4 ♘e3 24.♗xd8+ ♗xd8 25.♙e2 ♙c4+ 0-1

Game 40

**José Raúl Capablanca**

**Miguel Najdorf**

Margate 1939

1.d4 ♘f6 2.c4 e6 3.♘c3 ♘b4 4.♙c2 d5 5.cxd5 ♙xd5 6.♘f3 c5 7.♘d2 ♘xc3 8.♘xc3  
 ♘c6 9.♗d1 0-0 10.a3 cxd4 11.♘xd4 ♘xd4 12.♗xd4 ♙c6 13.e4 e5 14.♗c4 ♙e6 15.♗c5  
 ♘d7 16.♗d5 ♙g6 17.f3 ♘b6 18.♗xe5 ♘e6 19.f4 ♙h6 20.g3 ♘d7 21.♗b5 b6 22.♘e2  
 ♘c5 23.b4 a6 24.♗xb6 ♘b3 25.♗xh6 ♘xc2 26.♗h5 ♘xe4 27.♘a1 f5 28.0-0 ♘d2  
 29.♗f2 ♗fc8 30.♘d4 g6 31.♗h4 ♘e4 32.g4 ♘xf2 33.♙xf2 a5 34.♘c5 axb4 35.axb4  
 ♘b3 36.gxf5 ♗a2 37.fxg6 hxg6 38.♗h3 ♘c4 39.♗e3 ♙f7 40.♙f3 ♘xe2+ 41.♗xe2  
 ♗xe2 42.♙xe2 ♙e6 43.♙f3 ♙f5 44.♙e3 ♗h8 45.♙d4 ♗xh2 46.♙d5 ½-½

Game 41

Kevin Wang 1960  
Ben Johnson 2115

Pittsburgh 2021

---

1.e4 c5 2.♘c3 ♘c6 3.g3 g6 4.♙g2 ♙g7 5.d3 d6 6.f4 e5 7.♘f3 ♘ge7 8.0-0 exf4 9.♙xf4  
0-0 10.♚d2 ♘d4 11.♙h6 ♘xf3+ 12.♚xf3 ♙e6 13.♙xg7 ♚xg7 14.♚af1 ♚b8 15.d4 f6  
16.d5 ♙g4 17.♚f4 ♙d7 18.♘d1 g5 19.♚4f2 ♘g6 20.♘e3 b5 21.♘f5+ ♙xf5 22.♚xf5  
♚b7 23.♙h3 ♚e7 24.♙g2 ♚e8 25.♚f2 ♚ef7 26.h4 h6 27.♚f3 ♘e5 28.♚h5 ♚e7  
29.♚e2 ♘g6 30.♚f2 ♚ef7 31.♙f3 b4 32.♚h1 ♚e7 33.♙h5 ♚ef7 34.♚g2 ♚e7 35.♚5f2  
♚e8 36.♚e2 ♚e5 37.♙g4 ♚xb2 38.♙e6 ♚xe6 39.dxe6 ♚e7 40.h5 ♘f8 41.e5 dxe5  
42.♚ef2 ♚d4 43.♚xf6 ♘xe6 44.♚xe6 1-0

Game 42

Ben Johnson 2100  
Gracy Prasanna 2205

Princeton 2021

---

1.♘f3 ♘c6 2.d4 d6 3.d5 ♘b8 4.e4 ♘f6 5.♙d3 g6 6.h3 ♙g7 7.0-0 0-0 8.c4 ♘bd7 9.♘c3  
♘c5 10.♙c2 a5 11.♙e3 b6 12.♘d4 ♙d7 13.b3 e5 14.♘de2 ♘h5 15.a3 ♘f4 16.♚d2  
♚h4 17.b4 ♘b7 18.♙a4 ♙xa4 19.♘xa4 ♘xe2+ 20.♚xe2 ♚xe4 21.♘c3 ♚h4 22.♘b5  
♚e7 23.♚ac1 axb4 24.axb4 f5 25.f3 ♚fe8 26.♚d2 ♚d7 27.♚fe1 ♘d8 28.♙h6 ♙xh6  
29.♚xh6 ♘f7 30.♚d2 f4 31.♚a1 ♚g7 32.♚c2 c6 33.dxc6 ♚xc6 34.♚d3 ♚g8 35.♚ed1  
♚xa1 36.♚xa1 e4 37.fxe4 ♚xe4 38.♘d4 ♚e8 39.♘f3 ♚e6 40.♚a8+ ♚g7 41.♚a7 h6  
42.♚c7 ♚f5 43.♚xd6 ♚xc4 44.♚e5+ ♚xe5 45.♚xf7+ ♚g8 46.♘xe5 ♚xb4 47.♚f6  
♚e4 48.♘xg6 b5 49.♚xf4 ♚e6 50.♘h4 ♚e1+ 51.♚f1 ♚e4 52.♘f5 ♚h7 53.♚b1 b4  
54.♚b3 ♚g6 55.♘e3 ♚g5 56.♘d5 1-0

Game 43

Tolonen Mikko 2027  
Andrzej Krzywda 2191

Graz 2019

---



1... ♖g4+ 2. ♜f3 ♗h2+ 3. ♜f4?? ♜d4#

Game 44

Boris Kharchenko

2488

Rameshbabu Pragganandhaa2339

Moscow 2016

1.e4 e5 2. ♗f3 ♗c6 3. ♝c4 ♗f6 4. d4 exd4 5.e5 d5 6. ♞b5 ♗e4 7. ♗xd4 ♝d7 8. ♞xc6 bxc6 9.0-0 ♜b8 10. ♗b3 ♝e7 11. ♝e3 a6 12. ♗1d2 ♗xd2 13. ♜xd2 f6 14. ♝d4 fxe5 15. ♝xe5 0-0 16. ♜c3 ♜f7 17. ♜g3 ♜b4 18. ♝xc7 ♜c8 19. ♝e5 ♜g4 20. ♜c3 c5 21.f3 ♜g6 22. ♜a5 ♝d8 23. ♜d2 ♝e6 24. ♜h1 d4 25. ♜f2 ♝d5 26. ♗d2 ♜f5 27. ♝g3 ♝g5 28. ♗e4 ♝e3 29. ♜e1 ♜h5 30. ♗xc5 ♜xf3 31. ♜xf3 ♜xf3 32. ♜f1 ♜xg3 0-1

Game 45

Mikhail Botvinnik

Bobby Fischer

Varna ol 1962

1.c4 g6 2.d4 ♗f6 3. ♗c3 d5 4. ♗f3 ♝g7 5. ♜b3 dxc4 6. ♜xc4 0-0 7.e4 ♝g4 8. ♝e3 ♗fd7 9. ♝e2 ♗c6 10. ♜d1 ♗b6 11. ♜c5 ♜d6 12.h3 ♝xf3 13.gxf3 ♜fd8 14.d5 ♗e5 15. ♗b5 ♜f6 16.f4 ♗ed7 17.e5 ♜xf4 18. ♝xf4 ♗xc5 19. ♗xc7 ♜ac8 20.d6 exd6 21.exd6 ♝xb2 22.0-0 ♗bd7 23. ♜d5 b6 24. ♝f3 ♗e6 25. ♗xe6 fxe6 26. ♜d3 ♗c5 27. ♜e3 e5 28. ♝xe5 ♝xe5 29. ♜xe5 ♗xd6 30. ♜e7 ♜d7 31. ♜xd7 ♗xd7 32. ♝g4 ♜c7 33. ♜e1 ♜f7 34. ♜g2 ♗c5 35. ♜e3 ♜e7 36. ♜f3+ ♜g7 37. ♜c3 ♜e4 38. ♝d1 ♜d4 39. ♝c2 ♜f6 40. ♜f3 ♜g5 41. ♜g3 ♗e4+ 42. ♝xe4 ♜xe4 43. ♜a3 ♜e7 44. ♜f3 ♜c7 45.a4 ♜c5 46. ♜f7 ♜a5 47. ♜xh7 ♜xa4 48.h4+ ♜f5 49. ♜f7+ ♜e5 50. ♜g7 ♜a1 51. ♜f3 b5 52.h5 ♜a3+ 53. ♜g2 gxh5 54. ♜g5+ ♜d6 55. ♜xb5 h4 56.f4 ♜c6 57. ♜b8 h3+ 58. ♜h2 a5 59.f5 ♜c7 60. ♜b5

♖d6 61.f6 ♗e6 62.♜b6+ ♜f7 63.♞a6 ♜g6 64.♞c6 a4 65.♞a6 ♜f7 66.♞c6 ♞d3  
67.♞a6 a3 68.♜g1 1/2-1/2

Game 46

Eric Rosen 2353

Elisabeth Pähtz 2473

Chess.com 2020

---

1.c4 b6 2.d4 ♘b7 3.♙f4 e6 4.♗f3 ♘b4+ 5.♗fd2 f5 6.e3 ♗f6 7.a3 ♘xd2+ 8.♗xd2 0-0  
9.♜c2 d6 10.♙d3 ♗bd7 11.0-0-0 ♜e7 12.♞hg1 e5 13.♙g5 e4 14.♙e2 c5 15.g4 cxd4  
16.exd4 ♞ac8 17.gxf5 d5 18.♙h6 ♞f7 19.♜b1 ♜h8 20.♙g5 dxc4 21.f3 c3 22.bxc3  
♜xa3 23.♗c4 ♜e7 24.♙xf6 ♞xf6 25.fxe4 ♙xe4 26.♙d3 ♙xd3 27.♜xd3 ♜f7 28.♗b2  
b5 29.♜xb5 ♞b6 30.♜a4 ♞cb8 31.♞d2 ♜xf5+ 32.♜a1 ♗f6 33.♜c2 ♜a5+ 34.♜b1  
♞xb2+ 35.♜xb2 ♞xb2+ 36.♞xb2 h5 37.c4 ♜c3 38.♞c1 ♜xd4 39.c5 ♗d5 40.♞bc2  
♜b4+ 41.♜a1 ♜a4+ 42.♜b2 ♗b4 43.c6 ♗xc2 44.♞xc2 ♜b4+ 45.♜a2 ♜a5+ 46.♜b3  
♜c7 47.♜b4 g5 48.♜c5 ♜g7 49.♞d2 ♜b6+ 50.♜d5 ♜d8+ 51.♜e6 ♜xd2 52.c7 ♜c3  
53.♜d7 g4 54.♜c8 h4 55.♜b7 g3 56.h3 ♜xc7+ 57.♜a8 g2 1/2-1/2

# Index of names

(numbers refer to pages)

## A

Aagaard 10, 39, 128-130, 141, 174, 179, 216-217

Aaron 47

Abeln 180

Adams 173, 178

Agdestein 46-47, 149

Alekhine 151

AlphaZero 87, 111, 179, 190, 193

Alter 137

Amanov 52

Anand 11, 47-49, 60-61, 83, 155, 180, 223, 226

Andersson 26, 37-38, 222

Andreikin 149

Antonsen 119, 228

Arkell 74, 78, 116, 178

Ataman 176

## B

Banasik 8, 220

Banzea 202

Bareev 46

Barkley 132

Bartholomew 78-79, 205

Belenkaya 208

Beliavsky 77, 226

Bellin 173

Benjamin 19-20, 220

Benko 84-85, 227

Berg 61, 224

Bhat 72  
Bitalzadeh 85, 227  
Boddy 65-66  
Bondalapati 33, 221  
Botvinnik 25, 52, 96, 190-192, 232  
Boyd 154  
Brady 10, 172, 180  
Brown 20, 62, 103, 144, 198  
Bruce 133-135, 136, 176, 229  
Brunia 91, 181  
Brunson 139  
Bryant 168, 200  
Burgess 178  
Byrne 48-49

## **C**

Canty 135-136, 203, 229  
Capablanca 72-73, 106, 151-152, 177, 183-184, 225, 228, 230  
Carlsen, H 150  
Carlsen, M 35, 46-47, 49, 56, 70, 75, 80, 83, 86, 96, 115, 123, 131,  
139-140, 148-150, 155, 157-158, 163-164, 167, 174, 182, 184,  
193, 217, 221, 225, 230  
Carlsson 76  
Carrey 12  
Caruana 82, 164, 182, 193, 212, 226  
Chabris 107, 142-143, 145-146, 213  
Chapin 180  
Chapman 63-64, 68, 178, 214  
Charbonneau 61  
Chen 138, 158, 214  
Cheng 177  
Chernev 72, 176-177  
Chernin 21, 220  
Chua 45  
Cigan 67

Clear 101-102, 130, 132-136

Coakley 175, 180

Coleman 34

Collins 48-49

Colovic 117

Colvin 105

Cramling 205

Crompton 20, 147

## **D**

Damsky 177

De la Maza 103-106, 108

De la Villa 70, 177

Del Rosario 175

Di Camillo 49, 223

Donaldson 19-20, 22, 24, 31, 48-49, 180, 217, 220

Donner 142

Dvoretzky 70, 74-79

Dylan 80, 140

## **E**

Eagleman 147

Eckert 214

Eingorn 77, 226

Emms 178

Ericsson 9, 144-145, 148-149

Erigaisi 28, 87

Euwe 151

## **F**

Finegold 7, 11, 22, 25-26, 146, 154, 158, 161, 206-207, 217

Finn 22

Firouzja 28, 96, 99-100, 227

Fischer 10, 41, 48-49, 66, 80, 84-85, 96, 138, 144, 163, 172, 180,  
188, 190-192, 223, 227, 232

fisensee 127, 229

Fishbein 75, 81-83  
Flores 30, 178  
Franco 24, 32-33, 221  
Frey 50, 67-68, 223  
Fridman 83, 148-149  
Friedel 186

## **G**

Gaasland 149, 230  
Gallwey 111  
Ganguly 57, 60, 62  
Gareyev 90, 93  
Gawande 125-126, 128, 130  
Gelfand 102, 179  
Geller 191-192  
German11 183-185  
Giannatos 38, 45, 95, 106-107, 142-143, 175, 203  
Giri 84, 193-194, 198-199  
Gladwell 9, 144  
Glickman 116-117  
Goh Wei Ming 117, 120-122, 124, 228  
Gorgiev 42, 222  
Gorovitz 125-126  
Grabinsky 39  
Greco 59, 186  
Gretzky 89  
Grischuk 131  
Gulko 123  
Gustafsson 75, 213

## **H**

Hagen 104-105  
Hamilton 160  
Hammer 46  
Hansen, E 65  
Hansen, S 130

Hardy 142  
Harikrishna 61  
Hartmann 76  
Hawkins 74, 79  
Heisman 139, 176, 206  
Hellman 52, 155-156  
Hellsten 162, 172, 177, 203  
Hemingway 141  
Hendriks 10, 30, 59-60, 64, 68, 132, 173, 178, 186, 214

Hertan 203  
Hickl 176  
Hjartarson 10  
Hort 11  
Howell 40, 43, 84-86, 149, 227  
Huberman 146-147, 214  
Hurtado 173

## I

Ippolito 117, 152-154, 156  
Ivanchuk 89

## J

James 66  
Johnson 61, 160-161, 224, 230-231  
Jordan 66  
Jussupow 181  
Justesen 91

## K

Kahneman 35  
Kaidanov 11, 82-83, 226  
Karpov 25-26, 46, 170, 220  
Kasparov 25-26, 46, 52, 80, 82, 88, 170, 173, 186, 189-190, 220  
Kasparyan 36, 221  
Kaufman 199

Kavutskiy 39, 43, 52, 76, 133, 135, 206  
Kearsley 65, 224  
Khachiyan 43  
Kharchenko 167, 231  
King, A 52, 101-102  
King, D 210  
King, E 186  
Klein 72  
Kobo 39-40, 222  
Koltanowski 89  
Korchnoi 26-27, 46, 82, 226  
Kotov 35  
Kraai 27-30, 51, 87, 162, 173, 206  
Kramaley 198  
Kramnik 75, 129-130  
Krampe 144-145  
Krasenkow 76  
Kristensen 117-122, 124, 214, 228  
Krivec 100  
Krogius 19  
Krush 94  
Krykun 50  
Krzywda 8-9, 11, 41, 164, 220, 231  
Kuljasevic 76, 178

## **L**

Lakdawala 43, 179  
l'Ami 163, 194, 213  
Lane 173  
Lang 21, 214, 220  
Lasker 72-73, 85, 225  
Laughlin 23, 87  
Lawson 173  
Leela 189-190, 192-193, 196  
Leitao 80  
Leitner 103

Le Quang Liem 24  
Li 86  
Li Chao 121-122, 228  
Logozar 44, 98-99, 106, 227  
Lopez 165  
Lübberding 64-65, 224

## **M**

MacIntyre 125-126  
Manvelyan 36, 221  
Markos 173, 179, 212  
McDaniel 20, 144  
Mesotten 43, 203  
Mikko 164, 231  
Mishra 198-199  
Mitkov 58, 223  
Moranda 40, 42-45, 94, 115, 173, 180, 211  
Morphy 69, 103, 175  
Müller 70, 75, 78  
Muzychuk 39-40, 222  
Myers 39

## **N**

Najdorf 90, 151-152, 230  
Nakamura 44, 74-76, 79, 86, 89, 96, 131, 140, 171, 184, 208, 211-212, 217, 225, 229  
Narayanan 87, 96  
Naroditsky 100, 183, 206  
Neely 91, 203  
Neff 93-95  
Nepomniachtchi 131-132, 149, 163-164, 229  
Ngo 113-114, 228  
Niemann 157-158, 207  
Nimzowitsch 176  
Norowitz 211  
Novik 92-93, 227

Nunn 107-108, 178

## **P**

Pähtz 210, 232

Perelshteyn 196

Perrine 203

Peterson 186

Petrosian 27

Philidor 71

Pillsbury 89-90, 163, 227

Piotrowski 133, 229

Poe 138, 230

Polgar, J 10, 41, 56, 94-95, 144, 150, 177, 217

Polgar, L 172, 181

Polgar, So 146, 150

Polgar, Su 146, 150, 181, 202

Ponzetto 173

Portheault 168

Postovsky 46

Praggnanandhaa 157, 166-167, 231

Prasanna 161, 231

Pruess 206

## **Q**

Quesada 136, 229

## **R**

Radic 204, 207

Ramesh 89, 94, 166-167, 172-173, 212

Ravuri 10, 57-59, 223

Razuvaev 46

Regan 161, 177, 179

Rembrandt 80

Renoir 80

Resika, N 80

Resika, P 80

Roberts 87  
Robson 44  
Roediger 20, 144  
Rosen 188, 205-206, 210, 232  
Rowson 66-67, 125, 139, 156, 178  
Rozman 10, 111-115, 140, 207-208, 228  
Rubinstein 72

## **S**

Sadler 73, 177, 179, 194, 196  
Sarin 96  
Schrantz 206  
Schut 126-127, 154, 181, 195  
Seger 157  
Seinfeld 130  
Seirawan 206  
Sethuraman 167  
Shah 87  
Shahade, G 28, 60, 63-64, 67, 85-86, 98, 201  
Shahade, J 28, 180

Shankland 34, 44, 141-143, 177, 199  
Shereshevsky 71-73, 79, 172, 177  
Shirov 36-38, 78, 221-222  
Short 173  
Shridhar 223  
Sielecki 163, 202  
Silman 70-71, 77-79, 124, 172, 176-177  
Smerdon 70, 155  
Smith, A 78, 104, 108, 178, 192  
Smith, C 52, 98  
Smyslov 46, 72, 181, 191, 196  
Sneed 100, 123  
So 84, 178, 198  
Socko 41  
Solon 18, 23-24, 162, 196

Sosonko 180  
Spassky 10, 196  
Sreekumar 51  
Sridhar 47-48  
Stallings 180  
Stean 177  
Stjerneanis 50, 223  
Stockfish 73, 111, 157, 189-190, 192-193  
Studer 30, 74, 212-213, 215  
Supi 35, 221  
Svidler 170, 172, 199

## **T**

Tal 103, 177, 191, 217  
Tang 21  
Tarrasch 139, 216  
Terekhov 181  
Tesch-Romer 144-145  
Thomas 22, 58-59, 165  
Tian 85  
Tikkanen 104-105, 107-108  
Timman 173, 178  
Tomic 206  
Topalov 37-38, 194, 221  
Toth 32-33, 69, 202, 205, 212  
Trent 28

## **V**

Van der Velde 199  
Van Wijgerden 91, 181  
Vasquez 92-93, 184, 227  
Volokitin 39

## **W**

Waitzkin 25, 138, 230  
Wang 160, 230

Waters 172  
Watson 146  
Watts 66  
Weeramantry 86  
Weteschnik 45  
Wilcox 90, 227  
Wilder 122  
Williams 202, 208  
Wilson 81  
Winter 96  
Wolff 175, 193  
Wüllenweber 186  
Wurzburg 43, 223

## **Y**

Yermolinsky 11, 28, 46  
Yoo, C 94-95, 106  
Yoo, Y 106

## **Z**

Zaitsev 160  
Zander 151  
ZheniaSemyanko 127, 229  
Zinn 22, 214

# Acknowledgements

First of all, I would like to thank all of the guests who have ever appeared on *Perpetual Chess*. The podcast could not exist without the generosity of so many chess enthusiasts who have shared their stories and perspectives. It is a testament to the curiosity and wisdom of the chess community, that we never run out of stories to tell and topics to discuss.

I would also like to thank a few friends who helped get *Perpetual Chess* off the ground in its tentative early days. Greg Shahade, Jan Gustafsson, Jennifer Shahade, and Mike Klein provided early encouragement and help in helping me find guests while the podcast gained traction.

I would also like to acknowledge some of the great minds who have helped shape my thinking about chess improvement. With so much chess information to sift through, here are a few of the people whose insights about the challenges of chess improvement I have learned the most from, whether from consuming their books/videos or from personal interactions: Jacob Aagaard, Axel Bachmann, Christopher Chabris, John Donaldson, Ben Finegold, Willy Hendriks, Jesse Kraai, Wojciech Moranda, Jonathan Rowson, Greg Shahade, Axel Smith, and Nate Solon.

Marko Bulatovic deserves his own paragraph for reading a draft of this book on short notice and providing quick and helpful feedback as the deadline for the book approached. Thank you, Marko!

Thanks to Ben Finegold for regaling us with stories, and for writing the Foreword – it's all about the Benjamins!

Thanks to the following people for sharing their thoughts on various chapters: Han Schut, Nate Solon, Wojciech Moranda, Martin Justesen, Benjamin Portheault, Christopher Chabris, Todd Bryant and Alex King.

Thanks to those who submitted positions and materials and answered background questions for the book to liven up the prose: Andrzej Krzywda, Kåre Kristensen, Nicholas Vasquez, JJ Lang, John Donaldson, Courtney Frey, Hans Henning, Elijah Logozar, Alex Yermolinsky, Sal Matera, Michael Franco, James Canty, Neal Bruce, Wojciech Moranda, Han Schut, Jon Edwards, John Hartmann, and Christof Sielecki.

Thanks to my original and forever editor, Ramona Johnson (Mom), and to Curt Johnson (Dad) for his unwavering support. While I am at it, I should thank my sister, Jess, who always encouraged me to write something.

Most of all, thank you to Katie for always being there and to Henry and Margot for the daily inspiration and laughs.

# Bibliography

## Books

- Aagaard, J.: *Grandmaster Preparation: Positional Play*, Quality Chess (2013)
- Agdestein, S.: *How Magnus Carlsen Became the Youngest Grandmaster in the World*, New in Chess (2013)
- Anand, V.: *Mind Master: Winning Lessons from a Chess Champion's Life*, Hachette India (2022)
- Botvinnik, M. and Garry, S.: *One Hundred Selected Games*, Dover (1960)
- Brady, F.: *Endgame: Bobby Fischer's Remarkable Rise and Fall*, Crown (2011)
- Brady, F.: *Profile of a Prodigy*, Dover (1989)
- Brown, P., Roediger, H., and McDaniel, M.: *Make it Stick: The Science of Successful Learning*, Belknap Press (2014)
- Clear, J.: *Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones*, Avery (2018)
- Chernev, I.: *Capablanca's Best Chess Endings: 60 Complete Games*, Dover (1982)
- De la Maza, M.: *Rapid Chess Improvement*, Everyman Chess (2011)
- Donaldson, J.: *Bobby Fischer and his World*, Silman-James Press (2020)
- Dvoretsky, M. and Müller, K.: *Dvoretsky's Endgame Manual*, Russell Enterprises, Inc. (2020)
- Eagleman, D.: *Livewired: The Inside Story of the Ever-Changing Brain*, Pantheon (2020)
- Flores Rios, M.: *Chess Structures: A Grandmaster Guide*, Quality Chess (2015)
- Gallwey, T.: *The Inner Game of Tennis: The Classic Guide to the Mental Side of Peak Performance*, Random House (2012)

Gawande, A.: *The Checklist Manifesto: How to Get Things Right*, Picador (2011)

Gladwell, M.: *Outliers: The Story of Success*, Little, Brown and Company (2008)

Hawkins, J.: *Amateur to IM: Proven Ideas and Training Methods*, Mongoose Press (2012)

Hearst, E. and Knott, J.: *Blindfold Chess: History, Psychology, Techniques, Champions, World Records, and Important Games*, McFarland (2013)

Heisman, D.: *A Guide to Chess Improvement: The Best of Novice Nook*, Gambit Publications (2011)

Hendriks, W.: *Move First, Think Later*, New in Chess (2012)

Hendriks, W.: *On the Origin of Good Moves: A Skeptic's Guide at Getting Better at Chess*, New in Chess (2020)

Hymer, B. and Wells, P.: *Chess Improvement: It's All in the Mindset*, Crown House Publishing (2020)

Kahneman, D.: *Thinking, Fast and Slow*, Farrar, Straus and Giroux (2013)

Kasparov, G.: *Kasparov on Fischer: My Great Predecessors Part IV*, Everyman Chess (2020)

Kasparov, G.: *Garry Kasparov on My Great Predecessors Part II*, Everyman Chess (2020)

Korchnoi, V.: *Chess is My Life*, Edition Olms (2004)

Krogius, N.: *Psychology in Chess*, RHM Press (1976)

Najdorf, L.: *Najdorf x Najdorf*, Russell Enterprises, Inc. (2016)

Plisetsky, D. and Voronkov, S.: *Russians vs. Fischer*, Everyman Chess (2005)

Polgar, J.: *How I Beat Fischer's Record*, Quality Chess (2012)

Polgar, L.: *Chess: 5334 Problems, Combinations and Games*, Black Dog & Leventhal (2013)

Pope, J.: *Harry Nelson Pillsbury American Chess Champion*, Ann Arbor (1996)

Rowson, J.: *The Seven Deadly Chess Sins*, Gambit Publications (2001)

Rowson, J.: *Chess for Zebras*, Gambit Publications (2003)

Sadler, M. and Regan, N.: *Game Changer*, New in Chess (2019)

- Shirov, A.: *Fire on Board: Shirov's Best Games Part 1*, Everyman Chess (2012)
- Shirov, A.: *Fire on Board: Shirov's Best Games Part 2*, Everyman Chess (2012)
- Silman, J.: *Silman's Complete Endgame Course: From Beginner to Master*, Siles Press (2006)
- Smith, A.: *Pump Up Your Rating*, Quality Chess (2013)
- Smith, A. and Tikkanen, H.: *The Woodpecker Method*, Quality Chess (2019)
- Waitzkin, F.: *Mortal Games*, Putnam Adult (1993)
- Van Wijgerden, C. and Friesen, B.: *Learning Chess - Workbook Step 2 Thinking Ahead*, Cor van Wijgerden (2013)
- Yermolinsky, A.: *The Road to Chess Improvement*, Gambit Publications (1999)
- Zander, R. and Zander, B.: *The Art of Possibility: Transforming Professional and Personal Life*, Penguin Books (2002)

### **Periodicals/articles**

- Basso, J., McHale, A., Ende, V., Oberlin, D., and Suzuki, W.: *Brief, daily meditation enhances attention, memory, mood, and emotional regulation in non-experienced meditators*, Behavioral Brain Research (2019)
- Clear, J.: *How to Declutter Your Mind and Unleash Your Willpower by Using Bright-Line Rules*, JamesClear.com
- Colovic, A.: *Rating Is The Enemy*, AlexColovic.com (2023)
- Coughlan, E., Williams, M., McRobert, A., and Ford, P.: *How Experts Practice: A Novel Test of Deliberate Practice Theory*, Journal of Experimental Psychology: Learning, Memory, and Cognition (2014)
- Crompton, A.: *How To Learn Chess As An Adult (or, how I went from 300 to 1500 ELO in 9 months)*, AlexCrompton.com (2021)
- Donner, Y. and Hardy, J.: *Piecewise power laws in individual learning curves*, Psychonomic Bulletin & Review (2015)
- Ericsson, K., Krampe, R., and Tesch-Romer, C.: *The Role of Deliberate Practice in the Acquisition of Expert Performance*, Psychological Review (1993)

Justesen, M.: *The Botvinnik Method For Chess Improvement*, SayChess.substack.com (2023)

Mandolesi, L., Polverino, A., Montuori, S., Foti, F., Ferraioli, G., Sorrentino, P., and Sorrentino, G.: *Effects of Physical Exercise on Cognitive Functioning and Wellbeing: Biological and Psychological Benefits*, Frontiers in Psychology (2018)

Müller, K.: *The old riddle of Botvinnik vs Fischer*, ChessBase.com (2020)

Park, D. and Bischof, G.: *The aging mind: neuroplasticity in response to cognitive training*, Dialogues in Clinical Neuroscience (2013)

Schut, H.: *Developing new Skills and Habits using Root Cause Analysis*, Chess.com (2023)

Shah, S.: *Grandmaster at the age of 36 – Kevin Goh Wei Ming*, ChessBase.com (2020)

Studer, N.: *How To Analyze Your Own Chess Game: Part 1*, NextLevelChess.blog

Voigt, M.: *The Elo ratings: Inflation or Deflation?*, ChessBase.com (2021)

Winter, E.: *Chess Notes: Fast Chess*, ChessHistory.com

Winter, E.: *Chess Notes: Vassily Smyslov (1921-2010)*, ChessHistory.com

## **YouTube/podcasts/film**

Bruce, N. and Kavutskiy, K.: *How to Find Time & Motivation as an Adult Chess Improver | Dojo Talks Habits feat. Neal Bruce*, ChessDojo (2021)

Finegold, B. and Altucher, J.: *Analyzing Kasparov vs Karpov 1991 with GM Ben Finegold and NM James Altucher*, GMBenjaminFinegold (2022)

Fridman, L. and Carlsen, M.: *Magnus Carlsen: Greatest Chess Player of All Time | Lex Fridman Podcast #315*, Lex Fridman (2022)

Huberman, A.: *How to Focus to Change Your Brain | Huberman Lab Podcast #6*, Andrew Huberman (2021)

Huberman, A.: *Using Failures, Movement & Balance to Learn Faster* | *Huberman Lab Podcast #7*, Andrew Huberman (2021)

Kasparov, G.: *Season 1. Episode 10. Botvinnik's School of Chess.*, Kasparovchess (2021)

Kauffman, A.: *Inside the Training Regimen of Abhimanyu Mishra*, Chessable.com (2021)

Kraai, J., Kavutskiy, K., and Pruess, D.: *The Best Chess Puzzle Books Ever* | *Dojo Talks*, ChessDojo (2023)

Neff, E.: *How to Develop Blindfold Chess Skill*, Chess House (2018)

Rensch, D., Canty, J., Hambleton, A., and Naroditsky, D.: *\$1M CGC: Hikaru v. So | Giri v. Nihal - Chess.com Global Championship Semifinal* | *Presented by Brave*, Chess.com (2022)

Rozman, L.: *Winning My Tournament?!*, GothamChess (2022)

Rozman, L.: *I Am Retiring From Chess.*, GothamChess (2022)

Shah, S. and Müller, K.: *The greatest endgame expert of our time - GM + Dr. Karsten Mueller*, ChessBase India (2018)

Shah, S. and Narayanan, S.: *The man who saw the talent in Arjun Erigaisi before everyone else - GM Srinath Narayanan*, ChessBase India (2022)

Svidler, P.: *Peter Svidler Q&A - September 17, 2016*, chess24 (2016)

Zaillian, S.: *Searching for Bobby Fischer*, Paramount Pictures (1993)

## **Courses**

De la Villa, J.: *100 Endgames You Must Know*, Chessable (2017)

Howell, D.: *Winning Grandmaster Methods: How I Reached 2700*, GingerGM

Kramnik, V.: *Thinking in Chess, A How to Guide*, Chessable (2021)

Studer, N.: *Next Level Training*, NextLevelChess

## About the author



Ben Johnson is the host of the *Perpetual Chess Podcast*. *Perpetual Chess* is one of the longest-running and most popular chess podcasts in the world, with over five million episodes downloaded in over one hundred countries. As the host and founder of the *Perpetual Chess Podcast*, Ben has interviewed many of the world's top trainers, players, and content creators, including grandmasters Viswanathan Anand, Hikaru Nakamura, and Judit Polgar.

Ben has also reviewed more than thirty chess books on the podcast and founded the popular *Adult Improver Series*, which interviews accomplished amateurs about their approaches to chess improvement. Ben also hosts the *How to Chess* podcast in collaboration with Chessable.com.

As a player, Ben earned the title of USCF National Master in 1995 and still competes actively. Before founding *Perpetual Chess*, Ben was a scholastic chess teacher, and prior to that, he was a professional poker player for seven years. Ben graduated from Pomona College in 1999, and lives in New Jersey with his wife and two children.

## STUDY ADVICE & BEAUTIFUL STORIES

In a world awash in educational chess content, knowing how to study the game most effectively can be challenging.

As the *Perpetual Chess Podcast* host, USCF Master Ben Johnson has spent hundreds of hours talking chess with many of the world's top players and most accomplished trainers. In the popular *Adult Improver Series*, he has spoken with dozens of passionate amateurs who have elevated their games significantly while pursuing chess as a hobby.

Guests like former World Champion Viswanathan Anand and YouTube stars IM Levy Rozman and GM Hikaru Nakamura shared their insights and told memorable stories. And Ben has learned just as much from the many dedicated amateurs who applied their considerable professional (non-chess) experience to their chess learning.

In *Perpetual Chess Improvement*, Ben looks for common ground and shared principles in all chess advice given on the podcast. The book will show you:

- How to approach and study different aspects of the game, including openings, endgames, tactics, tournament games, and speed chess.

- How to find a chess coach and a like-minded chess community.
- How to properly utilize all the powerful chess study tools available.

The guests shared a wealth of beautiful stories and chess study advice on the *Perpetual Chess Podcast*. This book compiles the highlights and will help you make a holistic plan for your chess studies. Instructive chess positions illustrate the topics discussed.



**Ben Johnson** is a USCF Master and an accomplished chess coach. In 2016, he started the *Perpetual Chess Podcast*, the most successful chess podcast, with over five million downloads and streams in over a hundred different countries – and counting. Ben grew up in Philadelphia and lives in New Jersey with his family. Aside from his work in the chess world, he has worked as a professional poker player and a stock trader.



GAMES/CHESS \$24.95 / €24,95

**NEW IN CHESS**

WWW.NEWINCHESS.COM