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Preface David Howell

The original idea behind *Grind Like a Grandmaster* was first sparked in 2021 when Magnus joked about my love of 'old man chess'. By that time I had moved to Norway and – in between stints as a commentator – I was still actively competing in tournaments.

At the Grand Swiss that year, I played a 142-move game against GM Arturs Neiksans. 8 hours of grim defending, three scoresheets, almost a missed dinner, all for the sake of half a point. Yet I felt on top of the world. That night, I was so high on adrenaline that I could barely sleep. It is moments like these that remind me of the beauty and infinite nature of chess. It truly is a sport, and pushing oneself (and one's opponent!) to the limit – both mentally and physically – can be exhilarating in its own way.

Of course, despite Magnus' jokes, there is some method behind the madness. I realised from a young age that there are different approaches to chess. A game can be won in various styles. A quick swashbuckling attack full of sacrifices may appeal to some, but a long endgame grind can lead to the same result. Arguably, while one approach is more spectacular and may ensure that games end quicker, the other approach comes with less risk attached.

This early epiphany led to many memorable marathon games, some of which are included in this book. Suddenly the opening and middlegame felt easier to play, knowing that I would be able to fall back on my endgame skills if necessary. My 236-move draw against Harikrishna (so near yet so far from the 269-move world record!), my 129-move clutch victory against Ruifeng Li in St.Louis to win first prize in a strong round-robin in 2017, it is games like these that I will remember at the end of my career. If only tournaments were decided by the number of moves played!

Sometimes, when it appears that the opponent has answers for everything, it can be rewarding to ask new and unusual questions. This is how Magnus eventually defeated Ian Nepomniachtchi in their 2021 World Championship match. Game 6, the famous and

decisive 136-move battle that broke the challenger's resistance, is a case in point. It is not by luck that Magnus was able to withstand the tension better than his opponent. I will confess that receiving a text from Magnus afterwards saying, 'This one was for you', was truly satisfying.

A few words about *Grind Like a Grandmaster* (or *GLG* as we affectionately call it) before you get started. The goal of this book is, of course, to help your game. While 'old man chess' might be a phrase that we use fondly and jovially, we genuinely believe that patience is a virtue. By getting into the mindset of grinding out long endgames, we hope you will be able to add an extra string to your bow and outfox your opponents when they are tiring. These opponents may begin to hate you, but results are ultimately the most important thing in chess! By basing the book on our own games and experiences, we hope to give some bonus insight into other facets of how chess players think.

I would like to thank a few people for helping to make *GLG* a reality. Firstly, a nod to grandmasters Boris Gelfand and Keith Arkell for inspiring me in the art of the endgame grind. I would like to thank Sir Andy Murray for making me sit through hours upon hours of long tennis matches and giving me the time to wonder whether outlasting one's opponent was an equally viable strategy in chess.

Also an honourable mention to everyone at Chessable and New In Chess for their patience in allowing two busy and disorganised chess professionals like Magnus and myself to pursue our passion project. It has been quite the journey! Last but not least, my undying gratitude to CP and AH for their unwavering support.

David Howell, Oslo, July 2023

Preface Magnus Carlsen

Ever since our first game in 2002, where David held a draw against me from a difficult position, I have been aware of his love for the endgame. There is no-one I know who loves a long endgame, a good grind, either to win or save a draw, more than David Howell. And there is no-one better to explain these strategies than him.

I hope you will discover the joy of playing endgames within these pages. Nothing quite compares to the thrill of pressing a minute advantage and converting it into victory. The excitement of outmanoeuvring and outlasting your opponent. The realisation that – although your first punch may not have landed – there is no need to despair. Try, try, and try again. You will very often succeed.

I'm also confident that you will learn something from this book. If we have done our job right, it will help you to master the art of the endgame grind and the mindset required to squeeze out those extra points. Either way, no matter your level, I hope you will feel inspired as we guide you through some of our most memorable games.

Magnus Carlsen, Oslo, July 2023

What is a Grind?

Chess is a very difficult game and, while it's generally acknowledged that all games are drawn with perfect play, it's also true that a lot can happen and does happen.

In a leveled game, after the opening phase and the twists and turns of the middlegame, very often we will reach an endgame where we could be slightly better or worse, or perhaps it's a draw.

That moment is the starting point of this course, the beginning of the grinding phase. Then, our task will be to squeeze a win out of that drawn position or salvage half a point from a lost one.

In this course, we are going to focus on grinding wins. We will provide you with tools to make your opponent's life as difficult and as boring as possible.

It's important to note that it's not necessarily about the evaluation and concrete variations, but also about the process and the mindset. Very often, as you will see in the games and the puzzles, there is no magic solution to win the game. Instead, the position requires you to find a way to keep the game alive or to maximize your pieces. You'll hear us say 'don't rush!' a thousand times. Be patient. Be confident. Be a grinder.

Is this an endgame course?

Mostly, but... it's a lot more than that! We will discuss different parts of the game and we hope to instill in you our love for grinding positions by sharing our own experiences on the field. Both of us are accomplished grinders and particularly Magnus has built a quite successful career on long grinds. We will see some of the most memorable ones in the following lessons.

An experienced grinder finds these victories especially rewarding, as a well-deserved gift rather than a working day's wage. We'd love you to enjoy this game selection as much as we do and to learn valuable insights from our analysis.

The Grind in action



This position comes from Game 6 in the 2013 World Championship match in Chennai between Viswanathan Anand and the young phenom, Magnus Carlsen. In his youth and in his early years dominating the highest level of elite chess, Carlsen was a grinder through and through. After drawing first blood in the previous round, he struck again with the black pieces in paradigmatic grinding fashion.

Throughout this book, David and Magnus will go in-depth into many of their favorite grinds, but the purpose of this example is to take onboard what a grind looks like and feels like by looking at some of the key moments chronologically, almost as if watching a movie on fast-forward.

So, all aboard the grind-train! Magnus will be your conductor.

In this position, Vishy went **23. \(\vec{\psi}\) 4** which eyes some squares in Black's territory and seems like a more aggressive post, but it would have been a better idea not to allow the doubling of his central pawns.

After **23... 2xe3 24.fxe3** Black has something to play against, a nagging long-term edge. Is Black winning? Absolutely not. However, oftentimes after such favourable simplifications, we find ourselves in a position where we can start the grind!

We now go forward several moves.



28... **警b7**

Black has clarified the central structure by gaining space with ...c5, ...c4, and has traded off one pair of rooks. The latter is a common way to reduce the opponent's counterplay while you proceed with your own plans. Furthermore, with the text move, Magnus has put indirect pressure on e4 (important in some lines) while restricting the white rook's entry on the a-file. Although the engine evaluation is still roughly balanced, Black has clearly improved his position.

After ...exd4, White had to recapture with the rook, leaving his e-pawns doubled, isolated, and ripe for the picking.

Ten moves later, the following position arose.



Magnus is going a pawn up. Still a lot of work to be done, but he has effectively converted a small positional gain into a small material gain.

39. wxd6 xe3 40. xe7 xe7 xe7 41. xe7 42. xe6 f6 43. h4 xe7 44. h5



Vishy has managed to maintain an active rook to compensate for the material deficit, and has attempted to spice things up by breaking up Black's pawn structure. This was a critical moment in which Magnus made the correct concrete decision.

44...gxh5

Magnus correctly captures this pawn immediately, giving the king a direct path up the board, before White's king can put too much pressure on the weak pawns. Still far from winning, and maybe Vishy overestimated his drawing chances around this moment.

The position on move 57.



57...**∲**f4

Magnus could have kept the pawn with 57...\$f6; however he would have still needed to find an active plan. The idea he went for in the game, while objectively drawn, is incredibly difficult to face. Magnus sacrifices his final queenside pawn in order to fully activate his rook and king and ultimately create a far-advanced passed f-pawn, which should make life very difficult for White. Sometimes you have to take risks!





62...f3 0-1

As is so often the case when your opponent gets battle-weary, after making the most logical move on the board, 62.c4, now the game is decided since the f-pawn is faster, and no side-checks to the black king are available.

An endgame masterclass for the history books, and a textbook example of how to turn a draw into a win by technical and practical means.

Now that you have a sense for the grind, let's dive into the book and hear what Magnus and David have to say about it!

Enjoy!

Glossary of the Grind

Grind (noun): Wearing out an opponent, often in an endgame, by accumulating and exploiting small advantages, usually in an advantageous position (though there are exceptions)

There have been way too few grinds in my games recently. They are very satisfying when they work – **Magnus**

Grinder (noun): The player who carries out the grind.

One of my heroes as a grinder is the great Boris Gelfand – **David**

This is like a grinder's dream from the opening; a solid opening against a slightly lower-rated opponent. Solid opening, equalize, and gain these slight, incremental improvements until your opponent gives in – **Magnus**

Grindee (noun): The player on the receiving end of the grind.

Here you (Magnus) were the grindee – you were getting attacked. You were on the defensive, at least – **David**

Grindy (adjective): Of or relating to the grind.

Some of the grindy type of players; they're not necessarily that young. They use their experience to keep the game going to find some avenues – **David**

Grinding (verb): The act of carrying out the grind.

Seasoned FIDE Master playing against some tenacious kid, who is firstly making a lot of positional mistakes, then starts grinding him in an ending... sounds awful – **Magnus**

Grinding (adjective): Referring to general characteristics of the grind.

The grinding phase is when you're trying to get an extra half-point; trying to win a drawn position, or draw a lost position – **Magnus**

Grinding out (verb): The act of grinding with a view toward the final result.

I hope you've picked up some of the points from our love of grinding out long games – **Magnus**

Your opponents are gonna be p##### at you, trying to grind out these long endgames when there are places where they would rather be – **Magnus**

Grinding down (verb): The act of grinding with specific reference to the helpless grindee.

That's one way to play against other grinders; grind them down! They often are uncomfortable when they're on the wrong side of things – **David**

He (Gelfand) would have tortured me. He would have ground me down for sure – **David**

*I also ground him (*Harikrishna) down in an endgame there, but that line is essentially a draw – *Magnus*

CHAPTER 1

Legendary endgame grinders

Introduction

Magnus Carlsen is clearly in a class of his own, but it's true that he took some inspiration from some of his great grinding predecessors. Anatoly Karpov and Ulf Andersson are legendary grinders and Magnus studied their games to become a grinding master, though he also figured out a lot of stuff on his own. For David, Boris Gelfand was one of the grinding models in his youth.

In this chapter, we will see David on the receiving end of a grind. Gelfand imposed his experience on the young grindee/wannabe grinder. Magnus summarizes the stages of a grind: 'at first, there are ten moves enough for a draw; then, there are three; then, there's only one.' That's exactly what Gelfand put David through until there wasn't even one drawing chance and Gelfand flawlessly executed the finish.

In the end, the engines will show that White could have held the endgame but made a final mistake instead. That's not the point: mistakes don't usually happen in a vacuum. Gelfand played a lot of strong moves, getting small victories and limiting his opponent's choice by posing practical problems until poor David cracked under pressure. Enjoy this model game and learn from the legends to embark on your journey to become a future grinder!

Historical Archetype



24... \(\beta\) xc1 25. \(\phi\) xc1

It's important to know your classics, kids. This position comes from **Cohn-Rubinstein, St Petersburg 1909**. Akiba Rubinstein is one of the most celebrated endgame players of all time. He was especially dominant when it came to rook endgames, which are notoriously complex. There, his mastery was unparalleled.

However in a stroke of irony, this position features an immediate exchange of the remaining pair of rooks in order to reach a king and pawn endgame which is completely winning for Black. You can be sure Rubinstein had worked it all out before exchanging the last pair of pieces, as doing so is extremely committal – especially when only pawns remain on the board.



The arrows indicate Black's follow-up idea. Quite simply, the black king races to the h3-square, followed by advancing his kingside pawns until White is forced to capture a pawn eventually landing on q3, after which the activity of Black's king will be decisive.

It is debatable whether this endgame can be considered a grind, since after the rook exchange, the result is hardly in question and with no superfluous moves. However it is still instructive to see how Rubinstein was ultra-sensitive to recognizing his opportunities when they arose and how he executed his winning plan from start to finish. These are skills that every grinder should possess.

The game finished as follows:

25...\$f6 26.\$d2 \$g5 27.\$e2 \$h4 28.\$f1 \$h3 29.\$g1 e5 30.\$h1 b5 31.\$g1 f5 32.\$h1 g5 33.\$g1 h5 34.\$h1 g4 35.e4 fxe4 36.fxe4 h4 37.\$g1 g3 38.hxg3 hxg3 0-1

So I've played a bad move with 33. 22, which I instantly realised after making it. I anticipated MVL manoeuvring his knight through e7 to f5 or d5. But what he played was much stronger.

33...⊘b4



Magnus: This move was extremely unpleasant to face, also because my clock was starting to run low. Wherever I go, my pieces are getting attacked. The bishops are currently really nice on their adjacent diagonals, but will soon come under attack.

34. Id2 公d5 35. Id3

Magnus: As I've said before, trading dark-squared bishops, like with 35. ≜d4?, is not an option. I had about three minutes left on the clock at this point, but I do think I found the right defensive idea with 35. ₫d3.

35...6)xe3+ 36.\(\bar{2}\)xe3 \(\bar{2}\)d4 37.\(\bar{2}\)d3 e5



Magnus: With his pawn already on h5, it becomes especially hard for Black to prevent me from playing h4. Putting the pawns on dark squares with his dark-squared bishop on the board may look weird, but I'm preventing him from creating a passed pawn, which is key. He can move his pawns to f5 and e4, but then what?



Magnus: But he made a brilliant decision here, setting a trap that I fell right into, to my great embarrassment.

39...\$h6 40.f4?

David: Doing nothing and just shuffling your rook along the second rank, like with 40.\(\mathbb{Z}\)c2, seems sufficient for a draw.



analysis diagram

Magnus: It is, and quite easily so. As long as I keep my rook on this rank, he can't do much.

So it seems like the text move, 40.f4, instantly draws. I calculated every line, including his move



40...<u>\$</u>e3,

and figured my defences would always hold up.

- A) 40... b3 41.fxe5 2xe5 42.2f3 and Black hasn't made progress;
- B) 40...f6 41.fxe5 fxe5 42.\(\hat{2}\)f3 \(\bar{2}\)b1 43.\(\bar{2}\)e2 \(\hat{2}\)g7 44.\(\hat{2}\)e4 \(\bar{2}\)b3 45.\(\hat{2}\)f3 gives White a blockade on the light squares.



Magnus: But alas! I caught myself right on time here.

42.gxf4

Magnus: I had originally calculated 42. ■xf7?? and surmised that it allowed me enough pawn exchanges for a draw:



analysis diagram

After another exchange on g3 my pawn on h4 remains weak, but his bishop is of the wrong colour to aid in the promotion of the h-pawn, meaning all I need to do for the draw is go for a mass slaughter on g6. However! He has something better. The position is not a draw.

David: I'm trying to see it. 42... 2b2 and 43... fxg3?

Magnus: That's right. 42...**□**b2 (42...fxg3?? 43.**ଢ**xg3=) 43.**ਫ**f3 fxg3!!



analysis diagram

44. \$\dot{\psi}\$xe3 g2 45. \$\dot{\psi}\$f2 \$\textbf{Z}\$xe2+ and Black wins. So I've fallen right into it.

David: Very cunning by MVL.

Magnus: I caught it (just) in time, thank god. But I didn't have much time left on the clock. I've made several mistakes to get here, and as the game shows, I'll do a lot more wrong.

42...f5

David: So having made such a mistake, is that hard to get back from?

Magnus: No, the position is still a draw. But I started to get unsure here.

43.⊈f3 ≜c1 44. ≜c4



Magnus: I thought I was being clever here, aiming for either g6 or a mating idea on h7.

David: This is a really unusual type of endgame. It's all about tactics, two- or three-move combinations.

Magnus: That's right, and MVL saw this too. That's why he made yet another very clever move.

44...≌c8

If he does someting else entirely like 44... I just play 45. 253 I 346. I just play 45. 253 I 346. I just play 45. 254 I 354 i 355 i

David: It does look like you have counterplay in all of these lines.

Magnus: I missed his last move completely and started to panic. I didn't want to allow the pin after 45. 2d3 \(\begin{align*} \begin{align*}

45. gf7 Ic3+ 46. gg2 gxf4 47. gg8 g5 48. ge6



Magnus: This was all forced, and I thought my last move was brilliant. I calculated the complications and thought I had enough.

48...**∲**g6

Magnus: My calculation went 48...gxh4 49.\(\hat{\mathbb{g}}\)xf5 h3+ 50.\(\hat{\mathbb{g}}\)xh3 \(\bar{\mathbb{Z}}\)g3+ 51.\(\hat{\mathbb{c}}\)h2.



analysis diagram

This looks lethal for White, but Black doesn't seem to have an effective discovery or zugzwang motif: White's rook is defended, and after a waiting move like 51...h4 I play 52.\(\mathbb{Z}\)f7, hitting the bishop.

The rook comes to f1 next, where it's once again defended. That said, Black can still win: 51... \$\documen\$b8!! and White is in zugzwang: 52. \$\bar{\textsup}\$b7 \$\bar{\textsup}\$b3+ 53. \$\bar{\textsup}\$xb8 leaves White without the right bishop, with a simple win for Black. MVL must have missed 51... \$\documen\$b8.

49.₫d5

Magnus: Anyway, the game is far from over here. I hadn't taken the time to relax yet, but I still thought I could make the draw.

49...g4 50. 2xf5+ 2f6 51. 2h7 2e5 52. 2g6





analysis diagram

The black rook is boxed in forever.

His move is much cleverer, allowing no tactics:

52...g3 53.≌a5

I could have taken on h5 here, but I was relucant to allow a check on the second rank with g3 so far advanced.

David: The dark promotion square doesn't help either.

Magnus: I suppose 53. ≜xh5?! Ic2+ 54. Ig1 &b8 55. Ig5 is enough to stop the bishop reaching the diagonal.



analysis diagram

David: It looks scary still.

Magnus: It does. I decided not to go for it. What I did was fine also.

53... Ic4 54. Ia6+ &g7 55. 2xh5 Ixh4



Magnus: And the position remains tricky, even with so little material on the board.

Magnus: 56. 全 f 3?? loses the bishop to 56... 置 h 2+ 57. 空 g 1 全 d 4+ 58. 空 f 1 置 f 2+, for example.

56...∳h7 57.ℤg5 ℤh2+



Magnus: I had about half a minute left here, trying desperately to avoid a rook and bishop vs rook endgame.

58.**⊈**f3

Magnus: To illustrate my previous point: I figured 58.當到 Qd4+59.當了 g2+60.置xg2 置xh5 would be an ending to avoid at all cost, even if it's drawable.

David: So a general question: you're in time trouble against a world-class player, with three legal moves. Are you still calculating, or just trusting your intuition?

Magnus: I was still calculating. And making yet another key mistake, actually.

58...<u>□</u>f2+ 59.🗳g4

Magnus: My plan was actually to go for 59. \$\docume{9}e4\$, which loses to 59.. \$\docume{9}h6 60. \$\bar{\mathbb{Z}}\$xe5 g2.



analysis diagram

So once again I had to rethink on the fly, resulting in the awfullooking 59. \$\displays 34.

59...≜f4

Magnus: I'm really hanging on by a thread here.

60.<u></u>g6



60...\[]f1??

Magnus: He could have won with 60... 全7 here. White's pieces are so clumsy that he can't adequately stop the pawn: 61. 全 4 里 h 2 + 62. 全 4 里 h 1.



analysis diagram

And White has to give up the bishop to avoid ...g3-g2-g1.

His plan with 60... If I looks dangerous for White as well, but it has a tactical flaw.

61.**∲**f5 **≜**g5+

Magnus: I saw this move. He does have more discovered checks, which I also had to calculate.

After 61... 2c7+ my plan was to move up further with 62. 2e6, when 62... 1h1 walks into 63. 2f7!!



analysis diagram

and Black can't take the bishop on account of the perpetual check on g7, g8 and g6.

David: That's beautiful. I don't think I've ever seen this pattern before.

What about 63... 2e5?

Magnus: Then 64. 2e2, covering the check on f1, keeps me out of the woods. The line can continue 64... e1, when Black has to worry about checkmate after 65. g5.



analysis diagram

Magnus: Going back to the position, like I said: I had seen his last move. I can't take the bishop.



62.**ġ**e4

Magnus: 62. \$\div xg5?? leads to a beautiful win for Black: 62...g2 63. \$\bar{\textsf{\pm}}\$ 64. \$\bar{\textsf{\pm}}\$



analysis diagram

This looks drawn after White moves his king and sacrifices his rook, but Black has the brilliant 64...會f7!!. Black wins by walking right into a discovery. White can't play 65.會h6 on account of 65...置f6!! and has no other way to prevent promotion.

Luckily I did defend very well from here.



62... If 4+ 63. Id 3 If 5 64. Id e4

Magnus: Only move.

64...**⊑**f4+

Magnus: One last pretty line: 64...罩a5 65.鸷f3 身h4 66.罩g4 罩xh5 67.鸷g2 with a draw.



analysis diagram

Black's pieces are hilariously stuck.

David: He has to give up the pawn.

Magnus: That said, 66. \$\div g4\$ would be an easier draw anyway.

He can also go for a new queen with 64...g2 65. \$\dispxf5\ g1\$\dispxf66.\$\dispxf5\ but it's a draw.



analysis diagram

The h5-bishop looks loose, but it does control the key g6-square. This means he can't ever attack my rook once it moves to f5. White holds easily.

65.⊈d3 ዿh4 66.⊑e6 g2 67.⊑g6 ⊑f5 68.⊑xg2 ⊑xh5



David: And we've reached the unavoidable \(\mathbb{Z} + \mathbb{L}\) vs \(\mathbb{Z}\) endgame.

Magnus: And we move around a lot. I'm playing quickly to get myself out of time trouble.

69. \$\dig e4 \(\frac{1}{2}\$ f6 70. \$\dig f4 \(\frac{1}{2}\$ g7 71. \$\dig e4 \dig g8 72. \$\bar{\pi}\$ g6 \$\dig f7 73. \$\bar{\pi}\$ a6 \(\frac{1}{2}\$ f6 74. \$\bar{\pi}\$ a8 \$\bar{\pi}\$ h4+ 75. \$\dig f5 \$\bar{\pi}\$ h5+ 76. \$\dig e4 \$\bar{\pi}\$ b5 77. \$\dig f4 \(\frac{1}{2}\$ e5+ 78. \$\dig e4 \(\frac{1}{2}\$ d6 79. \$\bar{\pi}\$ h8 \$\frac{1}{2}\$-\frac{1}{2}\$



Magnus: MVL decided he had had enough. I was already up to two minutes, he was down to six or seven. We still had an Armageddon game coming, so it's understandable. That said, I think you should in principle always play until you reach the 50 moves.

David: I agree. Especially below elite grandmaster level, this is one of the hardest endgames to draw.

Magnus: On top of that, MVL could see from my play that I was doing my best to avoid this ending. If you then reach it, that gives you a psychological advantage. If your opponent enters such an ending confidently, it's a different story.

From my personal experience in blitz games, I think I've won most I + 2 vs I endings when playing with the bishop, and I'm pretty sure I've never lost with the rook either. Rare and perhaps dull as it is, studying theoretical endings improves your overall technique in endgames. It won't win you decisive points, but it's just essential knowledge.

David: There's an English grandmaster out there, Keith Arkell, who has something like 27 out of 27 in $\mathbb{Z} + \mathbb{Q}$ vs \mathbb{Z} endgames. Obviously some of his opponents were lower-rated, but I think there were some grandmasters in there as well.

Magnus: Well done to him. For the other 27: shame on you.

David: Study those theoretical endings! That's the lesson here. See you in the next chapter.