Nick Maatman

The Hidden Laws of Chess

Volume One – Mastering Pawn Structures

Contents

Foreword

Nick and I have known each other for as long as I can remember. Although he is a few years older than me, we started playing chess competitively around the same time and we had many encounters about a decade ago. I still vividly recall the Dutch Youth Championships under 20 in 2013. I was leading the tournament after five rounds with the maximum score, but in the sixth round Nick caught up by defeating me. Eventually he won the event, while I finished second. That one still hurts! Already back then, Nick was good with words since in his winner's speech he consoled me by mentioning that I had played better chess than him.

From those battles across the board, we formed a close friendship. Over the years we spent a lot of time working on chess together, as well as speaking about various other topics. I have always had high regard for Nick's understanding of the game, while perhaps he is lacking some calculation skills to elevate his game to the next level. His playing style being positional in nature, I would often jokingly nickname him as a 'structure-guy', as his priority number one was to keep his structure intact. On the other hand, I have personally been favouring dynamic play instead, often playing with my pawn structure in ruins. Since this book is about understanding pawn structures, asking me to write the foreword surely has to be a major blunder!

Besides being an avid chess player, Nick always had a talent for writing and speaking. Having finished his studies in philosophy, he often has interesting and striking ideas about life and chess which he can bring across in an eloquent way. By writing a chess book he was able to combine his talents, so this decision definitely has to be a double exclamation move, compensating for the aforementioned blunder.

The road to chess improvement is a highly abstract one, and no one to this date has figured out what exactly is the best way to become a better chess player. What is certain is that chess is an extremely complicated game which cannot be solved by the most advanced computers, let alone humans. Since we have limited processing capabilities, we can use heuristics or laws to guide us in the process of finding the best move. An

understanding of the Hidden Laws of Chess is critical for laying a solid positional foundation.

I hope you will thoroughly enjoy this book, as Nick's writing makes it a very pleasant read. Do not forget to solve the exercises either, since challenging yourself is necessary to become a better player.

Jorden van Foreest,
Groningen, September 2022.

Introduction

The wise know that we are barely evolved apes. – Alain de Botton

What does it mean to be wise? Psychologists agree that wisdom revolves around the integration of experience, knowledge, and a deep understanding of the uncertainties of life. Philosophers, on the other hand, have pointed out traditionally that wisdom is the best, highest, or deepest kind of knowledge. The wise have obtained an understanding of the Hidden Laws of reality.[2]

Can wisdom be translated to the chessboard? In 2012, my compatriot IM Willy Hendriks published a wonderful book called *Move First, Think Later*. In this book, he criticises the way most chess instructors teach chess. Hendriks asserts that in our decision-making over the board, we see a move, then look for its ramifications and finally conclude whether it is good. In his view, many chess teachers have it backwards. They claim that you first have to look at the 'characteristics' of a position and that good moves flow from this process naturally. On Hendriks' account, the processes of spotting moves and evaluating characteristics happen at the same time. Therefore, pretending that this is not the case is counterproductive.

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1   My clubmate Tjeerd Santema suggested the alternative title: 'The Hidden Laws of Chess the government doesn't want you to know about'. Maybe I should have opted for a more 'clickbait' title instead!

2   In essence, the Hidden Laws of chess are analogous to the Hidden Laws of our Universe. Good play in chess supervenes on lawlike properties. Similar to the regularities in nature, the Hidden Laws of chess represent the regularities behind good moves in chess. Hence, a 'wise chess player' is one who masters the Hidden Laws of chess. The design of the cover reflects this analogy by displaying the universe.

Hendriks is particularly critical of the way in which many chess authors have extracted chess wisdom. Let's look at the diagram given above. In this well-known position of the Najdorf Sicilian, White is setting up a pawn storm on the kingside. Black is supposed to react with 13...d5!, counterattacking in the centre. With correct play, this should lead to an approximately even game. Chess trainers would immediately shout: 'ah there we go again, the famous maxim: if your opponent attacks on the wing, counterattack in the centre!'. Obviously, this turns out to be good advice here. But is this maxim good advice in general? Hendriks set up an experiment. He drafted a selection of 110 games in which White played the move 17.g4 – a clear sign that White is aiming for an attack on the flank. In about two-thirds of the games, a counterattack in the centre was simply impossible. A counterattack in the centre was a bad idea in 22 cases, in 10 games it was all right, and it was the best idea in only 2 games. Thus, on Hendriks' account, what we can learn from the above chess position is not some form of chess wisdom, but rather that the key to the position is the move 13...d5!.

While I agree with Hendriks's skepticism with regards to certain chess maxims, I doubt that this is the full story. Even though I enjoyed his book a lot, in my humble opinion he was a little bit too harsh on respectable chess authors such as IM Jeremy Silman. Aren't there any deeper truths to be discovered about the game of chess? Isn't there any room for language in chess? Let's turn to that question now.

Language in chess

On the chessboard, there is a battle between two armies of 16 pieces each. There is no language involved in the movement of the pieces. The quality of a move is determined by the value that it offers towards the end goal: delivering checkmate. When learning to play the game of chess, we quickly become aware of the value of the pieces. Pieces need to be preserved, as casualties allow your opponent's army to overwhelm yours. The different pieces have different abilities. More mobile pieces such as the queen are significantly more valuable than less mobile pieces such as bishops and knights. Chess scholars have established the comparative value of pieces. Most often, the pawn is attributed a value of 1, knights and bishops have a value of 3, rooks are valued as 5 and the queen gets a value of 9. This assessment has stood the test of time and proved to be useful from the beginner level all the way to the grandmaster level. Obviously, other positional considerations can alter these assessments, but most of the time these values prove to be extraordinarily accurate guidance. The comparative values of the pieces are part of our decision process when

choosing moves. Still, it's an analysis based on numerical values. Is there any language involved in our decision process?
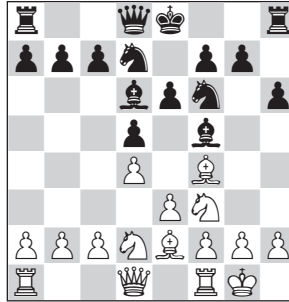
To answer this question, we need to have a deeper look into our decision process. How does one decide on a move? A primary process is calculation, which can be vocalised in the following way: if I move my knight from f3 to e5 he can take it with his knight, but if he does so, I take back with my pawn, forking his bishop and knight. Therefore, the exchange is satisfactory for me. This particular exchange is completely described in alignment with the laws of chess. A legal move is answered by a legal move, etc. The description contains one special term: a 'fork'. But the term 'fork' is merely used as a shortcut to describe a situation in which a piece of little value attacks two pieces of higher value. The entire exchange is satisfactory because it furthers the goal of winning the game. Does this paint the full picture or is it more complicated?

The process of deciding upon moves is chaotic. We go back and forth between several possible continuations and sometimes discard an option for superficial reasons. Language fulfills an important function in this process. In our thought process, language plays two roles: it provides guidance to help us decide which moves deserve attention and it plays a role in our judgment. We need language to evaluate positions. The game of chess is extraordinarily complex. With our limited processing capabilities, it is often impossible to calculate variations all the way until mate. Therefore, we need to create heuristics. Chess players develop an understanding of the game over time that lets them evaluate positions more and more accurately. Interestingly, even computers make use of these heuristics. Even the strongest chess computers have nowhere near the capabilities to give definitive assessments of middlegame positions. Computers also must apply judgment. Designers of chess computers have installed algorithms. Besides an assessment of the value of pieces, these algorithms contain parameters of factors such as space, mobility, king safety, threats, and imbalances. It is precisely the investigation of

factors like space, king safety and imbalances that grants us access to the deeper truths of chess. These factors operate with a certain consistency. For instance, having a space advantage is most often favourable, while having an unsafe king is disadvantageous. Such claims are examples of the Hidden Laws of Chess.

What is a Hidden Law in chess? With a 'Hidden Law', I refer to the deeper structures that spring from a mere contingency of the rules of chess. This might sound like a mouthful of gibberish to you. What I mean is that there are certain patterns that underlie good play. Had the rules of chess been different, these hidden structures would have been different as well. On a surface level, there are Laws that comprise the comparative value of the pieces. On a deeper level there are Hidden Laws that encompass elements such as the importance of space, the quality of a pawn structure, the strength or weakness of an isolated pawn, the importance of a key square, etc.

How do these Hidden Laws compare to chess wisdom that has been captured in chess literature? To a certain extent there is overlap, but the Hidden Laws of Chess are recognizable when three features are present:
• they operate in a lawlike manner
• they operate under the surface
• they are context-dependent

With the ascription of 'a lawlike manner', I simply refer to the likelihood that a certain heuristic is applicable. When applying the Hidden Laws of Chess in this book, there is a reasonable probability that they provide good guidance in positions with certain features. The idea that a flank attack should be answered by a strike in the centre is seldom good advice. So this principle doesn't operate in a lawlike manner. Hence, the banal chess wisdom that we saw earlier is excluded. In addition, the Hidden Laws of Chess are operating under the surface. In this sense, the Hidden Laws are distinct from what we might call the 'Obvious Laws' of chess. These Obvious Laws of chess include the benefits of development, the merits of king safety and the perks of capturing pieces. Indeed, the Hidden Laws and the Obvious Laws have in common that they are both operating in a lawlike manner, but the former are considerably more difficult to discover. You don't need to be a serious student of the game to extract the wisdom of the Obvious Laws of chess. Finally, the Hidden Laws are context-dependent. Good chess strategy may vary immensely in different types of positions. That's why this book is divided into eight chapters, featuring eight different types or aspects of pawn structures.

In this book, my objective is to explore these Hidden Laws of Chess. My goal is not to provide cheap wisdom of the sort that Hendriks warned us about, but to provide actionable tips and ideas that you can apply to elevate your game. Ideas that form the foundation for a solid positional understanding. A mastery of the Hidden Laws of Chess contributes to sound judgment – and sound judgment leads to good moves, which ultimately leads to better results.

In his work, Hendriks mentioned the work of another fine author: Dražen Marović. Marović tried to save the maxim: 'when attacked on the wing, strike back in the centre', by adding: 'only if you can!' An alternative solution would be to create a more modest formulation that includes a term such as 'sometimes'. Hendriks astutely points out that a weakening of these formulations makes the chess teacher less authoritative and less convincing. In sports coaching, there is a dilemma between honesty and not promising too much. Since I value honesty, I will immediately admit that the Hidden Laws that will be revealed in this book aren't categorical laws – they contain exceptions! And since we are now in the business of making confessions, I'd like to add another disclaimer. To improve in chess, it is still most effective to train chess patterns by solving (tactical) exercises, rather than focusing on the positional aspects of the game. But if you already have a solid tactical foundation, or if you supplement the content of this book with doing tactics, I can guarantee that you will make progress. And remember, if this book somehow doesn't make you wiser about chess, perhaps you will learn something else. Maybe all chess teachers are charlatans after all?

Have a great read!

Nick Maatman,
Groningen, September 2022

CHAPTER 5

Preview exercises

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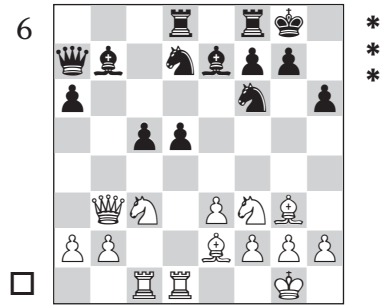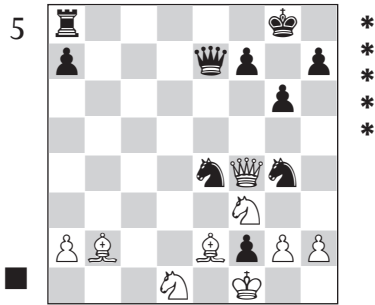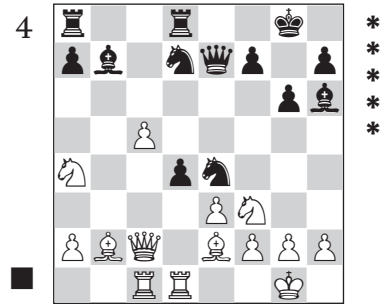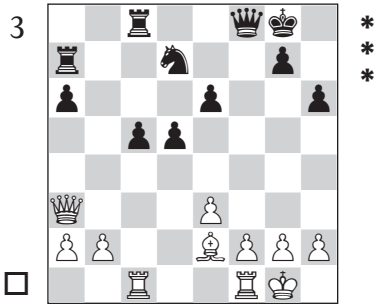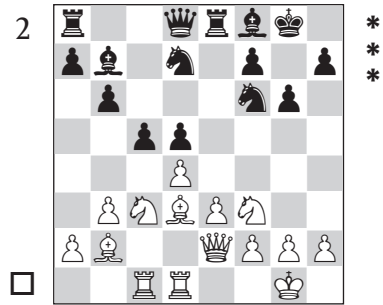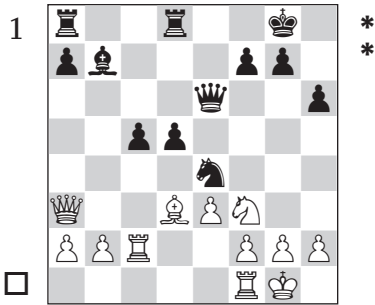
CHAPTER 5

Hanging pawns

I am convinced, the way one plays chess always reflects the player's personality. If something defines his character, then it will also define his way of playing. – Vladimir Kramnik

My favourite logical paradox is the *unexpected hanging paradox*:

Imagine a trial in which a judge informs a condemned prisoner that he will be hanged at noon next week during one of the weekdays. However, there is one special condition: the execution will be a surprise. He will not know on which day he will be hanged.

The prisoner then concludes that he can escape the hanging. He establishes that the hanging can't be on Friday. After all, once it is Thursday afternoon, the prisoner would know that he would be hanged on Friday, and in that case it would no longer be a *surprise*!

The prisoner subsequently invokes a backtracking argument. Since the prisoner established that he can't be hanged on Friday, he can infer on Wednesday afternoon that he will be hanged on Thursday. But that would once again remove the element of surprise. By continuing this logic, there will be no day left in the week. The prisoner should be safe.[1]

Nevertheless, to the surprise of the prisoner, a guard knocked on his door on Wednesday at noon. The prisoner was executed. The judge was proved right after all.[2]

Contrary to the above story, hanging pawns in chess lack the element of surprise. With 'hanging pawns', we generally refer to a pawn island of two pawns on the c- and d-files. Hanging pawns are similar in nature to the isolated queen's pawn. They offer dynamic opportunities when there are a lot of pieces on the board, but they can also become a liability once they are fixed or come under fire.

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1   In my assessment, the prisoner's logic is flawed. One attempt to tackle the paradox is to recognise that propositions are timebound. For instance, the proposition: 'Fischer is leading against Spassky' was false at some point in time and true in others. As time goes on, the truth value of the claim by the judge changes. Therefore, it is a falsidical paradox.
2   Objection: relevance! You may wonder why I am telling you all of this. Well, I promised that you would learn something non-chess related.
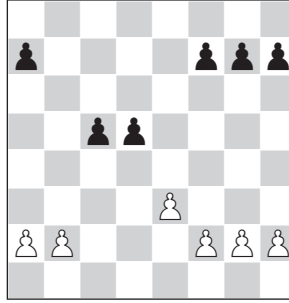
The diagram above features a typical hanging pawns structure. The main resource for Black is the ...d5-d4 push, as it opens the position and creates dynamic possibilities towards the white king. White, on the other hand, has multiple plans. First of all, a reduction of material is often favourable, as it limits Black's attacking opportunities and weakens the defence of the centre. A concept that will be different than the previous chapter is that White often aims to lure one of the black pawns forward. By inserting b2-b4 or e3-e4, Black will be obliged to release the tension in the centre. Either ...d5-d4 or ...c5-c4 will greatly diminish the flexibility of the black centre and a capture will leave the other pawn isolated. Furthermore, the ...d5-d4 advance will reduce Black's control over the light squares. Also, the ...c5-c4 advance will significantly weaken the dark squares, the most noteworthy being the central square d4. We will start off with a fine execution of the b2-b4 plan.

Game 27
Paul van der Sterren   2535
Ljubomir Ljubojevic   2570
Amsterdam 1999 (3)
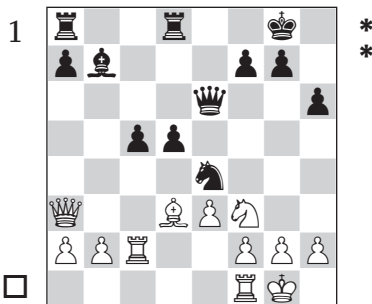
Although hanging pawns and IQPs bear many similarities, this position illustrates a key difference. Together, the hanging pawns control all squares in front of them. With an IQP, the situation would be totally different. Imagine for a moment that the black c-pawn stands on b6. In that case, White would enjoy a large advantage. This knight could occupy d4, and the black d5-pawn would be eternally weak. Attacking hanging pawns is considerably harder, as they have good synergy. Nevertheless, White finds a good method to pose some problems.

20.b4!

This typical move changes the nature of the pawn structure. Black is forced to concede the d4-square.

A) In Soppe-Garcia, Guarapuava 1991 (the only other game that reached this position) White played 20.♖fc1. This is a natural move, but after the active 20...♖d6!, Black is threatening ideas like ...♗a6, which allow him to equalise: 21.♘d2 ♘xd2 22.♖xd2 d4, and Black has no issues;

B) 20.♘d2 is another typical idea. After an exchange of the strong knight on e4, the hanging pawns become more vulnerable. Unfortunately, it is not effective here as Black has a forcing sequence to solve his problems by means of a pawn sacrifice: 20...♘xd2 21.♖xd2
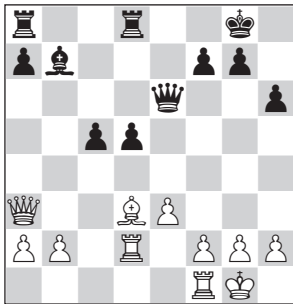
analysis diagram

21...d4! 22.♕xc5 ♖ac8 23.♕f5. The threat of 24.♕h7+ forces the queens off, but Black has everything covered: 23...♕xf5 24.♗xf5 dxe3! 25.♖xd8+ (25.♗xc8?? exd2, and Black queens) 25...♖xd8 26.fxe3 ♖d2 27.♖f2 ♖d1+. The active rook forces a repetition;

C) 20.h3!? is an extremely sophisticated move that tries to make ♘d2 work under favourable circumstances:

C1) 20...♖d6?! isn't satisfactory here: 21.♘d2! Now, Black's active defence fails: 21...♗a6 (21...♘xd2 22.♖xd2 d4?! 23.♕xc5 ♖c8 24.♕a3 and due to the unfortunate placement of the rook on d6, White is much better. A key idea is 24... dxe3?! 25.♗h7+!, with a discovered attack) 22.♘xe4 dxe4 23.♗xa6 ♖xa6 24.♕xc5 ♖xa2 25.♖d1, and White's activity guarantees a slight advantage;

C2) 20...a5! seems best, for instance 21.♖fc1 a4 22.♗xe4 dxe4 23.♘d2 ♗a6 24.♘f1 ♗xf1 25.♖xf1 ♖d5 26.♖xc5 ♖xc5 27.♕xc5 ♕xa2 28.♕b4. White is slightly better due to his well-placed queen and the target on e4, but Black should ultimately hold.

20...c4

20...cxb4 is possible too: 21.♕xb4 ♗a6 22.♘d4 ♕b6! 23.♕xb6 axb6. After the exchange, White has a weakness on a2, which significantly reduces his advantage. 24.♗xa6 ♖xa6 25.♘c6 ♖e8 26.♖d1. White has an edge, albeit a minor one.

21.♘d4 ♕g6 22.♗xe4 ♕xe4
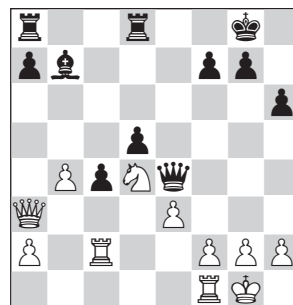
The strong knight on e4 has been eliminated, and we are now entering a situation in which the white knight clearly dominates the black bishop. Still, it is difficult to make progress. Van der Sterren finds an excellent plan:

23.b5!

After this advance, the white queen threatens to penetrate the black position.

23...♕g6?!

Ljubojevic now lands into difficulty. 23...♗c8! was correct. The bishop needs to be rerouted quickly. 24.♕c5 ♗d7 25.a4 a6!. The exchange of pawns gives Black more freedom and diminishes the power of White's pawn majority. 26.♖b2 ♕g6 27.♖c1 ♖ac8 28.♕a7 c3. Black has created sufficient counterplay and he should be able to hold this position.

24.♕e7! ♕b6

Black is forced on the defensive and he lacks counterplay.

25.a4 ♖e8 26.♕b4
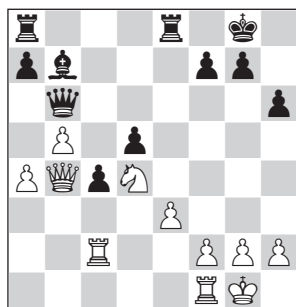
26...a5?

A further positional error, and Black's problems become insurmountable. The black queen

had to return to the kingside to create counterplay.

27.♕c3 ♖ad8 28.♖d2

With the queenside locked down, White can patiently rearrange his pieces and target the weak pawn on d5.

28...♖d6 29.♘e2 ♖e4 30.♖fd1 ♕d8 31.♖d4 ♖e5 32.♕d2
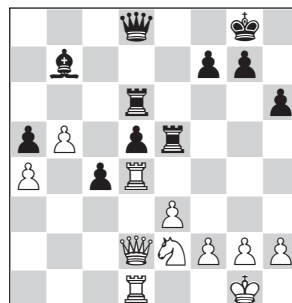
Remember the start of the previous chapter? This position plays almost exactly the same as an IQP position. The minor pieces have been exchanged, which limits Black's active opportunities. The heavy artillery is well-positioned to target the weakness. At an opportune moment, White breaks down the black defences with e3-e4.

32...♕c7 33.♘c3 ♖g6?!

This forfeits an important tempo. After 33...♖de6, aimed against e3-e4, Black could still hang in there.

34.g3 ♕c5

34...♖d6 35.e4, and White wins.

35.♘xd5

The central pawn is gone, and the game is over. Van der Sterren won on move 48.

1-0

The b2-b4 advance is a key resource to undermine the synergy of the black hanging pawns.

The game was a great technical display by Van der Sterren. He found all the right moves that put maximal pressure on his opponent. Of course, with perfect defence Black should have held, but by creating practical difficulties, the opposition can be forced into making mistakes. Ljubojevic eventually crumbled under strong positional pressure.

Whether the process of writing this book made me a better chess player remains to be seen, but I did manage to apply a Hidden Law of Chess successfully after already having submitted most of the material to the editor. In the following position I played a counterintuitive move that starts to make sense with the Hidden Laws of Hanging Pawns in mind.

Game 28
Nick Maatman 2368
Bernhard Stillger 2245
Dieren 2022
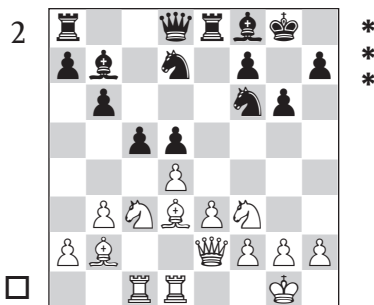
Question: A crucial position has arisen. It is clear that something went wrong for Black in the opening. All White's forces are perfectly mobilised while Black's development is still a little bit lacking. He would like to bring the a8-rook into play and transfer the dark-squared bishop to g7. Still, Black's central set-up seems solid. Since the development stage has been completed, it is time to come up with a plan. White has to devise a way to make progress and capitalise on his small lead in development. How should White proceed?

14.♗a6!
A fascinating move that may look ridiculous to the untrained eye. Black's b7-bishop was merely staring at the d5-pawn while its counterpart was targeting both flanks. On the surface, a trade of light-squared bishops should clearly be in Black's favour. What is White envisioning? White wants to clarify the situation in the centre at some point by trading on c5, inducing a position with hanging pawns.

In a position with hanging pawns, a reduction of the material favours the side that is playing against the hanging pawns.

The bishop on b7 is a key defender of the d5-pawn. After eliminating this piece, the pressure against d5 is already reaching critical mass. What else? The move ...b7-b6 weakened the complex of light squares on

the black queenside. Once the black bishop disappears, these light squares suddenly become quite vulnerable.

Did White have other options?

A) A respectable alternative is 14.♗b5!?, intending to enter an IQP position under favourable circumstances. For instance, 14...a6 15.♗xd7 ♘xd7 16.dxc5 ♘xc5. The bishop on b7 is very poor and Black doesn't have reasonable hopes of pushing the d-pawn anytime soon. Still, converting such a position is no trivial task, so the game continuation appears more convincing;

B) Note that 14.dxc5 is only good if it is followed up with 14...bxc5 15.♗a6!, transposing to the game. Interestingly, all alternative options for White fail to put pressure on the black centre.

14...♕c8 15.♗xb7 ♕xb7
16.dxc5 bxc5
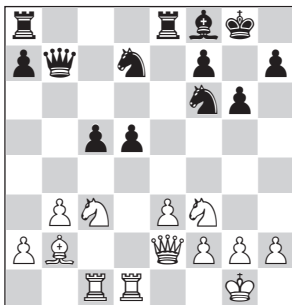
17.♕b5!

The situation in the centre has transformed. White is exerting considerable pressure on the hanging pawns. The exchange of queens aggravates the situation.

17...♕xb5 18.♘xb5 ♖ec8

I was expecting 18...♖ac8!?.

A) The point is that 19.♘xa7?! 19...♖a8! 20.♘b5 ♖xa2 alleviates Black's problems;

B) I was intending 19.♖c2 a6 20.♘c3 ♘b6 21.♘a4 ♘xa4 22.♗xf6 ♘b6 23.♗c3 with the strong threat of 24.♗a5!. Still, it seems that Black can save himself with 23...c4! 24.♗d4 ♗c5. White has a strong grip on the d4-square and the black centre is now fully immobilised. Unfortunately White is lacking a clear method to make progress and Black should be able to defend the weaknesses with careful play;

C) A notable alternative is 19.g4!?
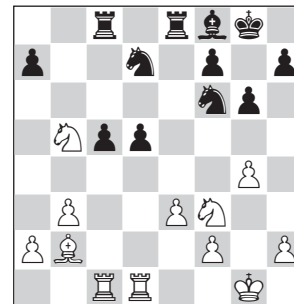
analysis diagram

19..♘xg4 20.♖xd5 ♘df6 21.♗xf6 ♘xf6 22.♖dd1, further transforming the position. White has a sound pawn structure and clear targets on a7 and c5. Black is facing a tough defensive task.

19.♘e5 a6?!

This inaccuracy makes the situation untenable.

19...c4! was required. 20.bxc4 a6! is Black's key point. The attacked white knight doesn't have an

attractive destination, so White has to enter a forcing variation: 21.♘xd7 ♘xd7 22.♘c3 ♖ab8 (another very useful zwischenzug) 23.♗a1 ♖xc4 24.♘xd5 ♖xc1 25.♖xc1 ♗a3. In the end, White managed to obtain a sound extra pawn anyway. Still, Black is very active, so converting the material advantage won't be a trivial task.
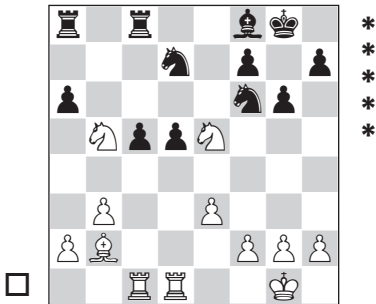
Question: After 19...a6?! I missed a stunning tactical shot. Do you see it?

20.♘xd7

Very natural as White now forcefully wins a pawn. Even so, an opportunity was missed here: 20.♘d6!!. Spotting tactical shots when you already have a very promising continuation available can be tremendously difficult. Perhaps the adagium 'if you see a good move, look for a better one' does contain some wisdom! 20...♗xd6 (20...♖cb8 21.♘xd7 ♘xd7 22.♖xd5 allows White to cash in the pawn under very favourable circumstances) 21.♘xd7 ♘xd7 22.♖xd5 ♖c6 23.♖cd1. The beautiful point. White has temporarily sacrificed a full piece, but the

awkward constellation of the black minor pieces on the d-file allows White to regain the piece, keep the extra pawn and maintain all his positional trumps.

20...♘xd7 21.♘c3 d4

A little more tenacious was 21...c4 22.♘xd5 cxb3 23.axb3 ♖xc1 24.♖xc1 ♖b8. With the active rook Black maintains chances to save the game, despite being down a healthy pawn.

22.exd4

Surprisingly, 22.♘a4! was even more convincing. Apparently White has to postpone cashing in the material: 22...♖ab8 23.♔f1. White can continue the game patiently. Note how the theme of the disrupted hanging pawns returns. By the push of the d-pawn, the black pawn formation has lost all flexibility and meanwhile Black has completely surrendered the light squares. 23...f5
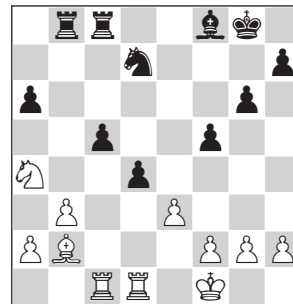
analysis diagram

24.♗a1!. Another remarkable prophylactic move. By moving the bishop away from the b-file, White ensures that exd4 can no longer be effectively met by ...c5-c4!. Black is now lacking constructive ideas. For instance, 24...a5 25.exd4 cxd4

26.♗xd4. On top of being up a pawn, White maintains complete control over the position. Black is hopelessly lost.
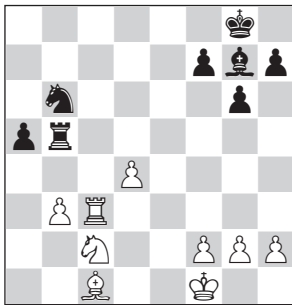
22...c4!

Smart defence by my opponent. By giving up the pawn in this fashion Black poses White some technical difficulties.

23.♘d5 cxb3 24.axb3 ♖ab8 25.♖xc8 ♖xc8 26.♖c1 ♖b8 27.♖c3 ♖b5 28.♘e3 ♘b6 29.♔f1 a5 30.♗c1!

If Black manages to exchange the a-pawn for the b-pawn, the game should theoretically be a draw. However, for the moment the idea of 30...a4 31. bxa4 ♘xa4 can be strongly met by 32.♖c8!.

30...♗g7 31.♘c2

A critical moment arises.

31...♔f8?

This allows me to finally coordinate my pieces.

A) During the game, I was a little worried about the continuation 31...a4 32.bxa4 ♖b1!? 33.♘a3 ♖a1 34.a5 ♗xd4. However, my worry transformed into reassurance when I spotted 35.♖c2!. Despite the peculiar constellation of White's pieces, Black has no way to take

advantage. In the end, the a-pawn should decide the game;

B) Returning the bishop with 31...♗f8! is quite tenacious. After the white knight has left the e3-square, Black attained the option of improving his position with ...♘d5. The retreat to f8 serves to defend against ♖c8+. After 32.♗a3 ♔g7 33.♗xf8+ ♔xf8 White is considerably better, but it is unclear whether he can win.

32.♗a3+ ♔e8 33.♖e3+ ♔d8 34.♗c5
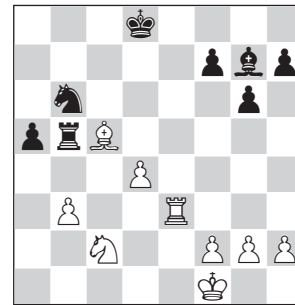
The bishop has undergone a metamorphosis. What a difference two moves can make! On c5, the bishop is fulfilling both an offensive and a defensive purpose. The extra pawn has been consolidated. From here onwards the technical assignment is fairly straightforward and I went on to win on move 57.

1-0

Many topics of the previous chapter are returning. Similar to an IQP, hanging pawns offer a lot of freedom to pieces. Furthermore, hanging pawns on c5 and d5 control many key squares. The

When we think of brutal chess games, the games that first come to mind involve heavy tactics. But games where one side is totally devoid of counterplay are even more brutal, in my opinion. These situations occur regularly in positions with a closed pawn centre. The previous game showcased Kamsky slowly seizing control. By locking down all play on the queenside, Kamsky was able to fully shift the attention to the kingside, and this was precisely where he had the upper hand. Van Wely could only play a waiting game while Kamsky kept improving his position. When the time was right, he opened the kingside and launched a decisive attack. In this game, with the other part of the board all locked, all play revolved around the kingside.

A similar strategy occurs when a player tries to compete for both flanks. I was a bit hesitant to include the following game, because the players are two machines. Still, Jorden van Foreest convinced me to incorporate it anyway because the game is a strategic masterpiece. It really showcases how much headway computers have made in closed positions. A couple of years ago computers regularly made really foolish mistakes in closed positions such as the King's Indian. For instance, machines would regularly lock the pawn structure on their strong side. Nowadays, the play of computers is close to perfection in

almost any position. And who's to say that we cannot learn anything from near-perfect chess?

Game 42
Stockfish dev15_20220302   3612
ScorpioNN 3.0.15.5   3514
TCEC Season 2022 (55)

1.d4 g6 2.c4 ♗g7 3.♘c3 d6 4.e4 ♘c6

In computer tournaments, the game usually starts with a predetermined opening and not from the starting position. This increases the variety of the games and raises the chances that a game ends in a decisive result. From an objective point of view, openings that concede the centre early on have a questionable reputation. Nevertheless, forcing the engines to play such openings leads to very interesting games.

5.♗e3 e5 6.♘ge2 ♘f6 7.d5 ♘e7 8.f3 ♘d7 9.♘c1 f5 10.♘d3 b6
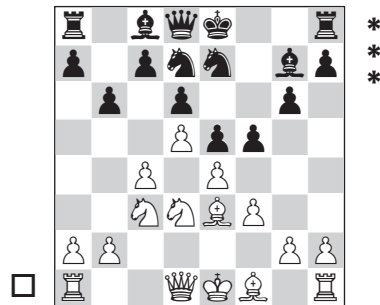
The opening has clearly turned out advantageous for White. White has more space and well-positioned minor pieces. Stockfish now shows excellent understanding of the position.

11.g4!

Nowadays, new strategies of play against King's Indian style set-ups been have identified. Since Black's counterplay usually revolves around ...f7-f5, the white king is better off in the centre or on the queenside. White likes to delay castling to avoid a potential kingside attack. Instead of focusing fully on a queenside attack, White wants to compete on all fronts – the eleventh move is a clear sign that he isn't forfeiting the kingside for free.
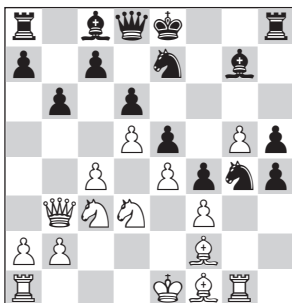
11...♘f6 12.♖g1 f4 13.♗f2 g5 14.h4 gxh4

Black is strategically obliged to make this capture, as otherwise White would completely control the tension on the kingside.

15.♕b3 h5!

This well-timed advance allows Black to regain the initiative on the kingside.

16.gxh5

16.g5?! looks like a clever way to control the queenside, but Black has a nasty reply in store: 16...♘g4!

analysis diagram

17.♗xh4 (17.fxg4? hxg4, and at the price of a piece, Black

starts a deadly avalanche. The three connected past pawns are unstoppable) 17...♘e3. Black cannot be worse with such a strong knight.

16...♔f8

Very interesting. In closed positions, guidelines about castling go out the window.

17.♗xh4 ♖xh5 18.♗xf6 ♗xf6 19.0-0-0!
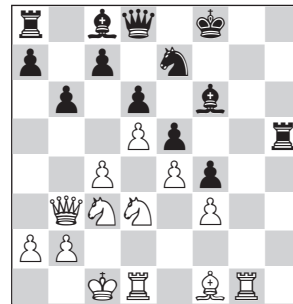
Both sides position their king on their strong side. How should we evaluate the current situation? White has a space advantage on the queenside, while Black's forward pawn on f4 offers him a space advantage on the kingside. In the white camp, it is mainly the pawn on f3 that is vulnerable, but it turns out that this pawn is difficult to attack. So, Black's problem is that his advantage on the kingside is unlikely to lead to anything promising. This also seems to apply to White's advantage on the queenside. For the moment, the black queenside is well-defended and a pawn storm on the queenside would expose the white king. Nevertheless, Stockfish still correctly assessed that its initiative

on the queenside has more potential.

19...♖h6 20.♔b1 ♗d7 21.a4 a5 22.♖d2 ♘g6
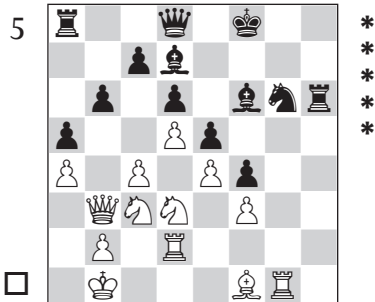
Question: We are about to reach the crucial moment in this game. In the introduction, I discussed how computers used to misplay closed positions in the past. Here, a similar thing seems to happen. Black appears to have a perfect blockade on the dark squares. Any further advance of the pawns merely seems to invite exchanges and these exchanges would expose the white king. What does Stockfish have in mind?[3]

23.c5!!

I hope you haven't fallen off your seat. What on earth could be the point of this move? Let's see.

23...bxc5

After the natural capture, the black pawn on c5 is well-defended, so White can't expect to recover his investment anytime soon. Furthermore, Black's control

over the dark squares has been amplified. However, as it turns out, it is not the dark squares that White is after, but the light squares. The pawn on c4 needed to go so the light-squared bishop can start participating.

24.♘c1!

The point is indeed starting to become clearer. Now the knight is moving out of the way in preparation of ♗b5.

24...♔f7 25.♕d1 ♕h8 26.♗b5 ♗xb5 27.♘xb5 ♖g8
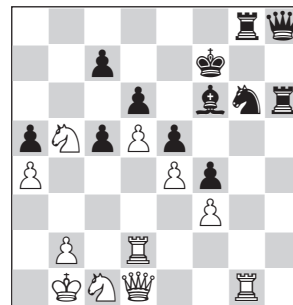
The light-squared bishops have been exchanged, which significantly reduces Black's control over the light squares. Note how this exchange was extremely desirable for White from a strategic point of view. Almost all the white pawns are on light squares, while all the black pawns are fixed on dark squares. This heavily devalues the remaining black bishop. White's light-square dominance and superior minor pieces massively outweigh the pawn deficit.

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3   What is a 'mind'? Do computers even have a 'mind'? Can Stockfish 'think'? The world is so mysterious. Contemplating such questions is the result of studying too much philosophy.

28.♖dg2!

White is temporarily shifting his forces to the kingside, but this is mainly a distraction. The sacrifice on c5 left the black a-pawn vulnerable. Once it is gone, White will get a powerful passed pawn on the a-file.

28...♖h2 29.♖xh2 ♛xh2 30.♘b3 ♘h4

If Black wants to preserve a pair of rooks with a move like 30...♖c8, the white rook can assist with the defence of f3, which leaves Black without any counterplay.

31.♖xg8 ♚xg8 32.♘xa5 ♛g2

After all the exchanges, Black is still dominating on the kingside. Now, the pawn on f3 is also dropping, which leaves Black with a strong passed pawn on the f-file. However, with the disappearance of the rooks, Black will have a hard time stopping White's a-pawn. We are entering a race, and Stockfish has accurately calculated that its passed pawn will arrive first.

33.♘b3! ♘xf3 34.a5 ♘g5

34...♘d4 35.♘5xd4 cxd4 36.♘d2. The white knight and queen are a fantastic tandem. Together they restrain the black pawns and protect the white king. 36...d3 37.a6 ♛f2 38.♘f3 d2 (38...♛e3 39.♛g1+) 39.♘xd2 ♛d4 40.♛b3! ♚g7 41.♛c3 ♛g1+ 42.♛c1 ♛a7 43.♛c6. White's winning process is slow, but eventually the a-pawn cannot be stopped. Black's problem is that it's essentially playing down a minor piece.

35.a6 ♛xe4+ 36.♛c2 ♛e1+ 37.♚a2 ♛b4 38.♛g6+ ♚f8 39.a7 ♛a4+ 40.♚b1 ♗d8 41.♛c2 ♛a6 42.♛f5+ ♘f7 43.♘d2 ♚g7 44.♘e4 ♛xb5 45.a8♛
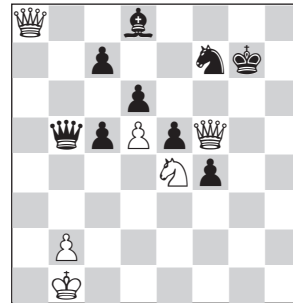
A fascinating position arises with no less than three queens on the board. Black still has quite a lot of material for White's second queen, but there is no perpetual check. Therefore, the white queens will ultimately start coordinating and launch a decisive attack.

45...♛d3+ 46.♚c1 ♛c4+ 47.♘c3 ♛f1+ 48.♚c2 f3 49.♛a4 c4 50.♛ad7 ♗e7 51.♛g4+ ♚f8 52.♛c8+ ♗d8 53.♛cf5

The white queens finally achieve perfect coordination, which means that the black pawns start dropping. The game is over.

53...e4 54.♕gf4 ♕g2+ 55.♔c1 ♕g1+ 56.♘d1 ♕g7 57.♕4xe4 ♕g5+ 58.♔b1 ♕g2 59.♕ee6 ♔g8 60.♘f2 c3 61.♘g4 cxb2 62.♔xb2 ♗g5

63.♘h6 ♗xh6 64.♕ff6 ♕g2+ 65.♔b3 ♕b2+!?

The perfect example of a spite check! Maybe machines are human after all...[4]

66.♔xb2 ♗c1+ 67.♔xc1 ♔g8 68.♕exf7# 1-0

An enthralling concept by Stockfish. The move 23.c5!! is just so captivating. Extraordinary imagination is needed to even consider such an idea. White's only path forward appears to be on the dark squares, but the machine completely forfeits the dark squares. Instead, it contests the light squares at the cost of a pawn. Eventually, the black a-pawn was lost, and its White counterpart promoted. Outstanding foresight by the machine.

The famous evolutionary biologist Richard Dawkins once remarked: 'Personally, I rather look forward to a computer program winning the World Chess Championship. Humanity needs a lesson in humility.' The times that humans were able to compete with computers have long gone, but the above game showcases that computers now have our number in any position.

Exploding the centre

There is one strategy we have yet to discuss: exploding the centre. A closed centre often comes with a space advantage for one side. Naturally, one side's pawns will be further advanced. Therefore, it can be favourable for the defending side to destroy the centre. Often, this strategy is unrealistic, as a locked pawn centre is generally well supported. For instance, a potential break for Black in the King's Indian is ...c7-c6, targeting White's advanced pawn on d5. Black's problem is that ...cxd5 is often simply answered by cxd5, which leaves White's centre intact. The exchange only helps White, as Black will be left with a weakness on d6. Remarkably, White generally tries to enforce the exchange by playing c4-c5xd6, which is in fact

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4   The British scientist Alan Turing devised the Turing test as a method of establishing whether computers can exhibit humanlike intelligence. Nowadays, moderators of chess websites are working on 'reverse Turing tests'. They must develop software that can establish whether a human is playing like a machine to combat cheating!

the same transaction, so he doesn't mind some assistance. We will nonetheless turn to an example in which Black succeeds in destroying the centre.
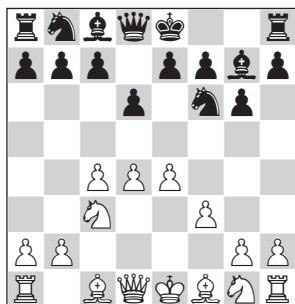
Game 43
Jan Timman 2660
Garry Kasparov 2760
Reykjavik 1988 (14)

1.d4 ♘f6 2.c4 g6 3.♘c3 ♗g7 4.e4 d6 5.f3

The Sämisch is one of those variations in which White stays flexible. Ideally, White wants to lock the centre after ...e7-e5 with d4-d5, castle queenside, and attack on the kingside.

5...0-0 6.♗e3 e5
Kasparov stays in King's Indian territory. Continuing in Benoni style with 6...c5! has the best reputation. Since White has already committed to f2-f3, he no longer has access to the scarier systems we saw in Chapter 1. Furthermore, 7.dxc5 dxc5 8.♕xd8 ♖xd8 9.♗xc5 ♘c6 10.♘d5 ♘d7! offers Black sufficient compensation.

7.d5 c6

There we have it, the pawn break that we were discussing in the introduction to this game.

8.♗d3
The popular 8.♕d2! is more flexible because it denies Black's active option from the game: 8...b5? 9.cxb5 cxd5 10.♘xd5, with a winning position. In this case, the light-squared bishop is not blocking the line of sight of the white queen.
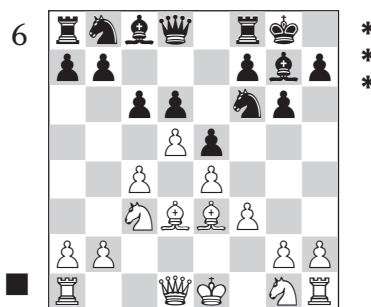
8...b5!
The white bishop is a little clumsy on d3, and Kasparov immediately takes advantage.

9.cxb5 cxd5!
The point is becoming clear. The b-pawn acted as a decoy, so White can no longer answer with the strategically desirable cxd5.

10.exd5

Black was threatening to win a piece on the d-file, but this is too passive. Maybe Timman was still ambitious? Returning a pawn with 23.♗e3 is correct. 23...♗xa2 24.♖bc1 ♖xc1 25.♘xc1 ♗f7 26.♖d1. As White has caught up in development, the game should end in a draw.
23...♖fd8 24.♗g5 ♖d7 25.♖e1 ♔f7 26.♗e2 h6 27.♗h4 ♘d5
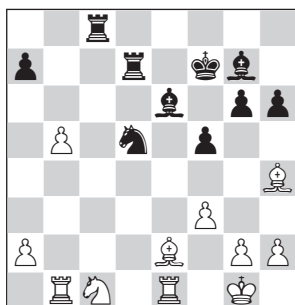
28.♗d1?
This error loses the game on the spot. Admittedly, White's position wasn't easy to play, but he could have put up a lot of resistance with a careful move like 28.♗f2, for example 28...♘c3 29.♖b4 ♘xe2+ 30.♘xe2 ♖c2 31.h4!.
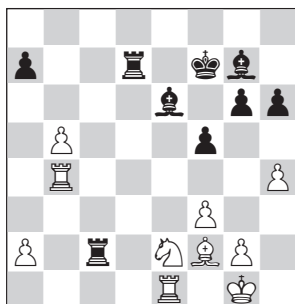
analysis diagram

Activating the h-pawn limits Black's options for an expansion on the kingside. 31...♖xa2 (the importance of h2-h4 becomes clear after 31...♗c4 32.♘f4 g5 33.hxg5 hxg5 34.♘h3. The knight has access to h3 and the pawn on g5 is hanging. Therefore, White wins valuable time that enables him to save the game: 34...g4 35.fxg4 fxg4 36.♘f4, and White should hold) 32.b6! axb6 33.♗xb6. Black is slightly better since he possesses the bishop pair, but with all pawns standing on one flank White should be alright.
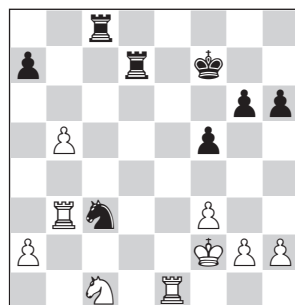**28...♗d4+! 29.♗f2**
Timman has no choice.
  A) 29.♔f1 ♘e3+ is immediately decisive;
  B) 29.♔h1 ♘c3 30.♗b3 ♗xb3 31.♖xb3 g5! 32.♗g3 f4 traps the bishop.
29...♗xf2+ 30.♔xf2 ♘c3 31.♗b3
I guess that Timman had calculated until this point and concluded that White is fine, since 31...♘xb1 runs into 32.♗xe6+. Kasparov has calculated slightly more deeply...
31...♗xb3 32.♖xb3

32...♘d1+!
Knight moves to the first or last rank of the board can be tough to spot, especially several moves in

advance. The white rook and knight are now disconnected. Black wins material and Kasparov had no problems converting.
33.♖xd1 ♖xd1 34.♘d3 ♖d2+ 35.♔e3 ♖xg2 36.♖a3 ♖e8+ 37.♔d4 ♖e7 38.♘e5+ ♔f6 39.♘c6 ♖d7+ 40.♔c4 ♖c2+ 41.♔b4 ♖xh2 42.♖a6 ♔g5 43.a4 h5 44.♖xa7 ♖xa7 45.♘xa7 h4 0-1

Kasparov distracted the c4-pawn with ...b7-b5, which loosened White's grip in the centre. Kasparov subsequently exploded the centre with dynamic play. The queens went off and Kasparov played the ensuing endgame with great precision.

What are the main takeaways from this chapter? A locked pawn centre can significantly alter the nature of the game. Regularly, the centre defines the dominant territory of either player, with each player generally having a superior flank. Making moves on your weak side is usually only desirable if it significantly slows down your opponent. In ideal circumstances you can lock up your weak side, after which all the focus can be transferred to the superior flank.

In openings like the King's Indian Defence, Black's strategy is fundamentally risky, as White's farther advanced centre grants him a space advantage. Black is ultimately willing to sacrifice his entire queenside to launch an all-out attack against the white king. Despite the closed nature of the position, Black's strategy leads to highly intense and razor-sharp battles.

The Hidden Laws of a Locked Pawn Centre

- Generally, it is a bad idea to push pawns on your weak side, unless it really slows down your opponent;
- You can burn all your bridges if the prize is the king;
- After neutralizing one side of the board, an advantage on the other flank becomes deadly;
- By putting your king on your strong side, the opposing attack is less threatening;
- A space advantage can be neutralised by exploding the centre.