

**Matthew Sadler and Steve Giddins**

# **Re-Engineering the Chess Classics**

**A Silicon Reappraisal of Thirty-Five Classic Games**

**New In Chess 2023**

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# INTRODUCTION

The starting point for this volume was the publication in 2021 of Matthew's book *The Silicon Road to Chess Improvement* (hereinafter referred to as *Silicon Road*). This dealt with the extremely valuable topic of how to use the modern chess engines for training purposes, to improve one's own play. Older chess engines, whilst fantastically useful for analysing tactics, were not much good for improving one's positional or technical understanding, but all this changed with the launch of AlphaZero in 2018, followed by the rest of the self-learning AI machines, such as Stockfish and Leela. These were far from being just monster tacticians, frightening though they were in that respect. The new machines understood chess much better, especially having a marvellous feel for piece activity and dynamism. Rather than only sacrificing when they could calculate a concrete justification, they frequently offered what seemed very speculative gambits and long-term material investments, relying on activity and dynamism to a far greater extent than previous machines. They were also able to demonstrate new strategic ideas and plans that human players had not previously thought of. Many of the standard middlegame pawn structures, which we thought we understood, have proved to be far richer than we imagined and a great many shibboleths about which positions are good or bad have been refuted.

Matthew's book showed how nowadays any chessplayer with a computer and an internet link can himself make use of AI engines and organise engine vs engine games, to test any position or opening one likes.

Thus it was that we had the idea of using a similar technique to analyse some of the great human games of chess history. Kasparov, in his *Great Predecessors* series, had re-analysed many famous games with an engine, but these were old, pre-AI machines, and whilst very good at finding unexpected tactical resources, they had little to say about positional and strategic aspects. In addition, Kasparov's books were written some 15-20 years ago, when the engines were much weaker. So we decided to select 40 grandmaster games, from the past 150 years, and see what the engines had to say about them and what lessons the human player could draw from the findings. By comparing the human decisions with those of the engines, particularly when the latter are critical of the former, we can learn a great deal about where even the best of us humans are going wrong.

The most instructive games are often those which are more strategic and technical. Any ordinary chess engine can find unexpected tactics

(and no human can ever expect to be able to match them in that regard), but the AI machines can change our whole perception of the strategic and technical pattern. For that reason, we have included many strategic games and some technical endgame grinds, where it is often not obvious to the human player where the loser went wrong. The engines are really useful at pointing out the turning points in such games.

A word should be said about the detailed games and variations included in the annotations. At first sight, these may seem somewhat overwhelming at times – the late Gerald Abrahams was wont to refer to long pieces of analysis as ‘exhausting rather than exhaustive’! Naturally, we do not expect readers necessarily to play over every note to its end, although there are some fantastic variations to see.

In effect, each game can be examined on two levels, firstly by concentrating on the main game itself and the relevant tactical variations, and secondly at a deeper level, by delving into the alternative approaches suggested by the engines. In order to assist readers, certain sections of the text are marked with a straight line down the lefthand side of the column. Those readers who wish to concentrate on the main narrative of the game can do so by ignoring those marked sections and just going through the unmarked text. Those who wish to delve more deeply into the engine alternatives can do this by examining the text which has the line next to it.

The really important thing for self-improvement is to understand the basic ideas and strategies which underlie the variations, and this is what we have tried to elucidate in as much detail and with as much clarity as possible. The detailed variations are, in a sense, the supporting data – it is there as back-up and for reference, but what really matters is what those variations illustrate. In order to maximise the instructional value of the book, we have also added a Postscript, which sums up the main lessons from the book.

This has been a great project to work on and we have both enjoyed making so many interesting discoveries about these games, even if, at times, we have been left wondering whether we actually understand anything at all about chess! (Needless to say, one of your co-authors has experienced this feeling rather more often than the other...). We hope that readers will find it both enjoyable and instructive.

GM Matthew Sadler & FM Steve Giddins  
Kent, England, March 2023

Game 21 King's Indian Defence  
**Mikhail Botvinnik**  
**Mikhail Tal**

Moscow Wch m 1960

This was the sixth game of the first World Championship match between Botvinnik and Tal, and was in many ways a turning point. Tal's meteoric rise through the ranks, including his victories in the Interzonal and Candidates tournaments, had astonished many people, especially with the manner in which he played, with his speculative sacrifices and attacks. But many sober voices remained convinced that such 'wild' methods could not succeed against the iron logic and imperturbable discipline of Botvinnik. At the start of this game, Tal led by a point, but had not yet done anything particularly outrageous. His 21st move in this game changed all that, and showed that his brazen sacrificial play could even succeed against Botvinnik.

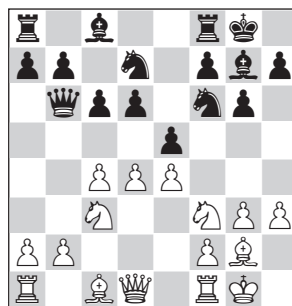
**1.c4 ♘f6 2.♘f3 g6 3.g3**

The g3 King's Indian was probably the most solid choice that Botvinnik could think of – useful against the young Tal!

**3...♗g7 4.♗g2 0-0 5.d4 d6 6.♘c3 ♘bd7 7.0-0 e5 8.e4 c6 9.h3 ♖b6**

First played in the 1950s, this is still Black's most popular move, although this classical system with ...♘bd7, ...e5 and ...c6 is less popular than it was. 9...♖b6 nudges White to release the central tension by adding pressure on d4

while preventing ♗e3 by attacking the b2-pawn. Any early queen move carries some risk, however, and 9...♖b6 gives White the opportunity to dramatically change the nature of the position.



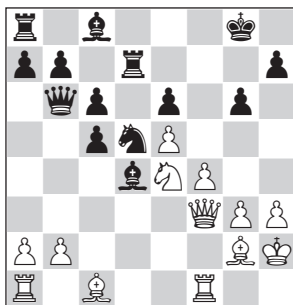
**10.d5**

Botvinnik chooses the most solid option, blocking the centre and thus (hopefully) reducing Tal's opportunities for tactical play. It puts some onus on Black to find an active follow-up as White will gain a useful development tempo on the queen with ♗e3 once b2 is defended, for example after ♖e2. But the modern engines are very fond of the sharp 10.c5. This was known long ago, but not really taken very seriously until it was revived by Yusupov against Kasparov at Linares 1990. Black eventually won that game, but was in difficulties out of the opening. More recently, the line has undergone significant engine tests, most notably between Stockfish and Leela Zero, and Black has been suffering: 10...dxc5 11.dxe5 ♘e8 12.e6! (even stronger than Yusupov's 12.♘a4) 12...fxe6 13.♘g5.



analysis diagram

White's idea is to entomb Black's dark-squared bishop with f4 and e5. With a wrecked pawn structure, Black will be unable to challenge the e5-pawn with ...f6 while the c5-pawn blocks another possible diagonal for the bishop: 13...♘e5 14.f4 ♘f7 15.♘xf7 ♙d4+ (15...♖xf7 16.e5 kills the ♙g7 for the long term) 16.♖h2 ♖xf7 17.e5 (the dark-squared bishop has got in front of White's pawn structure, but it has left behind a lot of weak dark squares on Black's kingside) 17...♖d7 18.♗f3 ♘c7 19.♗e4 ♘d5.



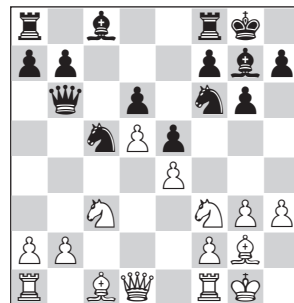
analysis diagram

Stockfish Classical chooses a plan of development similar to that chosen by Kasparov against Shirov (a somewhat uncomfortable draw

for Garry). However, Leela simply absorbs the temporary black activity and then starts squeezing on the weak dark squares. It turns out that this is as good as it gets for Black.

20.♖b1 ♖h8 21.♙d2 ♗a6 22.a3 ♗a4 23.h4 b6 24.♙c3 ♙xc3 25.bxc3 (one of Black's active pieces is exchanged) 25...♙a6 26.♖f2 ♖g7 27.♙h3 ♙c8 28.♖bb2 c4 29.♖a2 b5 30.h5 ♗a5 31.h6 (tightening Leela's grip on the kingside dark squares) 31...♖e7 32.♗g4 ♗d8 33.♗g5 a5 34.♘d6, with a wonderful position for White, 1-0 (93) LCZero-Stockfish Classical, TCEC 2020.

**10...cxd5 11.cxd5 ♘c5**



**12.♘e1**

Botvinnik has clearly decided that this is to be a game where Tal's active intentions will be stifled, either by closing lines and diagonals (10.d5) or by exchanging active pieces (12.♘e1). I (Matthew) have an ingrained mistrust of any white plan that involves spending several tempi to exchange the opponent's active pieces. My

intuition is that if White's system is any good, you should be able to fight effectively against the opponent's active pieces, not meekly seek to exchange them. In principle, the engine agrees with me, but Botvinnik's idea also gains some appreciation.

In fact, if the engines didn't think there was a good concrete way to deal with 12.♘e1, it would be as highly-regarded as the top moves 12.♞e1 and 12.♖e2. One must admit then that Botvinnik's approach is justified; after all, reaching a slight advantage with fewer pieces on the board is a pretty worthwhile goal to strive for against Tal!

12.♞e1 ♘d7 13.♙f1 still appeals much more, fighting for control of queenside squares and looking to turn the black queen on b6 and knight on c5 into targets. One idea for White is ♘f3-d2-c4, hitting the queen on b6 and the d6-pawn. However, the engines found enough play for Black to keep any disadvantage manageable.

The typical move 13...a5 gives White a resource as the queen loses a useful escape square on the queenside: 14.♙e3. White intends ♞b1, ♘f3-d2-c4, etc. The old game Keene-Penrose, England 1970, remains a textbook example of how to handle the white position in such structures: 14...♞fc8 (14...♖xb2 is too greedy and doesn't even win a pawn! 15.♙xc5 dxc5 16.♞e3 ♖b6 17.♘xe5 ♞ae8

18.♘f3 c4 19.e5 1-0 (61) Dragon 3.2-Stockfish, Classics 2023)  
15.♞b1 ♖d8 16.♘d2 a4 17.♖f3 ♘e8  
18.♞bc1 ♙f6 (looking for ...♙g5 to exchange off the dark-squared bishops) 19.h4 ♙e7 20.♙e2 ♘f6  
21.♙g5 h5 22.♙b5 ♘e8 23.♙xe7 ♖xe7 24.♖e2 ♙xb5 25.♘xb5 ♖d7 26.♞c3 ♞cb8 27.♞ec1 b6.

White looks a little better but the engines don't believe in White's chances: 28.♙g2 ♙g7 29.♞a1 ♘f6 30.f3 ♘e8 31.♞c2 ♞a5 32.♘c3 ♞a7 33.♞cc1 ½-½ Dragon 3.2-Stockfish, Classics 2023.

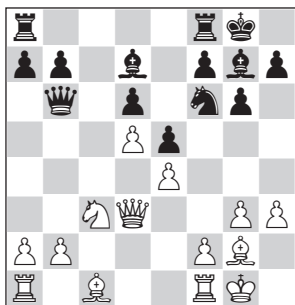
### 12...♙d7

12...♘fd7 is the engine approach, after which they find nothing better than hoping for a repetition with 13.♘f3 ♘f6.

13.♘f3 (13.♘d3 ♘xd3 14.♖xd3 f5. Black uses the time White has spent on exchanging the knight on c5 to start kingside operations. The engines quickly see the position as completely equal: 15.♙e3 ♘c5 16.♖d2 ♙d7 17.exf5 gxf5 18.♙h2 ♞ac8 19.♞ac1 a5 20.♞g1 ♙h8 21.f4 ♖d8 22.fxe5 ♙xe5 23.♘e2 ♖f6 ½-½ Stockfish-Dragon 3.2, Classics 2023) 13...a5 (the engines think that Black can exploit the extra tempi!) 14.♖c2 ♘b8 15.♙e3 ♙d7 16.♖e2 ♘ba6 17.♘d2 f5 18.exf5 gxf5 ½-½ (25) Stockfish-Dragon 3.1, Classics 2022.

### 13.♘d3 ♘xd3 14.♖xd3





### 14...♖fc8?!

Tal described this as something of a feint, to convince Botvinnik that Black was playing exclusively on the queenside so that he would be shocked when Tal played on the kingside after all with ...f5 ! As Tal explains in his classic book on the match, Black would like to carry out the break ...f5. He rejected the direct 14...♗h5 because of 15.♙e3 ♖d8 16.♙e2

(16.♗b5 is the engine preference, netting Black's light-squared bishop. Even without this normally important piece, Stockfish managed to drum up plenty of counterplay: 16...♙xb5 17.♙xb5 f5 18.♙b3 f4 19.♙d2 a5 20.♖ac1 ♗f6 21.♖c2 ♗d7 22.♙xb7 ♗c5 23.♙b5 f3 24.♙h1 h5 25.♖xc5 dxc5 26.♙xc5 g5 27.♙c6 ♗h7 ½-½ (38) Dragon 3.2-Stockfish, Classics 2023).

Now 16...f5? is bad because of 17.exf5, but the engines continue 16...♙e8, defending the ♗h5 and again preparing ...f5 and ...gxf5: 17.♙f3 ♙xh3 18.♖fc1. The line continues 18...f5 19.♗h2 (19.exf5

♗f6! is Black's idea: now 20.fxg6? ♙xg6 is assessed as a decisive advantage for Black, whose kingside pressure after moves such as ...h7-h5-h4, etc. seems irresistible) 19...f4 20.♗xh3 fxe3 21.fxe3 ♗f6, which they assess as equal. But the main silicon choice is 14...♗e8. No feints! The engines want to start counterplay with ...f5 at once.

15.a4 f5 16.♙e3 ♖d8 17.exf5 gxf5 18.♖a3 f4 19.♙d2 fxg3 20.♙xg3 ♗f6 21.♙h4 ♙f5 22.a5 ♖c8 23.♗e2 ♖d7 24.♗g3 ♙g6 25.♙e3 a6. White has some pleasant potential outposts for his pieces but Black's activity stops anything terrible happening, ½-½ (28) Dragon 3.1-Stockfish, Classics 2022.

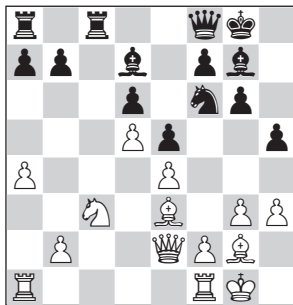
### 15.♖b1

This is a strange and somewhat inefficient way of defending the b2-pawn, as the white queen is likely to move back to e2 anyway (d3 is a slightly exposed square). It looks like a case of excessive caution, but one imagines that Botvinnik felt that ♖b1 gave him a better chance of stopping the black queen from hanging around on the queenside and causing confusion. In fact, we can guess that this safe move had a certain provocative effect on Tal. The fact that a black bishop on f5 will now attack the rook on b1 after ...f5, exf5 ...♙xf5 caused him to look immediately for risky kingside counterplay.

The engines like 15.a4 h5. Without the rook on f8, the engines don't seem keen on a quick ...f5 anymore. The engine-favourite march of the rook's pawn is thrown in to loosen up the white kingside structure at low cost before anything is attempted: 16.♖e2 ♖d8

(16...♗b4 would be the move one would worry about most as White: how disruptive can the black queen become? However, the engines see no problem in neutralising and then driving away the black queen: 17.♙e3 ♘h7 18.♞a3 ♙f6 19.♗d1 ♗c4 20.h4 ♙d8 21.♗b3 ♘f6 22.f3 ♙a5 23.♞c1 ♗c7 24.♙f1 ♗d8 25.♚g2 with a pleasant white edge, ½-½ (39) Dragon 3.2-Stockfish, Classics 2023)

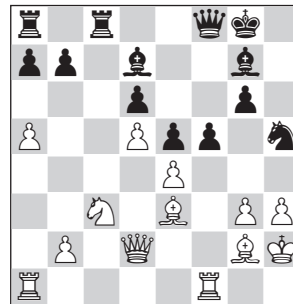
17.♙e3 ♗f8.



analysis diagram

Black refines his eventual plan of kingside counterplay with ...f5 by looking for additional positional achievements. 17...♗f8 looks to exchange dark-squared bishops with ...♙h6: 18.♗d2 (18.

f4 appealed to me (Matthew). I like the positions that result even if the engines think that Black is fine: 18...exf4 19.gxf4 h4 20.♗f2 ♗e7 21.e5 (21.♗xh4 ♘xd5) 21...♘h5 22.♘e4 dxe5 23.fxe5 ♙xe5 24.d6 ♗e8 25.♙g5 ♙f5 26.♞ad1 ♘g3 with a complex struggle ahead ½-½ (30) Dragon 3.2-Stockfish, Classics 2023) 18...h4 (...♙h6 has been prevented so Black looks to weaken White's hold on the kingside dark squares) 19.a5 (19.g4 ♘h7 20.♚h1 ♗e7 (looking for ...♙g7-f6-g5) 21.g5 f6 22.gxf6 ♙xf6 23.♘e2 ♞f8 24.♞g1 ♘g5. The white kingside is a little sensitive too: ½-½ (31) Stockfish-Dragon 3.2, Classics 2023) 19...hxg3 20.fxg3 ♘h5 21.♚h2 f5.

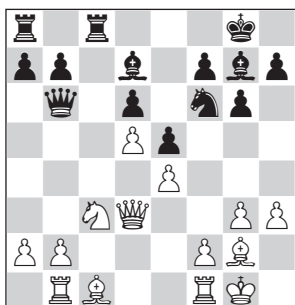


analysis diagram

This looks really risky with the rook on f1 and queen on f8 opposing each other, but the loosening of White's kingside gives Black additional ways of holding his kingside together tactically.

22.exf5 gxf5 23.♙e4 f4 24.gxf4 exf4 25.♙d4 ♙xd4 26.♗xd4 ♗g7 27.♗xg7+ ♚xg7 28.♞g1+ ♘g3 29.♞af1 ♞h8 30.♞xf4 ♞xh3+

31.♔g2 ♖g8 32.♕f2 ♜h8 (this looks terribly risky but Black is safe!) 33.♖g2 ♘xe4+ 34.♗xe4 ♗h7 35.♗xg8+ ♕xg8 36.♗b4 ♕f5 ½-½  
Stockfish-Dragon 3.1, Classics 2022.



### 15...♘h5

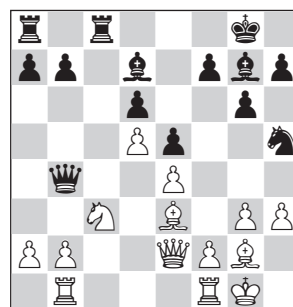
15...a6 16.♗f3 h5 was the engine approach, looking to make little space gains on both the queen-side and the kingside. The engine recommendations are very interesting and instructive. When the pieces are placed properly (the black king's rook still on f8) then the engines aim for quick counterplay with ...f5. When the pieces are improperly placed, they find restrained ways to create additional gains (for example with a march of the rook's pawn) to keep the position in balance.

17.♕e3 ♗a5 18.♗fc1 ♘h7 19.♕d2 ♕f6 (looking for either ...♕g5 or ...h4) 20.h4 b5 21.♕f1 ♕d8. The bishop will be activated along the a7-g1 diagonal. This manoeuvre is very common in the Old Indian where the black

bishop is developed to e7 in the opening, and even in the Ruy Lopez. It's also very effective here: 22.♔g2 ♗b6 23.♘d1 ♘f6 24.♕d3 ♗xc1 25.♗xc1 ♗b7 26.♗e2 ♕b6 27.♗a1 ♔g7 28.f3 ½-½ Dragon 3.1-Stockfish, Classics 2022.

### 16.♕e3 ♗b4 17.♗e2

The queen drops back to e2, eyeing the knight on h5 in case Tal wants to break on the kingside with ...f5 (hint: he does!).



### 17...♗c4?

This looks fairly normal to human eyes: Black is intending to double rooks on the c-file. However, effective wing attacks against a solid target are normally realised by a combination of pawns and pieces: the pawns drive pieces away or create holes in the structure and then a combination of major pieces and minor pieces drives in behind. It isn't immediately obvious, but the queen on b4 and rook on c4 are hanging in the air somewhat. It didn't matter when the queen was on b4: she had a choice of squares to run to if it was attacked. However, in the new situation, not

only does the rook on c4 take away an escape square from the black queen, the need to defend the rook also stops the black queen from escaping out of danger.

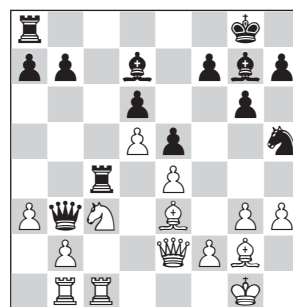
17...a6 starts to involve Black's queenside pawns in his queenside pressure: 18.♖h2 b5 (establishing a foothold on the queenside) 19.a3 ♖c4 20.♖d1 ♖c7 (the queen is safe!) 21.♘a2 a5 22.♗c1 ♖d8 23.♖e2 ♘f6 24.♗xc8 ♖xc8 25.♗c1 ♖b7 26.♖e1 ♘e8 27.♙d2 ♖b6 28.♖e2 h5 29.♗c2. White has a slight edge but Black's defences are harmoniously-placed, ½-½ (75) Stockfish-Dragon 3.1, Classics 2022.

Instead, 17...f5 seemed natural, especially as – like in the game – Black wins a tempo against the rook on b1 after exf5 ...♙xf5. 18.exf5 ♙xf5 19.♗bc1. The tempo has been won... but now Black has the serious threat of g4 to deal with: 19...♘f6 20.♘b5 ♘e8 21.♘xa7 ♗cb8 22.a3 ♖a5 23.♘b5 ♙d7 24.♘c3 and White had won a clear pawn, 1-0 (78) Dragon 3.2-Stockfish, Classics 2023.

### 18. ♗fc1

It's quite ironic that the little move 18.a3 could have helped Botvinnik so many times to a decisive advantage, but he avoided it every time. One suspects that this arises from his determination – seen in the opening phase – to avoid giving Tal any entry point into his position and to restrict the activity of Tal's pieces. However, a3 continually disrupts the coordination of Black's major

pieces: it emerges that on b3, the queen can't do any more damage than on b4; in fact, the queen is dragged away from connecting with key squares and becomes much more vulnerable to attack: 18...♖b3 19.♗fc1.



analysis diagram

White's idea is to play the light-squared bishop to d1 via f3 after which... the black queen is trapped. The engines think that Black needs to perform a quick about-turn to stand any chance of surviving: 19...♗cc8 20.♙f3 ♘f6

(20...f5 is all too late: 21.exf5 ♙xf5 22.♙e4 ♗f8 (22...♘f6 23.♙xf5 gxf5 24.♖f3 wins the f-pawn as Black's queen is too far away to defend it: 24...f4 25.gxf4 exf4 26.♙xf4 ♗c7 27.♖h1 ♗f7 28.♗g1 ♗af8 29.♙e3 ♘e8 30.♖e2 ♖h8 31.♗g4 a5 32.♗bg1 1-0 (65) Stockfish-Dragon 3.2, Classics 2023) 23.♙xf5 ♗xf5 24.♖b5 gives Black a horrible King's Indian ending to defend: 24...♖xb5 25.♘xb5 ♗f7 26.♘xa7 ♘f6 27.♗d1 h5 28.♘b5 1-0 (66) Dragon 3.2-Stockfish, Classics 2023)

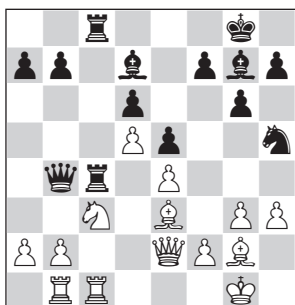
21.g4 ♔f8

(21...♖c4 22.♗xc4 ♜xc4 23.♕e2 ♜cc8 24.a4 h6 25.f3 ♕f8 26.a5 a6 27.b3 ♜c7 28.♘a4 ♜ac8 29.♘b6 ♜xc1+ 30.♜xc1 ♜xc1+ 31.♕xc1 g5 32.♕a3 ♖h7 33.♕d3 gives White a significant advantage: d6 is weak, Black has no counterplay and White can engineer a breakthrough on the queenside with b3-b4-b5, 1-0 (110) Dragon 3.1-Stockfish, Classics 2022)

22.♖g2 ♕e7 23.♗d2 ♕d8 24.♕d1 ♗c4 25.♕e2 ♗b3 26.f3 ♘e8 27.♕d1 ♗c4 28.♗f2 ♗c7 29.♕e2. Once again, Black is driven back and has nothing to show for all the moves he has made with his queen and rook. White is in control on both sides of the board, 1-0 (86) Stockfish-Dragon 3.1, Classics 2022.

### 18...♜ac8

The engines think the humiliating retreat with 18...♜cc8 was best, but no human player would do this, of course! Tal keeps on pumping up the pressure, but it gives Botvinnik a huge chance.

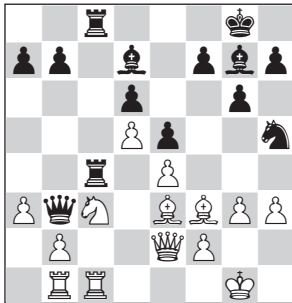


19.♖h2

Sensible, removing the king from the back rank and protecting h3 and g3, but completely missing the dynamics of the position. Having analysed a game between Botvinnik and Bronstein elsewhere in this book (see Game 16), one is struck by some similarities in the approach that Botvinnik took as White against his dangerous and creative foes. It seems that he had programmed himself in both cases to set up an unbreakable structure against which the waves of his opponents' creativity and attacking talent would exhaust themselves. Against Bronstein, he got himself completely confused: Botvinnik's 11.f3 in that game was, one suspects, intended as a prophylactic measure against a future ...e4 by Bronstein, which could be met by f4. However, it created severe weaknesses in his own position, which landed him in a horrible position. Against Tal, he did much better. We have been unenthusiastic about a number of Botvinnik's moves in this game – most notably 12.♘e1, 15.♜b1 and 19.♖h2 – but he got into a very strong position with them. One could almost claim that Botvinnik played a little like Petrosian with these exaggeratedly cautious moves! However, we would also argue that Botvinnik had programmed himself too thoroughly in a reactive mode. His plan was to let Tal launch his 'unfounded' attack and watch it fail miserably. In fact, by the time Tal's storm hit him, it had gathered

so much pace that it was extremely difficult to deal with, whatever the objective merits. Looking at the position with the engine, it is clear that Tal was at his most vulnerable not during the execution phase of his counterplay, but during the build-up play. If Botvinnik had noticed a3 on either move 18 or 19, then Tal would most likely have been forced back in disarray and we would have been praising Botvinnik's skill in manoeuvring, against which a wild attacker was no match. Instead...

19.a3 ♖b3 (19...♖a5 20.♙f1 followed by ♖e1 or ♖d2, and Black will most likely have to give up the exchange) 20.♙f3 was very strong, intending ♖d2 and ♙d1, winning the black queen.



analysis diagram

A) 20...♖f8 21.♙xa7 (always this move, it seems – see later in the game!) 21...f5 (looks like a Tal-like way to play, but the black queen simply cannot escape its cage) 22.♖e3 f4 23.♖d3 fxg3 24.♙d1 (winning the queen) 24...gxf2+ 25.♙xf2 ♗f4 26.♖f1 ♖xc3 27.♖xc3 ♖b5 28.♖xb5 ♙xb5 29.♙h4 1-0

(75) Dragon 3.1-Stockfish, Classics 2022;

B) 20...f5 21.♖d2 (threatening ♙d1) 21...♖4c7 22.♙d1 ♖c4 23.♙e2 ♖b3 24.♙xa7 ♗f6 25.♙d1 ♖c4 26.♙b6 wins: 1-0 (69) Dragon 3.2-Stockfish, Classics 2023;

C) 20...♙xh3 21.♙xh5 gxh5 22.♖xh5 ♙d7 23.♗g2 followed by ♖h1 and it's curtains for Black on the kingside!;

D) 20...b5 21.♖e1 ♖4c7 22.♙d1 ♖c4 23.b3 ♖d3 24.♙e2 traps the queen. 1-0 (27) Dragon 3.2-Stockfish, Classics 2023;

E) 20...♖4c7 21.♗h2. Having pushed back the black rook, Stockfish goes back into the Botvinnik mode of protecting everything against attack! 21...♗f6 22.♖d2 h5 23.♙d1 ♖c4 24.♙e2 ♖b3 25.♙d1 ♖c4 26.♙e2 ♖b3 27.f3 (e4 is completely protected and Black's queen is still very short of squares while the a7-pawn is a worry too) 27...a5 28.♙d1 ♖c4 29.♙e2 ♖b3 30.♗g2 ♗e8 31.♙d1 ♖c4 32.♙b6 ♗h7 33.♙e2 ♖b3 34.♙xc7 ♖xc7 1-0 (65) Stockfish-Dragon 3.1, Classics 2022.

19.♙f1 is another possibility. Tal mentions this and says that 'of course, Black's reply would be 19...f5', but the engine gives White a decisive advantage after 20.exf5 ♙xf5 21.a3 ♖b3 22.♖a1. Now the threat of 23.g4 forces Black to retreat: 22...♗f6 23.g4 ♙d7 and now 24.♖d1 ♖xd1 25.♖xd1 ♖4c7 26.♙xa7 simply nets a pawn for nothing. One suspects that Tal would not

have acquiesced in such a scenario and would again have put his knight on f4 somewhere along the way, but objectively White is much better.

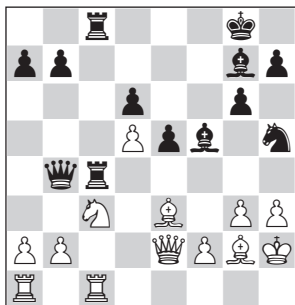
**19...f5**

Tal rolls the dice! In all fairness, it's now or never and the engines want it too. We have seen how fragile Black's queenside set-up is: Black will be pushed back if his activity doesn't lead anywhere soon.

**20.exf5 ♗xf5**

Hitting the rook on b1.

**21.♖a1**



I (Matthew) freely confess that when I first saw this game many years ago, and even much later after that, I was so impressed by White having to waste a tempo with ♖b1-a1 that I automatically believed in Black's position. If you're increasing your activity while gaining tempi, how can your position be bad? But Black's essential dilemma is that his activity is not particularly well-focused. His queen and two rooks are pummelling a knight defended securely by a pawn on b2; his light-squared bishop attacked a

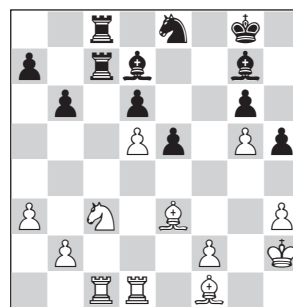
rook but it simply moved away and now it has no target left, while it is threatened with g4.

**21...♗f4!?**

Tal's comment on this move was actually spot on, in that he said that arguments over whether the move itself is sound or not are beside the point – all other moves are bad and if this doesn't work, then it is Black's 17th move that deserves the question mark. That is precisely the view of the engines. Admittedly, none of them want this move, preferring 21...♗f6.

However, after that move, most of the engine games end in white wins and it would have been precisely the game Botvinnik was aiming for. Tal's choice unleashes a storm that Botvinnik had thought he could avoid.

21...♗f6 22.g4 ♗d7 23.♖d2 h5 24.g5 ♗e8 25.a3 ♖b3 26.♗f1 ♗4c7 27.♖d1 27...♖xd1 28.♖xd1 b6 29.♖ac1.



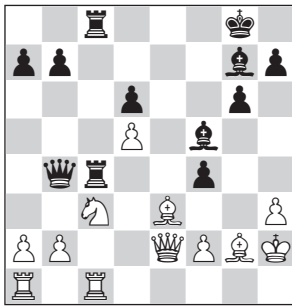
analysis diagram

It doesn't look so bad for Black, but this is as good as it gets for him! White has lots of weak points to attack and plenty of time.



29...♔f7 30.♙a6 ♖a8 31.b4 ♙f5  
 32.♘b5 ♗e7 33.a4 ♕f8 34.a5 e4  
 35.♔g2 ♙d7 36.♗c4 ♙b2 37.♗d2  
 ♙e5 38.♗xe4 ♙f5 39.♗c4 ♗f7  
 40.f3 bxa5 41.f4 ♙g7 42.bxa5 was  
 uninterrupted horror for Black,  
 1-0 (80) Stockfish-Dragon 3.1,  
 Classics 2022.

**22.gxf4 exf4**



**23.♙d2?**

Many human analysts have broken their heads over this position and the results have been frankly very impressive.

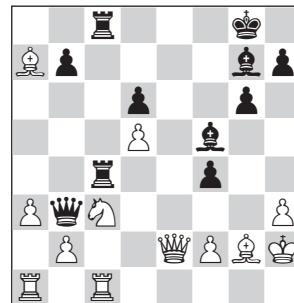
23.♙xa7? is met by a single-move tactic that is, however, deceptively difficult to spot: 23...♗a5 and Black regains the piece.

24.♙f1 ♙e5 25.♔g1 ♗4c7 26.♗e1  
 ♙xc3 27.bxc3 ♗xa7 led to a fine  
 position for Black: 28.♗f3 ♗f8  
 29.♗xf4 ♙xh3 30.♗e3 ♗xe3  
 31.♗xe3 ♙f5 32.a4 ♔g7 ½-½  
 Stockfish-Dragon 3.1, Classics  
 2022.

Grisha Goldberg, Botvinnik's second for the match, said White could have won with simply 23.a3,

disrupting the connection between Black's queen and the rest of the position. However, it's not really surprising that Botvinnik didn't play it: he had passed it by several times earlier in the game and one suspects by now it was clearly ruled out in his thoughts as too weakening.

Why is 23.a3 necessary? Once you get past the visual impression of total chaos, it starts off with fairly basic tactics. It forces a concession from the black queen. 23...♗a5 no longer attacks the b2-pawn so White can retreat the bishop to d2 without worry. 23...♗b3 loses contact with a5 so after 24.♙xa7,

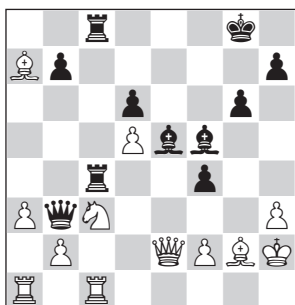


analysis diagram

Black no longer has an easy way to trap the bishop on a7. That isn't the end of the story, of course. Black can try and trap the bishop with 24...b6 and White will have to show a lot of ingenuity to extract the bishop and stay material ahead. But equally, Black will have to show a lot of ingenuity too: it's no longer a case of re-establishing material parity with one move. There follows 25.a4, with variations similar to



those below. One important point is that although Black seems to have gained a tempo by saving on ...♙e5, this means that d6 is hanging after 25...♖8c7 26.♙b8 ♖b7 27.♙xd6. After 23...♖b3 24.♙xa7, Tal, who describes 21...♗f4 as 'a purely positional sacrifice', says he intended (instead of 24...b6) to continue 24...♙e5



analysis diagram

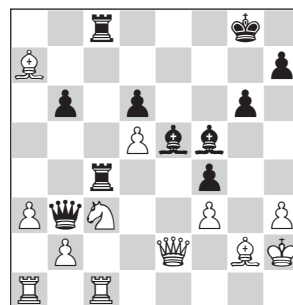
with the large threat of 25...f3+. He then analyses three defences for White:

A) Tal describes as the most interesting continuation 25.♙f3? which was the basis of Goldberg's criticism of Black's play. All analysts, Tal included, now considered only 25...b6, but the engine points out that simply 25...♖a8 traps the bishop and Black is clearly better;

B) 25.♗g1 b6 (note that against 25.♗g1, the same idea as above fails, because of 25...♖a8 26.♙f1! ♖cc8 27.♗b5) 26.♖d1 ♖xb2 27.♖a2? ♖xc3!, winning for Black, was given by various analysts. The engine shows the improvement 26.a4 ♖8c7 (26...♖4c7? now loses to 27.♖b5) 27.♙b8 (27.♙f1 f3! 28.♖xf3

♖4c5 and the bishop on a7 falls) 27...♖c8 28.♙a7 ♖8c7 with a draw by repetition;

C) But best is 25.f3. There are more than a few aesthetic considerations that White has to ignore in order to decipher this position! It looks disgusting to play f3, but this actually opens up two retreat squares for the dark-squared bishop once White achieves a3-a4-a5. After 25...b6,

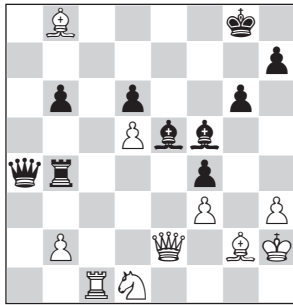


analysis diagram

Tal gave the line 26.♖d1 ♖xb2 27.♖a2 ♖xc3 28.♖xb2 ♖xc1 29.♖d2 ♙xb2 30.♖xb2 ♖1c2 31.♖d4 ♖e8 32.♖xf4 ♖ee2 33.♖g3 ♖xg2+ 34.♖xg2 ♖xg2+ 35.♗xg2 b5 with a drawn opposite-coloured bishops ending.

But here again there is the move 26.a4, covering the b5-square, so as to allow ♗b5 or ♖b5, and also teeing up ♖a3. This time it yields a winning advantage, e.g. 26...♖b4 (26...♖b4 27.a5 bxa5 28.♙f2 is another point of 26.a4, whilst the direct bishop hunt 26...♖8c7 runs into the thoroughly evil 27.♖a3 ♖b4 28.♙b8 ♖c8 (28...♖b7 29.♗a2) 29.♗a2! when the forced exchanges

29...♖xb2 30.♗xb2 ♕xb2 31.♖xc4  
 ♖xc4 32.♖b3 ♕e5 33.♘b4 leave  
 White still a piece up in the ending)  
 27.♘d1 ♖xc1 28.♖xc1 ♗xa4 29.♕b8.



analysis diagram

Black has managed to stop White  
 from reopening the g1-a7 diagonal,  
 but the bishop proves incredibly  
 slippery! 29...♗a8 30.♕c7 ♗xd5  
 31.♕d8

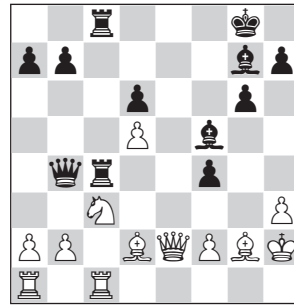


analysis diagram

and the bishop's rather nifty  
 footwork will see it emerge alive via  
 h4.

31...♖d4 32.♘c3 ♗c6 33.♖d1 ♖xd1  
 34.♗xd1 ♘g7 35.♕f1 ♕d7 36.♕h4  
 ♗c5 37.♗d2 ♕c6 38.♘g2 ♗b4  
 39.♕f2 and White gradually reeled  
 the point in, 1-0 (63) Stockfish-  
 Dragon 3.1, Classics 2022.

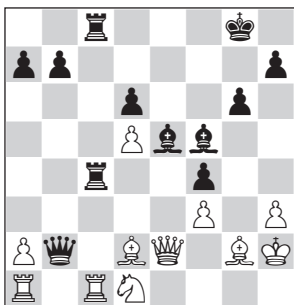
The conclusion is therefore that  
 Tal's sacrifice should have lost,  
 but White had to find 23.a3 ♗b3  
 24.♕xa7 ♕e5 25.f3! b6 26.a4!



**23...♗xb2?**

Played after 15 minutes' thought.  
 It's hard to believe, but this  
 move – that seems to accomplish  
 everything Black could have  
 dreamed of – is a serious mistake.  
 It's worth considering what  
 compensation Black actually has  
 for the sacrificed knight on f4.  
 Although the white king has been a  
 little exposed by losing the g-pawn  
 from its structure, it is clearly  
 not threatened by any concerted  
 danger. Incidental tricks have  
 arisen – ...♕e5, threatening ...f3+  
 or ...f3, as a disruptive intermezzo  
 – but nothing is going to be fatal  
 to the white king. Black's key  
 achievement after ...♘f4 is to  
 open the diagonal of Black's dark-  
 squared bishop (which Botvinnik  
 had sought to close with 10.d5),  
 increasing the pressure against  
 White's knight on c3, and the  
 achievement becomes even greater  
 once White plays 23.♕d2, allowing  
 Black to capture the b2-pawn when

all of a sudden the white knight on c3 is under fire from most of Black's army. And yet, a hidden downside of playing ...exf4 is that White's queen suddenly becomes active along the e-file and this gives White a tactical way to deal with the pressure against his queenside. Tal says he had even written down the correct move 23...♙e5 (this game was played back in the days when writing one's move down before playing it was not only legal, but recommended practice by writers such as Kotov!) but rejected it because of 24.f3 (24.♙f3 looks more active, but the bishop on f3 is just as restricted for now as on g2, due to the discovered check threat with ...f3+; 24...♗xb2 25.♖ab1 ♙xb1 26.♖xb1 ♗c2 27.♖c1 ♗f5 is fantastic for Black, 0-1 (80) Stockfish-Dragon 3.2, Classics 2023) 24...♗xb2 25.♘d1 (25.♖ab1 ♙xb1 26.♖xb1 ♗c2 27.♖c1 ♗f5 doesn't achieve anything for White).



analysis diagram

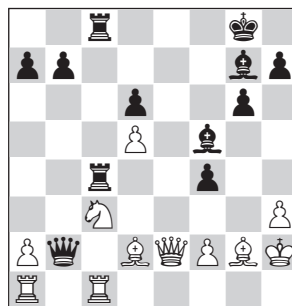
Now there are two lines:

A) 25...♗d4 26.♖xc4 ♖xc4 27.♖c1 ♖xc1 28.♙xc1 ♗xd5 29.♙f1 which he assesses as approximately equal.

The engine thinks White is rather better;

B) 25...♗xa1 26.♖xa1 ♙xa1 is the engines' top choice when despite the favourable material balance, White has to look for perpetual check. The logjam of pieces on White's second rank is easy prey for Black's rooks once they double!

27.♘f2 ♖c2 28.♘g4 ♖xa2 (28...♙xg4 29.hxg4 ♙e5 30.♗h3 ♖xa2 31.♗e1 ♖cc2 32.♗h4 h6 33.♗d8+ ♔f7 34.♗d7+ ♔f8 with perpetual check, ½-½ Stockfish-Dragon 3.2, Classics 2023) 29.♘h6+ ♔f8 30.♘xf5 gxf5 31.♗e6 ♖cc2. The engines try many things but everything ends in perpetual check. Black's pressure along the second rank is too powerful: 32.♙xf4 ♖xg2+ 33.♗h1 ♖ge2 34.♙h6+ ♙g7 35.♗c8+ ♔f7 36.♗d7+ ♖e7 37.♗xf5+ ♔e8 38.♗h5+ ♔f8 ½-½ Dragon 3.2-Stockfish, Classics 2023.



#### 24.♖ab1

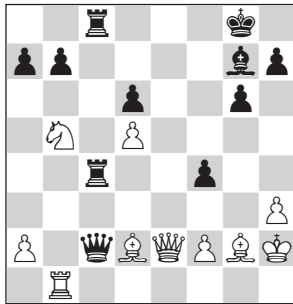
Now 24.♘d1? loses to 24...♗e5! as Tal correctly notes, exploiting the fact that the discovered check with ...f3+ is still open.

25. ♖f3 ♙e4 26. ♚xe4 ♜xe4  
 27. ♙xe4 ♙xa1 28. ♞xa1 ♞xe4  
 29. ♜c3 ♞d4 30. ♙e1 ♞d3 31. ♜e4  
 ♞c2 32. ♜g2 ♜g7 33. ♞b1 b6  
 34. ♜xd6 ♞xd5 35. ♜b5 ♞xa2 0-1  
 (46) Dragon 3.2-Stockfish, Classics  
 2023.

**24...f3**

This was the move on which Tal had been relying. It is not the best move by any stretch, but this shocking intermezzo finally sent Botvinnik into a tail-spin!

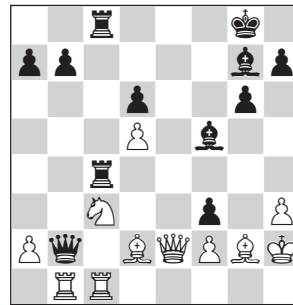
On the other hand, Black is now losing anyway, the only alternative being 24... ♙xb1 25. ♞xb1 ♚c2 26. ♜b5!.



analysis diagram

This is the gorgeous point. 26... ♙e5 (hoping to block the e-file due to the threat of ...f3+; 26... ♖xb1 27. ♜xd6 and the threat of ♖e6+ is terminal, quite apart from the fact that White is simply threatening ♜xc4, winning back the sacrificed rook with a big material advantage). 27. ♜xd6! (too late!) 27... ♙xd6 28. ♖e6+ ♜g7 (if

28... ♜h8, 29. ♖xd6 ♖xd2 30. ♖f6+ ♜g8 31. ♞xb7 wins) 29. ♞xb7+ ♞8c7 30. ♞xc7+ ♙xc7 31. ♖e7+ ♜g8 32. d6 (bringing the light-squared bishop into the action too) 32... ♖xd2 33. dxc7 ♞xc7 34. ♖xc7 ♖xf2 35. ♖c4+ ♜g7 36. ♖c3+ with an extra piece for White. The win isn't trivial, but the engines scored 100% as White from here! 1-0 (82) Dragon 3.1-Stockfish, Classics 2022.

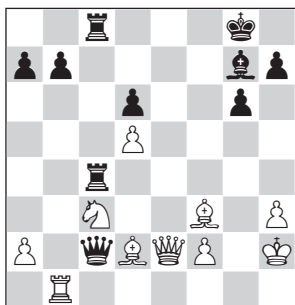


**25. ♞xb2??**

An astonishingly panicky reaction from the Patriarch! You can't help thinking back once again to his game against Bronstein where he sacrificed most of his advantage (worth a whole rook when he started!) just for the relief of exchanging queens. Perhaps aiming for the exchange of queens was also part of his programming for these games? In this case, you really feel that Botvinnik took the queen on b2 as an emotional decision and only looked afterwards at what he was threatened with. And that is quite a lot! Two huge pins along the c-file and the long diagonal and

a pawn on e2 just one move from queening. It's no longer surprising that White is losing something serious back.

During the game, both players calculated 25.♙xf3 ♖xb1 26.♜xb1 ♔c2



analysis diagram

27.♜c1 ♔b2 (Botvinnik had also been worried by 27...♙f5 but this loses to 28.♙g4 ♔e5+ 29.♙xe5 ♙xe5+ 30.f4 ♜xc3 (30...♜xf4 31.♙xc8 ♜d4+ 32.♙g1 ♜xd2 33.♘e4 was Leela's favourite path to victory) 31.♙xc8 when White wins. This was shown to Botvinnik after the game by his opponent, and the engine confirms it) 28.♞b1 and assumed White had no more than a repetition.

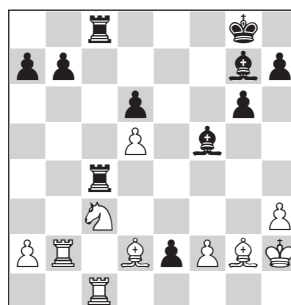
But back at the diagram, there are several ways to win and different engines choose their own favourites. A few days later, Salo Flohr pointed out 27.♙e4!! ♜xe4 (27...♜e8 28.♙xc4 ♙xd2 29.♘e2 b5 30.♙d3 ♙xd3 31.♙xd3 1-0 (67) Stockfish-Dragon 3.1, Classics 2022) 28.♘xe4 which wins after both

A) 28...♙xb1 29.♘xd6 ♜f8 30.♙e6+ ♙h8 31.♘f7+ ♜xf7 32.♙xf7; and

B) 28...♙e5+ 29.♙g2 ♙xb1 30.♘xd6! ♙xd6 31.♙e6+ ♙g7 32.♙d7+! ♙g8 33.♙xc8+ ♙f8 34.♙e6+ ♙g7 35.d6.

The engine demonstrates another win for White in the line 27.♜c1 ♔b2, this time with 28.♙g4, e.g. 28...♜f8 (or 28...♙e5+ 29.♙g2 ♜8c7 30.♙e6+ ♙h8 (30...♙g7 31.♙h6+) 31.♘d1 ♙d4 32.♜xc4 ♙xc4 33.♙f3 ♙g7 34.♙g5 and the attack is too strong) 29.♞b1 ♙c2 30.♙xc4 ♜xf2+ 31.♙g1 ♙xd2 32.♙e6+ ♙h8 33.♘e4 ♜g2+ 34.♙f1 and there are no more checks.

### 25...fxe2



### 26.♞b3

26.♞e1 ♙d3 27.♙f3 ♙xc3 28.♙xc3 ♜xc3 29.♙xe2 ♜e8 is Dragon's best line for White... which says something! 0-1 (48) Dragon 3.1-Stockfish, Classics 2022.

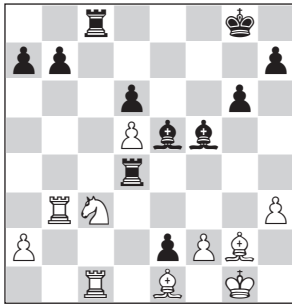
### 26...♞d4

Disrupting White's defensive structure. The bishop cannot remain on the only square from which it shores up both the knight on c3 and the rook on c1.

### 27.♙e1

27. ♖xe2 ♜xd2 28. ♜xc8+ ♕xc8;  
 27. ♖g5 ♕e5+ 28. f4 ♜xf4 29. ♖xf4  
 ♕xf4+ 30. ♖h1 ♕xc1 31. ♖xe2 ♜c2  
 0-1 (65) Stockfish-Dragon 3.1,  
 Classics 2022.

**27... ♕e5+ 28. ♖g1**



**28... ♖f4**

Tal doesn't always choose the most efficient way of finishing the game, but it is more than enough.

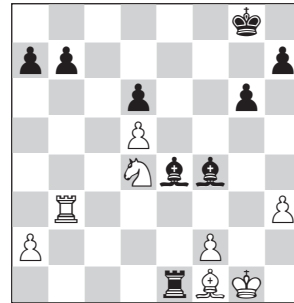
28... ♜xc3! 29. ♜bxc3 (29. ♜xc3 ♜d1  
 30. f4 ♕d4+ 31. ♜e3 ♜xe1+ 32. ♖f2  
 ♜g1 33. ♖xe2 ♕xe3 was one cute win  
 in Dragon 3.1-Stockfish, Classics  
 2022 0-1 (42)) 29... ♜d1 30. ♜c7 ♕b2  
 (or 30... ♖f4, chasing the white  
 rook off the first rank: 31. ♜e7 ♜xc1  
 32. ♜xe2 ♕d3 33. ♜e7 ♖f8 34. ♜e6  
 ♖f7 0-1 (40) Stockfish-Dragon 3.1,  
 Classics 2022) wins at once, but Tal's  
 line is also completely winning. He  
 mentions that his concentration  
 was interrupted when the arbiters  
 insisted on moving the game to  
 a closed room, because of the  
 noise in the auditorium! Fearful  
 that the interruption might

cause a miscalculation, he says he  
 deliberately eschewed the quicker  
 line in favour of the safety-first  
 text.

**29. ♖xe2 ♜xc1 30. ♖xd4**

30. ♖xc1 ♜d1 wins back the piece  
 with a huge advantage.

**30... ♜xe1+ 31. ♖f1 ♕e4**



The dust clears to reveal an ending  
 where Black has an extra pawn, two  
 powerful bishops, the more active  
 rook and a target on d5. The rest is  
 easy for Tal.

**32. ♖e2 ♕e5 33. f4 ♖f6 34. ♜xb7  
 ♕xd5**

Now he has a passed pawn as well.

**35. ♜c7**

35. ♜d7 ♕c4.

**35... ♕xa2 36. ♜xa7 ♕c4 37. ♜a8+  
 ♖f7 38. ♜a7+ ♖e6 39. ♜a3 d5 40. ♖f2  
 ♕h4+ 41. ♖g2 ♖d6 42. ♖g3 ♕xg3  
 43. ♕xc4 dxc4 44. ♖xg3 ♖d5 45. ♜a7  
 c3 46. ♜c7 ♖d4**

Now Botvinnik sealed

**47. ♜d7+**

but resigned without resuming.

**0-1**