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## The Process of Elimination

## Part Two

Studies are an excellent training ground for learning about the process of elimination. Here's a simple example.
S. Isenegger, 1951


## 1.?

We can immediately toss out 1.g7? Be6+! 2.Kxe6 Kxg7 (an elementary draw, as the bishop doesn't control the rook pawn's promotion square). In the case of 1.Bg8? the same check comes to the rescue 1...Be6+! (but not 1...Be8+? 2.

Kxe8 Kxg6 3.Kf8!+-, and the black king doesn't get to a safe corner). Finally, 1.Kf6? Be8 2.h4 Bxg6 3.Bxg6 leads to stalemate.

## 1.Kg8!

In order to choose this move it isn't enough to throw out all the other continuations, you also have to foresee the bishop sacrifice that enables you to put your opponent in zugzwang. For example, 1...Bf5 2.g7! Bxh7+ 3.Kh8 Kg6 4.h4! Kh6 5.h5+-. Or 1...Be6+ 2.Kh8! Bf5 3.g7! Bxh7 4.h3! Kg6 5.h4 Kh6 6. h5+-.

In School of Chess Excellence 1: Endgame Analysis and School of Chess Excellence 2: Tactical Play, I described an effective training method: playing through specially-chosen positions taken from practical games or studies. In those exercises it's impossible or extremely difficult to calculate the correct path from beginning to end, and so you have to progress move by move.

By playing through these studies we learn to make some decisions quickly with the help of the process of elimination - and at the key points, on the contrary, to think for a while in order to find non-obvious counterplay for our opponent and the only path that allows us to achieve our aim.
O. Pervakov, 1997

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by Mark Dvoretsky
\& Artur Yusupov

1.?

The rook is inviolable: 1.Kxh3? d2 2.Kh4 (threatening 3.Bf8\#) 2...Kg7!-+. The move 1.Bb4? (or 1.Bc1?) 1...Rxh5-+ is also unsatisfactory. Thus we come to the only playable option: first we force the king to occupy the h5square, and only after that do we stop the d3-pawn. It will then be difficult for Black to fight the passed a-pawn.

## 1.Bf8+! Kxh5 2.Bb4 Rh4 3.Bd2!

We make the last move after convincing ourselves that $3 . \mathrm{a} 5$ ? is impossible because of 3...Rxf4 4.a6 Rf5 5.a7 Rg5+ and 6...Rg8.

## 3...Kg6!

Threatening $4 . . . \mathrm{Rh} 5$, but again we have a way of closing the rook's outlet to freedom.
4.f5+!

It seems that the battle is over: after 4...Kxf5 5.a5 the pawn can't be stopped. But our opponent finds a surprising chance.

## 4...Kh5!!

What's this? It looks like he's playing for stalemate. Well, for now we have to move our pawn towards the promotion square and we'll choose a method of fighting our opponent's idea a little later.

## 5.a5 h6! 6.a6 Rh3!



## 1.?

And now the moment has come to go into the position deeply. We can reject both 7.Kxh3? and 7.a7? Rg3+! There are various ways to avoid an immediate draw. Let's test them.

The "flashy" 7.Bg5? fg! even loses.
7.Bf4? d2! 8.Bxd2 d3 gives us nothing ( $9 . . . \mathrm{Rg} 3+$ is again threatened), and on 9.Bf4 - either 9...d2 10.Bxd2 Rg3+!, or 9...Rh4 10.a7 d2=.

On 7.f4? Black replies 7...Rh4 8.f3 Rh3! (renewing the threat of 9...Rg3+) 9 . Be1 d2! (it's important to get rid of one of the pawns) 10.Bxd2 d3 11.Be1 Rg3 + (11...d2 12.Bxd2 Rg3+ is also possible) 12.Kxg3 (12.Bxg3 d2) 12...d2 13. Bxd2 - stalemate.

## 7.Bxh6! Kxh6

After the destruction of the h6-pawn, 7...d2 8.Bxd2 d3 is now useless because of 9.f4! Rh4 10.f3+-. And in the variation in which the pawns on both sides queen, White finds a way to achieve a decisive advantage.
8.a7 d2 9.a8Q d1Q 10.Qh8+! (but not 10.Qf8+? Kh7!=) 10...Kg5 11.Qg7+

Kxf5 (11...Kh5 12.Qxf7+ Kg5 13.Qg6+ doesn't change anything) 12.Qg4+
Ke5 13.f4+! and 14.Qxd1.
In the examples we looked at above the continuations that should have been rejected had a concrete refutation: a move or a forced variation leading to clearly unfavorable consequences. In endgame situations you can rarely get by without such precise calculations - which is why there are lots of studies and practical endings among the exercises that I offer for training on the process of elimination.

In the opening and middlegame we often eliminate this possibility or that one out of positional considerations. In some respects this is easier: it doesn't require precise calculation or finding non-obvious resources for your opponent, but in others it's harder - the evaluation may betray us.

Enklaar - Dvoretsky
Wijk aan Zee, 1975
1.e4 e5 2.Nf3 Nf6 3.Nxe5 d6 4.Nf3 Nxe4 5.d4 d5 6.Bd3 Be7 7.0-0 Nc6 8.

Re1 Bg4 9.c3 f5 10.h3 (10.Qb3 or 10.Nbd2 are usually played) 10...Bxf3!? (10...Bh5 is also possible) 11.gf!? (11.Qxf3 0-0=) 11...Nf6 (11...Nd6? 12. Qb3) 12.Bxf5 0-0 13.Qd3 Bd6 14.Bg5 Ne7!


## 1.?

Black, obviously, wants to exchange on f5. We can immediately toss out 15. Bxf6? Rxf6 16.Bxh7+ Kh8 (or 16...Kf7) with the very dangerous threat of 17...g6 - White's position is unsatisfactory here.
15.Re6? Nxf5 16.Qxf5 is also a mistake in connection with 16...Qd7! 17.Bxf6 Rae8!

But the natural bishop check on e6 should be rejected not out of concrete considerations, but purely positional ones: the e7-knight gets the g6-square, after which there's the threat of seizing the very important f 4 -square, which is in close proximity to the white king.

So White should agree to exchange off the f5-bishop and simply complete his
development: 15.Nd2! Nxf5 16.Qxf5 Qc8 17.Qxc8 Raxc8=.
Played in the game was 15.Be6+?! Kh8 16.Nd2 Ng6 (threatening 17...Bf4) 17.Bf5?
"Mistakes never come one at a time" - Bertus Enklaar choked and quickly lost. 17.Bxd5? Bf4 18.Bxf6 Qxd5-+ didn't work; he should have chosen between 17.Qf5 (on which I intended 17...c6 with a subsequent Qc7, Bf4) and 17.Nb3.
17...Bf4! 18.Bxf6 (18.Bxf4 Nxf4 19.Qe3 N6h5 or 18.Bxg6 Bxg5 are hardly better) 18...Qxf6 19.Bxg6 Bxd2 20.Re2 (20.Qxd2 Qxg6+ is joyless too) 20... Bf4 21.Bxh7 (21.Bh5 Qg5+ 22.Bg4 h5) 21...Qg5+ 22.Kh1 Qh5 White resigned.

Ivkov - Polgar
Monaco, 1994
1.e4 c5 2.Nf3 Nc6 3.Bb5 g6 4.0-0 Bg7 5.Re1 Qb6?! 6.Nc3 (6.Na3!?) 6...Nd4 7.Nd5 (7.Bc4!?) 7...Qd8 8.Nxd4 cd 9.c3?!
9.d3 is preferable, for example, 9...a6 10.Ba4 b5 11.Bb3 e6 12.Qf3! with a formidable attacking position.
9...e6


## 1.?

The natural move $\mathbf{1 0 . N f 4}$ ? that was made in the game was refuted by an attack on two White pieces at the same time, 10...Qg5! It was necessary to return the knight to the firing line: 11.Nd5 ed 12.ed+, but there wasn't enough compensation for the loss of material and Black won.

The knight sacrifice is also incorrect in this version: 10.Qe2? ed 11.ed+ Kf8 12.d6 Bf6-+.

It would seem that we already know enough that by process of elimination we can arrive at the only correct move, 10.Nb4!+/=. For a practical game this reasoning is playable, allowing us to make a rational decision without wasting too much time. Still, at the end of the day we should check again to see if we've missed any candidate moves that make sense - what if they exist and promise us more than the modest knight retreat?!

When the German player Berthold Ries was solving the problem he looked for a way to get an attack after sacrificing the knight on d5. He examined possibilities that I hadn't considered. His conclusions were tested and corrected by Artur Yusupov, and then by myself too. I'll give our brief summary.

In the variation 10.d3?! ed 11.ed+ Kf8 12.Bf4 Bf6 13.c4 Kg7 White is left with definite compensation for the sacrificed piece, but it still isn't worth it for him to go into this kind of position.

In the case of $10 . \mathrm{b} 3$ ?! the knight can't be taken immediately: 10...ed? 11.ed+ Kf8 12.Ba3+ or 11...Ne7 12.d6+-. However, 10...a6! is very strong; for example, 11.Bd3 ed 12.ed+ Kf8 13.Ba3+ d6, or 11.Ba3 Bf8!-/+ (11...ab? 12. $\mathrm{Bd} 6!$ is weaker).

But the move 10.Qa4!? deserves serious attention. On 10...a6 you can reply either 11.b3 Kf8 12.Ba3+ d6 13.Nf4, or 11.d3!? (and if 11...Rb8?, then 12. Bf4!). After 10...ed 11.ed+ Kf8 12.Qb4+ (or 12.Qa3+) 12...Ne7 13.d3 h6 14. Bf4 Bf6 15.Bd6 a6 a tense position is created that is difficult to evaluate.

## Belikov - Saulin

Russian Championship, Elista, 1995
1.e4 c5 2.Nf3 d6 3.d4 cd 4.Qxd4 a6 5.c4 Nc6 6.Qd1 Nf6 7.Nc3 g6 8.h3 Bg7 9.Be2 0-0 10.0-0 Be6 11.Be3 Qa5 12.Nd2 Rfc8 13.Nd5


## 1...?

Difficult problems always have simple, easy-to-understand incorrect solutions (from the famous book Murphy's Law).

I used this example for a long time as an exercise for paying close attention to your opponent's counter-chances. The logic seemed clear. You want to parry the threats of $14 . \mathrm{Nb} 6$ and $14 . \mathrm{Bb} 6$ with $13 . . . \mathrm{Nd} 7$. But your opponent has a strong tactical response, and once you notice it, with a heavy heart you have to play 13...Bxd5 14.cd Ne5 - typical use of the process of elimination. True, the position that arises after 15.f4 Ned7 16.Bd3 is very unattractive, but what to do, there doesn't appear to be any choice.

But still, why is the knight move bad?
13...Nd7!? 14.Bb6! Nxb6 15.Nb3


## 1...?

Black loses material. His resistance didn't last long.

Other knight retreats don't bring any relief either:
16...Nb6 17.Nxc6 Rxc6 18.b3! Bxa1 19.Qxa1 Nd7 20.f4, and White's material advantage should make its presence felt.
16...Nf4!? 17.Nxc6 Rxc6 18.Re1!? (18.Bf3 also deserves attention, with the idea on 18...Bxc4 of replying 19.e5!) 18...Bxb2 (18...Nxe2+ 19.Rxe2 Bxc4 20. Rc2) 19.Rb1 Bc3 20.Rxb7 Bxe1 21.Qxe1, and again Black's chances of salvation aren't great.

## 17.Nxc6! Nxd1 18.Nxe7+ Kf8 19.Nxc8 Nxb2 20.Nb6 Ra7

A strange move. 20...Re8 21.Rab1 f5 looks like a more natural attempt to help the knight that's stuck in the opponent's camp. But even then White preserves a decisive advantage by choosing 22.e5! Bxe5 23.Rfc1 Bd4 24.Rc2 Bxb6 25. Rbxb2 with a subsequent $26 . \mathrm{Rxb} 7$.
21.Rab1 a5 22.Rfc1 Bd4 23.Rc2 Black resigned.
"The harm or the benefit of an action is conditioned by the aggregate of the circumstances," the pseudonymous nineteenth-century humorist Kozma Prutkov taught us. It would be a shame if you chose 13...Nd7 only because you missed 14.Bb6! And conversely, very good if you played that way having foreseen your opponent's tactical blow and prepared a positional exchange sacrifice in response (suggested by grandmaster Simen Agdestein).

## 15...Qa4! 16.Nxb6 Qb4 17.Nxa8 Rxa8



Besides the pawn captures 18...Bxc4 or 18...Bxb2, White also has to reckon with 18...a5 and 18...Rc8. In analysis I didn't manage to prove an advantage for White - evidently the opponent preserves fully-fledged counterplay. This course of action is much more promising from a practical point of view than the depressing defense after 13...Bxd5

The next game was played in the last round of a big "Swiss" and determined who would be the winner of the tournament and receive a very large monetary prize.

## Hellers - Khalifman

New York, 1990
1.e4 c6 2.d4 d5 3.Nc3 de 4.Nxe4 Bf5 5.Ng3 Bg6 6.h4 h6 7.Nf3 Nd7 8.h5

Bh7 9.Bd3 Bxd3 10.Qxd3 e6 11.Bf4 Qa5+ 12.Bd2 Qc7 13.0-0-0 0-0-0 14. Qe2 Ngf6 15.Ne5 Nb6 16.c4!?

[FEN "2kr1b1r/ppq2pp1/1np1pn1p/4N2P/ 2PP4/6N1/PP1BQPP1/2KR3R b - 0 16"]

Here's what Alexander Khalifman writes:
"The move made by Hellers came as a complete surprise to me. At first I couldn't even understand the point of the pawn sacrifice. Then I got it, but I still had to accept the sacrifice, as the threat of 17.Bf4 was too unpleasant. Only after our encounter was over did I find out from local players that White's 16th move wasn't a novelty, this had all happened before in lower-rated tournaments."

Later, besides taking the pawn, 16...c5 17.Bf4 (17.Be3!?) 17...Bd6 18.dc Qxc5 19.Kb1 was tried, with better chances for White. From myself I'll add that instead of the "automatic" move 17...Bd6 it would have been interesting to test an unexpected combination: 17...cd!? 18.Ng6 Bd6 19.Bxd6 Rxd6 20. Nxh8 Nxc4, for example, 21.Kb1 Na3+! 22.Ka1 Nc2+ 23.Qxc2 (23.Kb1=) 23...Qxc2 24.Rc1 Rc6 25.Rxc2 Rxc2 with an ending that's difficult to evaluate, in which Black's two pawns possibly compensate for being a knight down.

## 16...Rxd4 17.Be3! Rxd1+ 18.Rxd1


[FEN "2k2b1r/ppq2pp1/1np1pn1p/4N2P/ 2P5/4B1N1/PP2QPP1/2KR4 b-- 0 18"]

## 1...?

It's difficult for Black to complete his development. He has to deal with the threat of 19.Bf4 and 20.Ng6. A difficult endgame results from 18...Qxe5?! 19. Rd8+! Kxd8 20.Bxb6+ ab 21.Qxe5+/-.
18...Bd6? 19.Rxd6 Qxd6 20.Nxf7 is bad. If 18...Bb4?!, then 19.Nd3!, and then:
19...Be7 20.Bf4 Qd8 21.Ne5 Qe8 22.Ng6! (or 22.Nxf7!) 22...fg 23.Qe5+-;
19...Qe7!? 20.a3 Bd6 (20...Bxa3 21.Bxb6 ab 22.ba Qxa3+ 23.Qb2+/-) $21 . c 5$ Bxg3 22.cb Bd6 23.ba, and the position looks alarming for Black.

## 18...Rg8!!

"This strong move can be found by process of elimination (using Mark Dvoretsky's terminology). The main thing is not to panic."

Khalifman realized that it was very important for him to take his rook off the vulnerable h8-square in order to prepare to develop his bishop to d6.

Now 19.Qd2? Bb4! 20.Qxb4 Qxe5 21.Bxb6 ab 22.Qxb6 Qf4+ is in Black's favor. The move chosen in the game, 19.Bf4?!, is also bad.

The strongest continuation of the attack is 19.f4!, for example, 19...Bd6? 20. c5 or 19...c5 20.Qd3! (20.Kb1!?), and Black's position remains dangerous.

But he can rightly respond 19...Kb8!? (preparing 20...Nc8) or 19...Na4!?, and if 20.Bxa7, then 20...b6!

Ferdinand Hellers, unlike his opponent, couldn't cope with the problem he was facing, and his attack quickly fizzled out.

## 19.Bf4? Nbd7!

Again played with the help of the process of elimination: Now a knight rebound isn't dangerous any more: 20.Ng6 Qa5 21.Nxf8 Rxf8 22.Bd6 Rd8-/+.
20.Qd2 Bb4! 21.Qxb4 (21.Qd4 Bc5) 21...Nxe5 22.Ne2

Nothing better is evident: on 22.Kb1, there follows 22...Nd3!-/+, and if 22. Be3, then 22...Rd8!-/+.
22...Nxh5 23.Be3 Rd8! 24.Rxd8+ Qxd8, and Black successfully exploited his material advantage.

## Exercises

## 7. Planinec - Bagirov

Banja Luka, 1976


## 1...?

8. Vranesic - Smyslov

Interzonal tournament, Amsterdam, 1964

1...?

1.?
10. Dizdar - Chandler

Jurmala, 1983


## 1...?

11. M. Zinar, 1982

1.?
12. H. van der Heijden, 2002

1.?

## Solutions

## 7. Planinec - Bagirov

It seems that the first of two possible moves ( $42 . . . \mathrm{Kb} 8,42 \ldots \mathrm{Nc} 6$ ) should be rejected immediately because of $43 . \mathrm{Rb} 5$.


## 1...?

These kinds of mistakes in reasoning can't be avoided with superficial, careless use of the process of elimination. Black finds 43...Rc1+! 44.Kf2 Rc5! The moves 45.Rxc5 Nxd3+ and 46...Nxc5 are very bad, and on a rook retreat there follows (now or a little later) Rc7.

Bearing in mind that variation, on the contrary, we have to eliminate the move 42...Nc6?, which allows White to get close to the desired draw by means of 43.Nd7 Nb8 44.Ra1+ (44.Ne5 Rc7 45.Rf1 f5 46.Nxg6=/+ is also possible) 44...Kxb7 45.Rb1+ Kc7 46.Nxb8 Ra2 47.Rf1 Kxb8 (47...f5 48.Re1 Kxb8 49. Rxe6=) 48.Rxf7=/+.

Vladimir Bagirov made the right choice: 42...Kb8!, and after 43.h3 Rc7 44. Rb4 Nc6 45.Rc4 (45.Rb6 Ka7) 45...Kxb7 he successfully exploited his material advantage.

## 8. Vranesic - Smyslov

An attempt to play "technically," 60...Kf3?, is refuted by 61.h4! gh 62.Bxf4 Kxf4 63.Ke2(e1)=. So Vasily Smyslov simply took the pawn, 60...Nxh3! Having convinced himself that after 61.Ke2 Nf4+ there was no use in 62.Kf2 Nd3+, and otherwise there would follow 62...Kf3, his opponent ceased his resistance.

## 9. Agdestein - Nunn

The move 53.Ka2? was rejected in connection with 53...Nf7!, and on a queen retreat - 54...Qa3+! 55.Kxa3 Ra1\#.

Simen Agdestein played 53.Rc1! After 53...Rxc1+54.Kxc1, Black should have tried $54 \ldots$...Be2!, intending either $55 . . . \mathrm{Bf} 3$ or $55 \ldots$...b5. An attempt to force events with 54...Qf1+ 55.Nd1 Be2 56.Qxd6 Qxd1+ 57.Kb2 didn't bring Black any benefits, and the game ended in a draw.

## 10. Dizdar - Chandler

Murray Chandler had just sacrificed a rook on g2 and given check with his queen on g 4 , after which the players agreed to a draw. And they did the right thing! Black should give perpetual check: 24...Qf3+! 25.Kg1 Qg4+ 26.Kh1 Qf3+!.

The appealing attempt to play for a win with 24 ...Qf4? is forcibly refuted.
25.Qa4+! (25.Be5 Bxe5 26.Qa4+ Kd8! 27.Qa5+ Ke8= is inaccurate) 25...Kf8 (25...Kf7 26.Qd7+ Kxf6 27.Qh3+-)


Black's attack can be repelled in two ways:
26.Bg7+! Kg8 27.Be5! Qf3+ (27...Bxe5 28.Rg1+ and 29.Rg2+-) 28.Kg1

Bxe5 29.Qb3!+- (29.Rb3 Bc3= is worse);
26.Be5! Qf3+ (26...Qxe5 27.f4!+-; 26...Bxe5 27.Qa3+ and 28.Qh3+-) 27.Kg1 Bxe5 28.Rb3!+- (but not 28.Qb3? Bc3!=).

## 11. M. Zinar

1.Kf4(f3)? Kb3 2.e5 Kxa3 3.e6 Kb2 $4 . e 7$ a3 5.e8Q a2 leads to a draw - the white king is too far away from the queenside. We should note that with the king on e3 or e2 this position would be won.
1.e5? Kd5 2.Kf4 Ke6 3.Ke4 Ke7 4.Kd5 Kd7 5.Kc5 Ke6 6.Kb5 Kxe5 7.Kxa4 Kd6 8.Kb5 Kc7= doesn't achieve the aim either. If the pawn had been eliminated on e4 instead of e5, the black king wouldn't have succeeded in getting back to the safe corner.

White's strategy becomes clear: don't move the pawn, don't move the king away from the queenside without reason, and first try to make it your opponent's turn to move in the initial position.
1.Ke2!! Kd4 (1...Kb3 2.e5 Kxa3 3.e6 Kb2 4.e7 a3 5.e8Q a2 6.Kd2 a1Q 7.Qb5 +, and so on.) 2.Kf3 Ke5 (2...Kc4 3.Ke3! - zugzwang) 3.Ke3 Ke6 4.Kd4 Kd6 5.Kc4 Ke5 6.Kb4 Kxe4 7.Kxa4 Kd5 8.Kb5+-.

## 12. H. van der Heijden

Attempts to win can only be associated with the pawn sacrifices g4-g5 or e4e5. These breakthroughs obviously can't take place now or after 1.Kh3? Kf3.

## 1.Kh1!! Kf1

If 1...Kf3, then 2.e5! (2.g5? fg 3.e5? Kf2! even loses) 2...fe $3 . g 5$ e4 4.Kg1!+-.

## 2.e5! fe $3 . g 5$ e4 4.g6 e3 $5 . g 7$ e2 6.g8Q e1Q 7.Qg2\#.

Conclusion next month.
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