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# Endgame Virtuoso Magnus Carlsen 

His Extraordinary Skills Uncovered and Explained

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## Preface

In 2014 I was lucky enough to be a second of Joshua Altman at the Reykjavik Open. I saw Henrik Carlsen (Magnus' father) playing in the event, so I asked if I could interview him. At the end of a very pleasant conversation, I gave him my Endgame Virtuoso Anatoly Karpov book as a present. I signed the book and wrote that very few players in the history of chess had a chance of reaching the great Soviet World Champion's level of endgame play. Under my signature I expressed my hope that Magnus would reach that level, and I wished him good luck. However, in no way did I think that in a few years' time I would write a book on Magnus' endgame play.

Magnus Carlsen is only in the middle of his career, but has already achieved so much. He has already become one of the game's all-time greats. He has achieved more than most World Champions by obtaining the highest title and defending it two times. He is the world number one on the FIDE rating list. Although his edge against his rivals is currently not that big, his previous lead over the world number two was one of the biggest ever.

Carlsen's extremely successful endgame play has been one of the key reasons for his success. But that is not the only reason why it is worth looking in great detail at his endgame play. I think the Norwegian grandmaster is the first World Champion who has never played an adjourned game - or if he has, it was at the very beginning of his career. Unlike older players, Carlsen did not acquire his endgame skill by analysing adjourned positions during nights with little sleep. On the other hand, he was able to learn a lot from endgame tablebases, so he surely knows many more six-piece positions than earlier champions.

A couple of great players have hailed him as the reincarnation of Karpov, and it is hard to argue with them, as they have actually played both Karpov and Carlsen. However, from my perspective, having written three books on Karpov and having already looked into Carlsen's endgames, I could see clear differences. When I worked in Singapore and told people that their country is similar to Malaysia, they were surprised. But while somebody like me who came from afar could see the similarities, those who live close to one another see the differences.

Of course, I believe that both Karpov and Carlsen are phenomenal in endgames, but I also think they are both lucky to have had their career
when they did. What do I mean by that? Karpov was not physically strong, and sometimes in his career he ran out of energy. I think having an adjournment after 5 hours served his interests; also, he had world-class grandmaster helpers. On the other hand, Carlsen plays a lot of sports and is, just like Fischer and Kasparov were, very healthy and physically strong. Therefore he can keep his concentration level longer than others, and wins some games by outlasting his opponents. Beliavsky said that Karpov and Carlsen are the only two players whose level of play does not decrease as the game goes on, but goes up. I am sure that Beliavsky is right, but I think Karpov would not have been able to keep his level up for another 2-3 hours after the first 40 moves. Carlsen can, as he has proved on many occasions. Being allowed an adjournment would have helped Carlsen's opponents to hold slightly worse positions a few times. I believe that Carlsen would be better able to adjust to the old system than Karpov would have been to the new one. As a side note, Carlsen's attitude reminds me very much of Beliavsky's, more than any other former great player. Neither of them cares much about what type of position they get - it can be tactical, complicated-positional, or an equal ending - they both want to fight.

When I started to work on Carlsen's endgames, studying the comments of various grandmasters in New In Chess magazine and ChessBase Megabase as well as in a number of books on Carlsen (listed in the Bibliography in the back of the book), and adding my own analyses, I was surprised to find that Magnus plays them quite differently from Karpov. The Russian World Champion rarely had to save difficult endgames; Carlsen has surely saved many more of those than Karpov. On the other hand, the Russian made fewer mistakes, but I think that is mainly because he had the chance to analyse the positions at home. Karpov caught the opponent's king more often, while Carlsen more often seems to take advantage of the very subtle choice between knight and bishop. Karpov liked to base his game plan on his exceptional endgame skill from the start of his career, while Carlsen only became an endgame monster in the middle of his teenage years.

Why devote a book to Carlsen's endgames when he is still very far from finishing his career? Because he has already produced so many fantastic endgames, and studying them will bring a lot of pleasure and instruction to many chess fans. I will review his best endgames in chronological order, so we can see how Carlsen developed his skill.
For many years, Karpov and Kasparov were the very best players in the world, and I followed their games like everybody else. But it was only
when I started writing books on their play and continuously worked on their masterpieces that I was able to more fully appreciate their tools and specialities. I am sure that focusing on Carlsen's endgame play will, in the same way, help us to discover new aspects of his endgame artistry.

Given the fact that I coach junior players, I am particularly devoted to investigating and analysing what makes junior players develop rapidly and to scrutinising the early years of great players. Therefore, in the chapter on the early years I will make some remarks on Carlsen's general play alongside my main focus, which is his endgame play. Simen Agdestein's excellent book on Carlsen, How Magnus Carlsen Became the Youngest Chess Grandmaster in the World, had a very wide target audience and did not go into great detail in his game commentary. Simen's desire to please non-chessplaying readers meant that he did not analyse variations, but restricted his comments to brief verbal points. Agdestein's book almost never entered into subjects like what openings Magnus chose. For chess experts and devoted chess trainers these small things would have been very interesting to read about. Magnus became one of the youngest grandmasters ever, so it is therefore very much worth scrutinising his chess in his early years. When covering the years after he stopped playing in junior events, I will concentrate exclusively on his exceptional endgame play.

Magnus' level of endgame play allowed him to beat Teimour Radjabov in the crucial game to earn the right to challenge Viswanathan Anand for the title of World Champion.

I asked Dennis Monokroussos whether he had an especially memorable Carlsen endgame. He answered: 'Not really - they all kind of blend together for me. They used to jokingly accuse Tal of "witchcraft" back in the day for winning the crazy tactical games he did. That's sort of how I feel about many of the endgames Carlsen has managed to win over the years.' I think this book will help chess fans to understand Magnus' magic in endgames and uncover some of his tools and methods.

Dear reader, working through all of Carlsen's best endgames will be a long but fruitful journey, and we will touch on other aspects of his chess along the way. Please join me, for if you like endgames you will surely not be disappointed!

Tibor Karolyi
Soltvadkert, May 2018

## CHAPTER 2

## The young superstar rises to the top

The most important thing of the years 2004－2006 is that Magnus became a professional player．Maybe the decision was made a bit earlier，however it was sealed in 2004．Playing in the same event and in the same hall with the very best professionals of the world must have given him motivation． He also got acquainted with the life of the elite players，and he surely liked it．Financially the risks surely disappeared．He was selected for the first time into the Norwegian Olympic team，and playing on board one would be a pleasant memory for the rest of his life．In a rapid KO event Magnus had a winning position against Garry Kasparov，but drew．In the World Cup he put up a great fight against Levon Aronian，one of the very best players．In 2006 he won the Wijk aan Zee B event－his first tournament win in an extremely strong event．

His openings and endgames improved a lot．In this book there are many games in which Carlsen defeated world－class players，and the first of these is his win over Nigel Short．In his game with Lie we can see that he was already an all－round endgame player as he managed to crack a fortress．In the Cheparinov game he showed some quite special imagination．

## 2004

FIDE rating（age 13 ＋ 1 month，January 2004）：2484．World number 746.

Game 13
Halldor Halldorsson
Magnus Carlsen
Reykjavik 2004 （1）


## 24．．． 0 e4

2159 Carlsen keeps the knights on the 2484 board，at least for a while．After 24．．．dxe2 25．cxd6 exd6 26．를xe2囬ac8 27．g3 Black would have a tiny advantage．

## 25． 2 A 4 4xc5 26．

Taking the e－pawn is simpler．On 26．品xe7 営fe8（26．．．g5？！27．b4！）27．党c7
品ac8 $28 . \mathrm{d} 6$ the game will end in a draw．
26．．．．．．a7 27． $0 x d 3$
Halldorsson is ready to settle for a somewhat worse endgame with an isolated pawn．

White could have come up with an interesting pawn sacrifice here， which my computer found：27．b4
 has enough compensation for the pawn，as he has pressure on the d6－pawn and the knight is out of play on 44 ．
27．．． Qxd3 28．$_{\text {exd }}$


## 28．．．를 $8!$

Magnus makes sure that White will not be able to exchange the isolated pawn．
 f5
Black hopes to get closer to the isolated pawn．

## 32．f4？！

This takes the e5－square away from the black king．In this position 32．当e3！，exchanging a pair of rooks，would help the defender， as the king would be able to assist


35．．．奌f6 $36 . f 4$ and White can approach the centre．

## 32．．．噚f6 33．혹e3 登c8！

The rook will cause a lot of headaches along the c－file，and White will never be able to
neutralise it．Twenty－seven moves later，this rook will take White＇s key pawn．
 White probably holds．

## 34．g3

White waits，but he could instead have tried to exchange the isolated pawn：34．d6 当c2（if 34．．．e5 35．fxe5＋
 38．当ed3 囬c2 39．a3 White holds，as the black king cannot approach the
毘xd6（on 36．．．exd6 37．党c2 囬e7＋ 38．．ీڭf3 White looks sufficiently
 39．b4 and White holds despite the pawn deficit because his king is strong in the centre．


## 34．．．h6

Carlsen wants to gain space on the kingside．

## 35．

Reducing the number of pawns should serve White＇s interests，so 35．h4 was preferable．

38．̈ㅡ d1 登c8
Magnus decides to tire his opponent for a while．



41．．．g4
Magnus gains space．

 47．${ }^{\text {E．1 }} \mathrm{d} 2 \mathrm{~h} 4!$
The h－pawn creates a dilemma for White．

## 48．兆e3？！

Halldorsson waits，giving a free hand to Magnus to build up his position．After $48 . g x h 4$ 囬h8
 hard for Black to make progress． Transferring the rook to e5 would keep the position balanced．Also after 48 ．亘e3 皆c5 49 ． White probably holds．


48．．．h3！
Such a pawn is always menacing as it gets so close to promotion．Getting this far is an accomplishment．

It is worth citing what Carlsen said regarding the following position in the post－game analysis of his win against Nakamura at Wijk aan Zee in 2011：

## Magnus Carlsen

Hikaru Nakamura
Wijk aan Zee 2011 （8）

 probably a horrible move．Hikaru suggested 19．．．g6，and Magnus said he had considered 20．h6 in response，which will give him a trump in the endgame and keep Hikaru＇s bishop away from g7．It is remarkable that Carlsen was thinking ahead about the possible endgame while the players were still so deep in the middlegame．


## 

Carlsen takes the opportunity to gain some space on the queenside as well．

## 51．${ }^{\text {und }} \mathrm{d} 4$ a5 52．



Carlsen begins the process of transferring the king to the queenside．


## ̈．c1

With 55 ．．．a4！？Black could have attempted to open the a－file：
56．曷e3（White cannot play 56．bxa4
Ea6 because he loses a pawn；
alternatively，if he tries 56 ．⿻丅⿵冂⿰⿱丶丶⿱丶丶⿻コ一⿵冂⿱一口又寸边

Black is able to invade） 56 ．．．axb3

甾xb4 60．axb4 甾b3 and Black has achieved a probably winning position．
56．${ }^{\text {ed }} 11$
Instead of this，White should have approached with his king

 58．فَact 5 White would have had some counterchances．



58．．．dㅜㄹㅜ
Black could have played 58 ．．．．ฏa6 59．畄1d2 a4 60．bxa4 光xa4，which also wins．

## 59．${ }^{-1 / 1 d 2}$





## 



 lost；

曾 C 7 and Black is winning）61．．． e d7
 형d4 65． is lethal．


60．．．．${ }^{\text {E．}} \mathrm{h} 1$

Carlsen＇s strategy prevails．He wins the key h2－pawn．The rest is easy．

## 


䍙xg3
White resigned．
In this game，Carlsen created an isolated pawn in his opponent＇s camp．He then proceeded to gain space with his pawns，pushing the h－pawn all the way to h3， and manoeuvred his king around the board nicely．Later he was ultimately able to eliminate White＇s h－pawn．

## Game 14

Magnus Carlsen 2552
Kjetil Lie
2430
Molde 2004 （9）


37． $0 \mathrm{f} 6+!$ ！
Although this position is not quite an endgame yet，I could not resist showing this spectacular move by Carlsen，which enables him to avoid mate．
37．．．置xf6 38．d7 2 （2＋39．象g2 40．高f3 0 xf


## 41．桨xb7

This fancy move cleverly ignores the hanging knight on $\mathrm{f4}$ and is a strong choice．However，it also gives the opponent an extra option． At some point，Black will have to give up the bishop for the d－pawn， but the question is whether or not Black can get the a－pawn too－if he is able to get rid of both White＇s a－and d－pawns，the rook will have the opportunity to set up a strong fortress on the kingside．
Instead，White could have taken

 queen does not allow a check on d3）
 does not give Black time to sacrifice the bishop for the a－pawn，and therefore White wins．
 ㄹa3＋
Unluckily for Lie，the a5－pawn is poisoned．43．．．曽xa5 is met by
 the rook．
44．唚e2
The king has to stop the rook from reaching the d－file．
44．．．ㄹ．．a2＋45．．


## 46．皆 5 5＋f6

Lie faced a tough decision．Either he moves his king in front of his pawns，where it will be vulnerable in a fortress situation，or he weakens the pawn structure a


 live dangerously）50．䠌f8＋
 tell whether this is a draw or not．

## 47．启e8 貝xa5 48．謄e7＋！

Magnus forces the king to move ahead of the black pawns．Winning the bishop would not be sufficient：
 Black holds．

## 跒h6



## 51．．屯木子a！

Good play by Magnus．Instead of winning the bishop hastily， he instead looks for the best circumstances to do so．After
 dag5 I believe Black holds．



## 54．鱼b2

Magnus sets up a zugzwang． 54．．．．g．g7
 57．d8嵝 White wins the rook．

Taking the pawn is an achievement． But still，if Black sacrifices the bishop for the d－pawn and the rook can get close to the black king， Black will have a good fortress．




61．唚c4！

Carlsen now wants to use his king to take away squares from the bishop．
61．．．${ }^{\text {घg }} \mathrm{f} 1$ ！
The rook threatens to return to f 8 ．

## 62．d8響＋

Carlsen has to win the bishop．The ensuing position is drawn，but of course Magnus tries to win the queen versus rook ending．
趷f


## 65．啠e5＋單f6

Lie plans to make room around his king by pushing his pawns． However，65．．．．．．g88，simply not moving the kingside pawns，should also suffice．
$66 . g 4$ h6 67．．
Magnus gets his king closer to Lie＇s king．


I think 71．．．${ }^{\text {異 }} \mathrm{f} 7$ was the simplest． It cuts off the king，although with the a－pawn on the board Lie＇s move works as well．

## 72．吉e7

This is the right square for the white king．



74． $\begin{aligned} & \mathrm{u} \\ & \mathrm{y}\end{aligned} \mathrm{f}$
A pretty move，but Black still has the a－pawn．

Carlsen takes the a－pawn．Black has a good fortress，but there are pitfalls to avoid．Usually zugzwang is the greatest threat against a fortress． 76．．．猡h7？？
Losing；76．．．黒f7＋！was the only move． Black must not tolerate the king on
 do，but 77．．．${ }^{\frac{1}{8}} \mathrm{~g} 7$ is the simplest．

78．贸d d 3 ！wins much faster．
78．．．声g7 79．奖e6
Magnus now tries to bring about this position with White to move．


Accomplishing his aim．


## 83．欮5！

This nice－looking move sets up a decisive zugzwang．

 88．噚d8 皆b7
Black resigned．
This game illustrates that Carlsen had already developed his all－round endgame skills successfully．He played well against the fortress idea， used his king excellently，and set up the final zugzwang in an instructive manner．

Game 15
Magnus Carlsen
Severin Papa


## 22．${ }^{\text {anf }} \mathrm{f}$

Carlsen is somewhat better in this position，as he has a slight space advantage and Black has doubled pawns．

## 

Magnus does not want to give up the f－file．
 Ef8 27．b3 \＃̈f

28.64

Magnus gains space．

29．d4！？was an alternative worth considering．
29．．．gxf6
Taking with 29．．．！${ }^{\text {exf }}$ ． worse in principle，as this pawn ending is more likely than not to

 would be insignificant）30．．．gxf6 Black is clearly worse，but has some chances，because it is not certain that White＇s king can invade：
A）After 31．${ }^{(18} \mathrm{f} 3 \mathrm{~h} 5$ ！ $32 . \mathrm{d} 4$（32．g4

34．．tad d f5！Black holds）33．．．t ${ }^{6} f 7$


 able to penetrate；
B） $31 . g 4$ ！stops ．．．f6－f5，which could be strong if White moves his king to the queenside：
B1）31．．．象e7 32．d4 and now：






38．高xc6 41．ded 4 and Black is in a lethal zugzwang；

㯰f7 38．a5 bxa5 39．bxa5 c6 40．c4
 king will invade．
B2）31．．．鬼f7 32．d4 \＆\＆
象f7 36．． survive）33．．．故f7（if 33．．．h5 34．gxh5＋器xh5 35．．． wins）34．．．fl

 can penetrate．


## 30．${ }^{\text {anf }} 5$ ！

The rook stands well on the 5th rank．

An automatic move．Normally one should centralise the king in endgames，but here it has a drawback．After 30．．．皐g7！31．．．$\ddagger$ f3
 bxa5 34．営xa5 䴗e8 Black is only a bit worse） $32 . c 4$（if 32 ． E b 5 f 5 or if $32 . g 4$ h5 will be the answer） 32 ．．．党f8 Black should be able to hold．


Papa wants to be active with his rook，but he should have consolidated first．After 31．．．h5！
 c6（33．．．亘g8 is also possible） $34 . \mathrm{d} 4$罭g6 White is clearly better，but Black is probably not lost yet．

## 32．${ }^{\text {adg }}$ g！

Carlsen invades with the king．

## 32．．．쁘a8 33．a5 c5

Papa sacrifices a pawn for active play for his rook．It is too late to use his king to stop White from penetrating：33．．．${ }^{(18 y}$ f7 34 ．

 38．dxc5 dxc5 39．c4 乹h7 40．h4 gxh4
噚g7 44．

## 34．axb6

Carlsen again has a pawn two squares from promotion．Such a pawn is almost always a source of danger for the opponent．
34．．．cxb4 35．cxb4 当a4 36．b5 発a2 37．h4 発d2


## 38．${ }^{\text {unf }} 3$

With his last three moves，Carlsen has done his best to keep as many pawns on the board as possible． Now his king is ready to invade．



39． $\begin{aligned} & \text { す．} h 5 ~ g x h 4 ? ? ~\end{aligned}$
In general，the weaker side seeks to decrease the number of pawns， but this time this has terrible consequences as it removes a target for Black：
 wins；
B）Black should attack the b－pawn at once－39．．．量b2！and now：

 b6 $45 . \mathrm{d} 4$（45．．
䍖xe4 would be equal； B2） 40 ． difference，as Black can attack


 43．gxh4 囬xb5 White is still better， but Black probably holds： 44 ．${ }^{\text {mg }} 3$ （if $44 . \mathrm{d} 4$ or 44 ．
 46．d4（46．党g2 觇f7）46．．．常b1 47．h5 d5 48．exd5＋థ্ঞg xd5 and Black gets away with it．
40．gxh4 苗b2 41．


42．d4
Now White threatens to play 42．e5．
42．．．ㄹ．．e2
On 42．．．胃h1 $43 . \mathrm{e} 5$ wins or if
 45． wins．

## 




b－pawn will promote．

## $44 . \mathrm{e} 5$

 well．

## 44．．．dxe5 45．dxe5 発xb5 46．饾xf6＋馬g7 47．



## 48．間xh6 比xe5

The Lomonosov tablebase proves that White wins here．

The h－pawn cannot be stopped．



Carlsen kept up the tension on the f－file，later gaining space on the queenside and obtaining a pawn close to promotion．Finally he was able to invade decisively with his king．

## Game 16

Magnus Carlsen
2581
Nigel Short 2687

Hoogeveen 2004 （3）


29．兹 $f 6$
Carlsen shows respect for the former World Championship finalist and decides to exchange queens．However，White would have won faster with the queens on the board．
I think several former World Champions，such as Alekhine，Tal and Kasparov，would have kept the queens on and would have played 29． $\begin{gathered}\text { Mr c } \\ \text { c } 3!? ~ i n s t e a d . ~ C o n v e r s e l y, ~\end{gathered}$ Capablanca and Petrosian would probably have swapped queens here．After 29．．．鼻g6 30．昆xf8＋昆xf8 31．e5 Black＇s position is about to fall apart．

## 

Other moves were no better here．
After 31．．．鼻g6 32．㲋xf8＋飛xf8 33．${ }^{\text {ene2 }}$ h6 34．h4 White has a convincing advantage．Or after

White would have good winning chances．
32． 0 xg5 鼻a2


## 33．${ }^{\text {² }} \mathrm{xf} 8+$ ！

Taking the pawn by $33.0 x h 7$ ？is tempting but wrong because of 33．．．笪d8！，when Black gets ready to double his rooks on the second rank．
33．．．䍢xf8 34．0xh7＋
Carlsen wins the second pawn，but the win will not be easy as Black＇s rook is more active than White＇s and Short＇s bishop is better than the knight．

37．．．af2 c3
 40．界c3 White should win．
$38 . e 5$ 発xa3 39．Øe4
Carlsen exchanges the h－pawn for the c－pawn．
39．．．c2 40．${ }^{\text {邑xc2 }}$ 皆xh3


41．쁘c7＋！

This check justifies the exchange of pawns．Black＇s king is pushed back．

Under normal conditions，one is supposed to defend a piece with the least possible force．However， this time，defending the pawn with 42．．．${ }^{\text {mana }}$ 3！was stronger．The point is to attack the e5－pawn from a5：

 45．． be able to sacrifice the bishop for White＇s last pawn）43．．．尊c3（if 43．．．


 46．．．噚e7 47．笪f2．
43.95

Although White＇s pawns are not connected，they are strong，as the rook and the knight can assist them well．



## 45．g6！

The g－pawn is too strong．
45．．．르g4
If 45．．．党h5 46.97 当xe5 47．$\triangleq$ f7＋wins．
46．g7 46．．．a5

47．噚f3 党g1

 White wins．
48．©b7＋象e8 49．©c5 蔂f7


50． 0 e4！
This knight hop is effective．


There is no fork with ．．．${ }^{\text {最d }}$ 5＋． Carlsen showed considerable respect for his world－class opponent by going for an endgame instead of relying on his attacking chances．Carlsen won material and obtained a winning position，but a lot of his playing strength was required to convert the advantage． He used his knight very well for tactical operations．

In 2004，more of Carlsen＇s games were decided by tactical means．In slow games，he usually did even better．
In the 2004 Wijk aan Zee tournament，he prepared some very sharp lines and managed to hurt his opponents in these games，but he often played positionally．In his endgames he had hardly any draws． It is interesting that，in general，
he already played endgames at an extremely high level. At the FIDE World Championship tournament he made Aronian work very hard to eliminate him, although in the final game Magnus was not able to hold the theoretically drawn f- and h-pawn rook ending.

Regarding his choice of openings for White, very little had changed since 2003. Magnus still played 1.e 4 somewhat above 50 percent of the time, and he varied the main lines. His win/loss percentage decreased somewhat, but that can be explained by the stronger opposition he faced. In closed openings, he scored somewhat
better, although the Trompowsky did not work for him, as he did not even score 50 percent with it. As Black, the Sicilian remained his main weapon. He varied the same lines as earlier, increasing the number of Najdorf games slightly. His score with 1...e5 was interesting. He won 2 out of 2 in the Ruy Lopez, but against other openings, such as the Italian and the Scotch, he scored minus 2. Against the closed openings, he reacted the same way as in 2003. In roughly half of his games, he employed the NimzoIndian and the Queen's Indian, and he also played the King's Indian and the Grünfeld with mixed results.

## Carlsen's results in 2004

Wijk aan Zee, C-Group 1st place 10½/13 GM norm
Aeroflot Open, Moscow 5½/9 GM norm
Reykjavik Open 33th-43th place $4 ½ / 9$
Reykjavik Rapid Championship 3/5
World Knockout Championship Tripoli Round 1 Aronian-Carlsen $\quad 11 / 2-1 / 2$
Norwegian Championship, Molde 1st-2nd place 7/9
Politiken Cup, Copenhagen 4th-14th place $71 / 2 / 10$
Norwegian Championship, Play-off Ostenstad-Carlsen 1-1 silver medal
Young Masters, Geneva: Alekseev-Carlsen $2^{1} / 2-1 \frac{1}{2}$, Carlsen-Papa $1 \frac{1}{2}-1 / 2$,
Carlsen-Lagno 4-2
Gausdal Classic 5th place 5/9
Chess Olympiad, Calvia (Board 1) 3/5
Hoogeveen 4th place 2/6
Spanish Team Championship, eliminated in the last 16 Kasparov-Carlsen $1^{1 / 2-1 / 2}$
Dubai Open 2nd-11th place 6½/9 GM norm
Malmö/Copenhagen 3rd place 5½/9
Norwegian Teams 2½/9
Drammen Smartfish Masters 9th-10th place 3/9

## Endgame classification

## (numbers refer to games)

This classification of Carlsen's endgames may help those players who have problems in certain kinds of endgames. Is there any chess player who has never spoiled a winning endgame with a material advantage? Carlsen's masterpieces are helpful in this regard.

A few words of clarification:

* Any one game in the classification scheme we present below may contain multiple elements. For example, it is possible that there was a zugzwang and also a mating attack, but even control of an open file could have been an important factor. In these cases, the game will appear under more than one heading.
* Often endgames never crystallise into clear rook endings, as both sides retain a bishop or a knight. These games are not placed under a specific heading but come under rook endings due to the influence of the rooks.
* Sometimes there is reference to opposite-coloured bishops, although there were still rooks on the board. In these cases, the bishops would have had a decisive effect on the outcome.
* The classification may also refer to motifs which only occurred in the analysis (not the game itself).

Carlsen applied many different skills in his endgames. However, the fact that there is a balance between his implementation of these tools shows how versatile he is.

## Pawns

2

## Knights

17, 25, 33, 42, 54, 60, 77, 86, 87, 90

## Bishops

35
Opposite-coloured bishops
$18,19,30,31,36,38,40,56,57,63$, 64, 74

Bishop versus knight
$9,10,16,23,27,29,41,43,44,51,52$, 66, 71, 72, 76, 78, 79, 81, 84

## Rooks

10, 11, 23, 27, 28, 45, 46, 48, 59, 85

Four rooks
2, 3, 6, 9, 31, 33, 44, 74, 77, 86, 87, 90

Exchange (rook vs minor piece)
9, 53, 62, 66, 75, 80, 82, 88

| Queens | Rooks on the seventh rank |
| :---: | :---: |
| 43, 55, 76 | $\begin{aligned} & 3,5,9,11,16,23,26,28,29,31,34,44, \\ & 47,48,51,57,64,68,7273,75,78,85 \end{aligned}$ |
| Queens and rooks | 91 |
| 67, 69, 73, 79, 88, 89 |  |
|  | Space advantage |
| Queen against pieces | 7, 13, 15, 17, 19, 21, 22, 33, 3843,45 , |
| 14, 19, 91 | 59, 61, 63, 66, 70, 83, 87, 89, 90 |
| Two pieces versus rook | Zugzwang |
| 20, 26, 34, 40, 58, 80 | 30, 35, 36, 51 |
| Pawns versus minor pieces | Exchanging |
| 5, 8, 23, 37, 49, 54, 82 | $\begin{aligned} & 2,7,17,41,42,48,49,56,65,67,71 \text {, } \\ & 72,84 \end{aligned}$ |
| Attacking the king |  |
| 12, 16, 19, 26, 28, 29, 31, 38, 43, 47, 58, | Open file |
| 63, 64, 67, 76, 88, 91 | $\begin{aligned} & 2,3,5,12,15,20,21,31,32,33,3848, \\ & 61,62,67,68,73,78,86 \end{aligned}$ |
| Passed pawns |  |
| 3, 12, 14, 16, 23, 24, 26, 28, 30 34, 39, | Pawns on one side |
| $41,44,45,54,55,57,60,62,64,68$ | 5, 8, 10, 46, 51 |
| $72,75,77,78,80,82,83,85$ |  |
|  | Pin |
| Converting a material advantage | 15, 23, 63, 86 |
| 7, 8, 9, 10, 11, 12, 15, 16, 18, 26, 30, 32, |  |
| 38, 40, 46, 47, 48, 49, 50, 54, 55, 56, | Pawn race |
| 58, 60, 64, 65, 69, 71, 74, 75, 84, 87, | 6, 22, 24, 34, 52, 85 |
| 88, 89 |  |
|  | Pawn promotion |
| King centralization | 14, 22 |
| 17, 31, 33, 48, 75, 89 |  |
|  | Two bishops |
| King manoeuvre | 18, 32, 35, 38, 63, 81 |
| 10, 11, 12, 13, 15, 17, 18, 23, 24, 25, 26, |  |
| 28, 30, 36, 37, 41, 45, 49, 51, 53, 54, | Hunting down a piece |
| 55, 56, 59 61, 64, 65, 69, 70, 71, 80, 81 | 53, 71 |
| 82, 84, 87, 91 |  |
|  | Building a fortress |
| Fixing pawns | 14 |
| 35, 51, 77, 86, 89 |  |

## Doubled pawns

2, 37, 49, 83

Cutting off the king
20, 46, 68, 69

Intermediate check
1, (11,) 26, 44, 46, 47, 71

Pawn as outpost
$3,4,13,15,19,20,28,29,39,59,62$, 72, 76, 79

## Isolated pawn

13, 37, 40, 48, 68, 79

Stalemate
50, 91

