



Advanced Lecture – Subtleties in K & P Endings

by Tim Broome

King and pawn endings are the most precise and mathematical of endgames. Major and minor piece endings can be difficult to calculate to a definite win or draw (although computers have done so in an increasing number of positions). King and pawn endings, however, usually can be analysed very precisely at the board, although this is not to say that doing so is an easy task.

With an extra pawn, an ending with kings and pawns is usually very easy to win. Endings with, for example, 3 pawns against 2, or 2 pawns against 1, on the same side of the board, are usually drawn with a pair of rooks, or bishops, or knights still on the board. But with kings only, they are usually an easy win for the player with the extra pawn.

Basic strategies - Active King and correctly placing your king "in opposition"

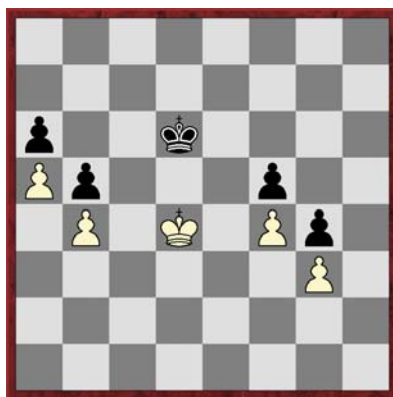
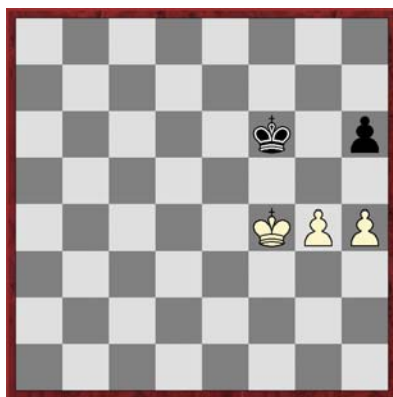
The king is the vital attacking piece. The player with the more advanced or active king will usually be able to win one or more pawns, and therefore win the game.

A critical tool is the concept of gaining "the opposition". When the kings are positioned two squares away from each other, both on the same coloured square, the game will commonly be won (or saved) by the player who can play the last available pawn move, thereby forcing the other player to move his king to one side or the other.

Each of the two positions below are won for White if it is Black's move. In the first example the continuation would be 1...Ke6; 2.Ke4, Kf6; 3.Kd5 and White's king breaks through. In the second example, the White king will be able to advance either to e5 or c5 and win the Black pawns.

But if it is White to move, both positions are drawn. In the first example, neither h5 nor g5 works for White, and king moves allow Black to retain the opposition.

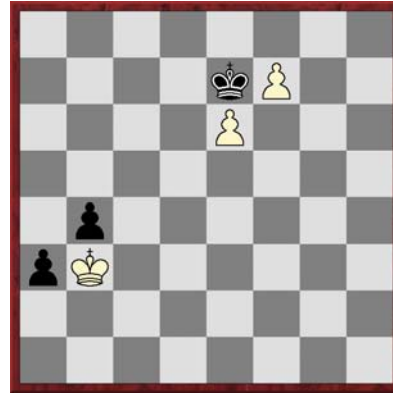
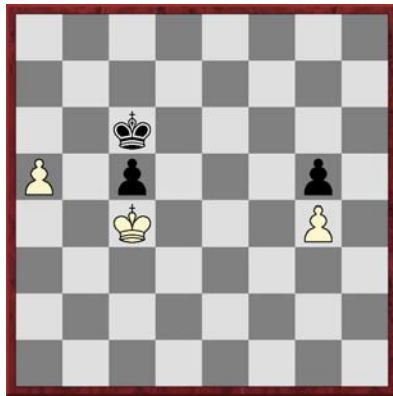
And note that in the second example, White must take care to play Ke3 or Kc3, in order to meet Kd5 with Kd3, drawing. The immediate Kd3 loses after Kd5 by Black.





Basic Strategies - Passed pawns

The other most important weapon in a king and pawn ending is the passed pawn, which ties down the opposing king to the passive job of stopping it from marching through to become a queen.



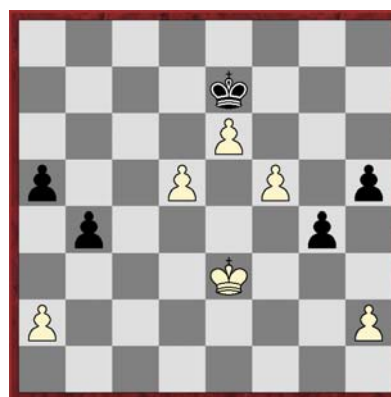
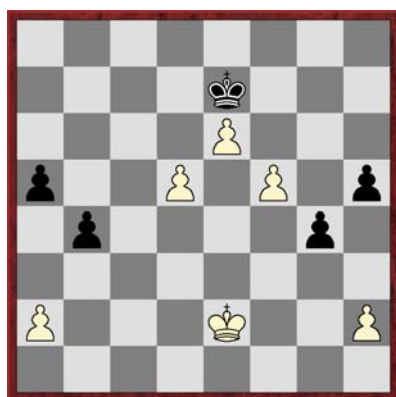
<p>Of particular value is what is known as the outside passed pawn. In left hand diagram White is winning, because the Black king must misplace itself by capturing the pawn on the a-file. The White king will capture the pawn on the c-file and will easily win the race to the g-file to take the last pawn. White simply plays a6 and a7, forcing the Black king to go and capture the pawn.</p>	<p>Two or more connected passed pawns are particularly powerful in tying down the defensive king, because the king can never take the pawn at the base of a chain of 2 pawns. The position in the right hand diagram is obviously a dead draw.</p>
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Advanced strategies – Counting moves in complex Passed Pawn positions

It should be noted that a lone king is able to halt the advance of as many as three connected passed pawns, if these pawns can't enlist the help of their own king. This can lead to some interesting possibilities. It is even possible for one side to be a pawn up, with 3 connected passed pawns, and still be losing the game even though his opponent has not yet established a single passed pawn of his own!! Take a look at the following examples (White to play).



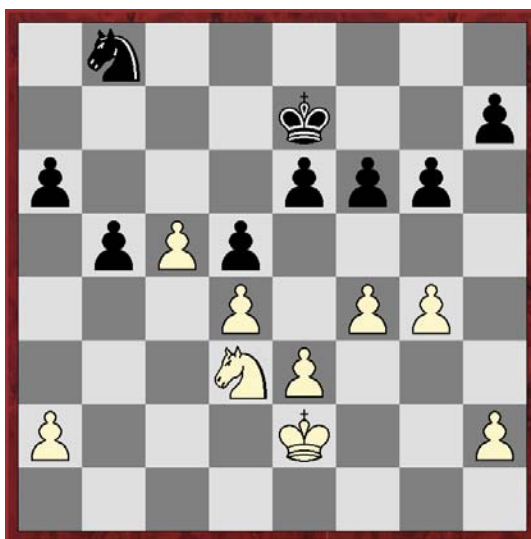
<p>The position on the left is won for Black. The Black king is doing a great defensive job, and the White king is unable to cover both sides of the board. A black pawn will promote on one side or the other.</p>	<p>The position on the right happens to be won for White. From e3, the White king has just enough time to reach e5 to support the advance of his connected passed pawns. In such positions it is necessary to count moves (sometimes in several possible variations) with great precision to determine whose pawns will queen first and win the game.</p>
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3 central connected passed pawns against outside passed pawns on both flanks is the theme of the brilliant and instructive endgame won by then little-known American Harry Pillsbury against Gunsberg in the final round at the great international tournament at Hastings in 1895, at the time the strongest tournament ever held. We'll join the game after Black's 26th move. Pillsbury (White) needed to win from this position in order to win the tournament ahead of all of the greatest players in the world at that time.





Pillsbury – Gunsberg, Hastings, 1895



1.	f5!	g5	If 1...gx5; 2. gx5, ex5, then White regains his pawn with advantage by 3.Nf4
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2.	Nb4!!	a5	This move is forced. White's threat (eg after 2...Kd7) was 3. fxe6, Kxe6; 4.c6, Kd6; 5.c7, Kxc7; 6. Nxd5, and White mops up the f and h pawns too.
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If Pillsbury now retreats his knight, he will have just allowed Black to improve his position by advancing his queenside pawn majority with gain of tempo. So before he placed his knight on b4, Pillsbury had already calculated the rest of the game. He had not only foreseen that he was able to force an exchange of knights, establishing a pair of connected passed pawns in the centre, but had also considered the fact that Black can actually create passed pawns on both flanks at once. He had calculated that, in the subsequent race to the queening square, a combination of more than 20 moves, his pawns would beat Black's two sets of flank pawns by just one move! It is because of this depth of calculation that I have given two exclamation marks to 2.Nb4!!





3.	c6!	Kd6	If 3...axb4, 5.c7 and the pawn will queen.
4.	fxe6	Nxc6	Again if 4...Kxe6; 5.c7 and the pawn promotes
5.	Nxc6	Kxc6	
6.	e4	dxe4	
7.	d5+	Kd6	This position is the point of Pillsbury's little combination. With the knights off the board, the Black king can never capture the d5 pawn, and will now forever be tied down to the job of stopping the connected passed pawns from advancing. White's king, by contrast, is free to attack the Black pawns. At first glance it looks hopeless for Black, but in fact it is not. Black's only chance lies in establishing passed pawns on both flanks simultaneously, and he must do so without delay.
8.	Ke3	b4	
9.	Kxe4	a4	
10.	Kd4	Ke7!	This move gains Black an important tempo. If the immediate 10...b3; 11.axb3, a3; 12.Kc3, White is one move ahead of the main line, because he has moved his king directly from d4 to c3 instead of going via c4, and Black will still shortly be forced to move his King to e7 to control all 3 central pawns. It should be noted at this point that, when moving his knight to b4 on move 2, Pillsbury also had to calculate a win in the following variation. 10...b3; 11.axb3, axb3; 12.Kc3, f5; 13.gxf5, Ke7 (if 13...h5; 14.f6, g4; 15.f7, Ke7; 16.d6, h4; 17.d7 and one of the pawns will queen) 14.Kxb3, h5; 15.Kc4, g4; 16.Kd4, h4 and White can win either by playing Ke4, getting inside the square of the h-pawn, or Ke5 followed by d6 and his own pawns crash through first.





11.	Kc4	b3	
12.	axb3	a3	
13.	Kc3	f5!	With the White king offside, the lone king on e7 can stop all 3 connected passed pawns. Black's only chance is to establish a second passed pawn on the far side of the board.
14.	gxf5	h5	
15.	b4	g4	<p>White is saved by the fact that he still has his b-pawn. The Black king is fully occupied with the other 3 pawns, and can do nothing about the advance of the b-pawn.</p> <p>It is now a straight race between the White b-pawn and the Black g or h pawn. White will take 4 more moves to queen the b-pawn. Black will also take 4 more moves to queen one of his pawns. If both players now just push their pawns, White will promote first, followed immediately by Black, and White will have the first chance to play some nasty checks. White's prospects would be good. But it turns out that both players have tempo-saving tricks up their sleeves!</p>
16.	b5	a2!	
17.	Kb2	a1(Q)+	
18.	Kxa1	h4	Black has given up his a-pawn in order to force the White king to a square on which it will be in check when the Black pawn promotes. White will still queen first, but Black will be able to play the first checks, significantly improving his hopes of a draw by perpetual check.





19.	b6	g3	
20.	hxg3	hxg3	
21.	d6+!	Kxd6	Pillsbury has the whole thing calculated beautifully. 21.d6+ ensures that White will queen with check, with the black pawn stranded on the 7 th rank. 21...Kf6; 22.d7, Ke7; 23.b7 would not solve Black's problem.
22.	b7	Kc7	
23.	e7	g2	
24.	b8(Q)+	Resigns	White will queen his e-pawn with check and then move to capture the Black g-pawn.

With this brilliant piece of endgame calculation, Pillsbury completed his famous tournament victory. Ill-health prevented him from having continued top-level success, but he is remembered as having one of the most brilliant brains of all time. He is famous as the greatest ever player of simultaneous blindfold exhibitions, playing 20 or 30 blindfold games at once, whilst also playing games of cards and checkers, and while memorising long lists of words chosen by the audience.

