

Endgame table testing of studies - 1

Article

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Endgame Table Testing of Studies – I

**HAROLD VAN DER HEIJDEN,
EIKO BLEICHER & GUY HAWORTH**

Introduction

Unsoundness is a major problem of endgame study composition. Obviously, it is the responsibility of composers to check their endgame studies before submission or publication, but, unfortunately, not everybody seems to bother. One of the worst examples is a recent book (Pomogalov, 2006) in which 153 of the 176 (the majority, original) studies seem to be incorrect. Also, tourney judges should check the studies for soundness themselves, or seek assistance for this. Again there are bad examples, e.g. in a recent tourney EG's cook hunter Mario García busted no less than 8 of 22 studies in the award (Van der Heijden, 2010). Such examples illustrate that also, when studies or awards are reproduced, the editor of the book or the magazine should undertake to check the studies' soundness (Van der Heijden, 2007a). It is extremely frustrating for solvers (Nunn, 2002; Nunn, 2006), especially in official solving tournaments, when a study turns out to be incorrect. But the difficulty is that, in comparison with most other chess composition genres, checking of endgame studies for soundness is often cumbersome. Before the advent of the computer, the endgame study community had to rely on strong analysts like the famous André Chéron, and other dedicated cook hunters (Roycroft, 1972). But, during the last two decades the introduction of the computer and chess playing software of ever increasing playing strength, lead to a revolution in soundness checking of (problems and) endgame studies. These tools allowed even moderate players to find faults, and many new cook hunters enjoyed to (sometimes systematically) check prizewinning endgame studies of famous composers. Not surprisingly, many studies have been cooked since. Even state of the art computer software

does not always has the last word: later computer systems have found apparent cooks to be unsound and the study is (appears to be?) correct again!

The introduction of Endgame Table Bases (EGTBs) by Kenneth Thompson and Eugène Nalimov was another leap ahead in cook hunting or correctness checking. In recent years all required sub 7 men EGTBs have become available. But, again, this does not solve all problems, especially duals are often difficult to evaluate (Van der Heijden, 2007b), EGTBs do not include castling rights and few in our community have all the EGTBs anyway. But many a study fell prey to cook hunters that used chess software loaded with numerous EGTBs on hard disk. Although some programs allow complete PGN files to be analysed (the so-called “blunder-check”) it was still a cumbersome procedure as these programs are unable to distinguish between EGTB-positions and positions with more pieces. In practice, most cook hunters are still checking studies individually. Moreover, not many people have all sub 7 men EGTBs accessible for the software on (e.g.) hard disk and have to copy and paste FEN positions in java applications on the internet that access EGTBs (e.g. at <http://www.k4it.de/>).

But, we now report that we have succeeded in checking all sub-7 man mainline positions in the studies of HHdbIII and identifying all positions with incorrect values.

The data-mining process

CQL subset HHdbIII to a pgn file of ‘Draw Studies’ with sub-7-man positions in the mainline. pgn2fen converted this file to a list of FEN positions, including the final positions. These were identified with their studies

and reduced to just the sub-7-man positions. Eiko evaluated these positions and counted the number of winning, drawing and losing moves. Guy then identified all studies with non-draw positions, and the first such position in each study: he also manually checked all positions with castling rights, these not being included in the EGTBs. Harold appraised the studies and positions highlighted in this way. The ‘win studies’ were addressed in the same way in a separate process.

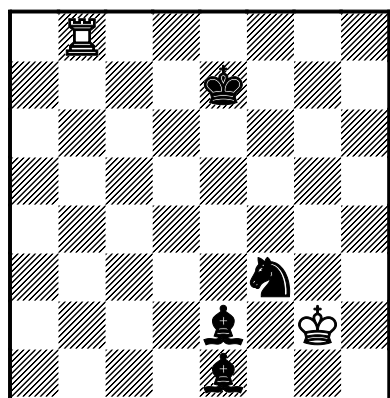
Results

This is the first of a series of articles and deals with the failed draw studies.

Of 15,387 ‘draw studies’ with sub-7-man play in the main line, some 1,503 have non-draw positions. In 154 cases, this identified mistranscribed data, either an incorrect stipulation or move. In the majority of cases this was checked against the original source or a reliable secondary source like an author’s anthology. In 545 cases of the remaining 1,349 studies a previously unreported fault was found.

It goes almost without saying that all cooks found in the mean time have been noted to HvdH’s database and will be present in the upcoming HHdbIV.

H1 G. Slepyan
3rd commendation
Československy Sach 1991
EG112.9302



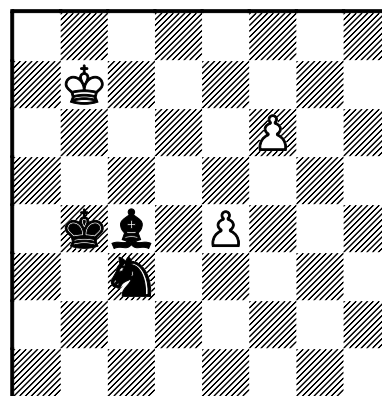
after move 4...Kxe7

Here we present some examples of the cooks we spotted. The selection was purely

based on study-like cooks without further pre-tentions.

(H1) We just entered a well-known “generally winning” endgame. White can only draw if they can take advantage of the entangled position of the black minor pieces. 5.Rb1 Now the author played 5...Sh4+ 6.Kh3 Bf2 7.Rb2 Bf1+ 8.Kg4 Be1 9.Rb1 Be2+ 10.Kh3 Bf2 11.Rb2 with a positional draw. However, Black has an alternative: 5...Ba5! Now it looks like White has any easy draw by 6.Kf2 Sd4 7.Ke3 and the only way that seems to save all pieces is 7...Bc3 8.Rc1 Bb2 9.Rb1 Bc3 10.Rc1 with another positional draw (not given by the author, by the way). But the surprising cook is 7...Sb5!! 8.Kxe2 Sc3+, got you! Of course, after 5...Sh4+ 6.Kh3 Black can return to the won position by 6...Sf3 (there are other wins as well).

H2 O. Carlsson & L. Parenti
2nd commendation *Sakkélet* 1987
EG97.7382



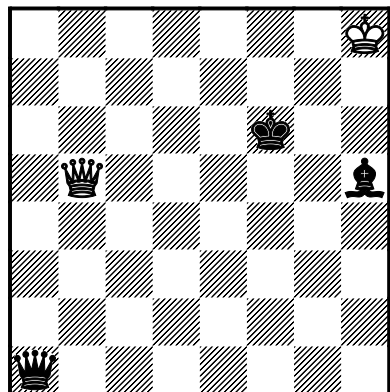
After move 3...Kxb4

(H2) The authors’ main line was: 4.e5 Kc5 5.Kc7 Kd4 6.Kd6 Se4+ 7.Ke7 Sg5 and now a nice drawing combination: 8.e6! Bxe6 9.f7! Bxf7 10.Kf6 winning a piece. But Black has the illogical 4...Sd1!! 5.Kc6 Se3 6.Kd7 (Kd6; Sg4) Sg4! 7.Kd6 Kc3 (or another tempo move) and one of White’s pawns will fall. After 8.e6 Sxf6 White is helpless.

(H3) The solution runs: 4.Qb7 (threat Qg7+) Bf7 5.Qg2 (threat Qg7+) Bg6 6.Qb7 Bf7 7.Qg2 positional draw.

However, Black has 5...Ke7+! 6.Qg7 Qh1+ 7.Qh7 Qa8+ 8.Kg7 Qf8 mate. And, one move

H3 S. Kolikhmatov
1st prize Rustavi 86 Ty
EG111.9237

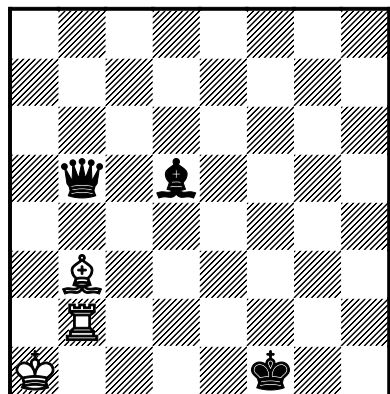


After move 3...Qa1

later the nice echo 6...Kg5+! 7.Qg7 Qa8+ 8.Qg8 Qh1+ 9.Kg7 Qh6 mate.

However, White could have accomplished a draw in the main line by playing 5.Kh7 or (the mirrored) 6.Kg8, and Black has nothing. The positional draw is gone, and so is the study!

H4 G. Nadareishvili
L'Italia Scacchistica 1986

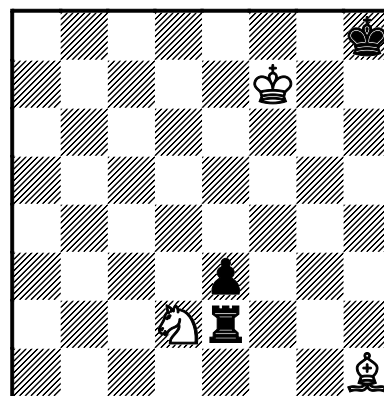


Draw

(H4) The late GM composer gave: 1.Bc4+ Qxc4 2.Rb1+ Ke2 3.Rb2+ Kd1 4.Rb1+ Kd2 5.Rb2+, and 5...Kc3 6.Rc2+ Kxc2 stalemate, 5...Kc1 6.Rc2+ Kxc2(Qxc2) stalemate, or 5...Kd3 6.Rb3+ Kd4 (Qxb3 stalemate) 7.Rb4 Qxb4 stalemate. However, it is curious that (e.g.) 2...Kg2 3.Rb2+ Kg3 4.Rb3+ Bf3 was overlooked.

(H5) Intended: 1.Se4 Re1 2.Bf3 Rf1 3.Sg5 e2 4.Kf8 e1Q 5.Sf7+ Kh7 6.Be4+ Qxe4 stalemate. Nice stalemate study. However: out of the blue 1...Rg2!! Nice block! (Bxg2 e2;)

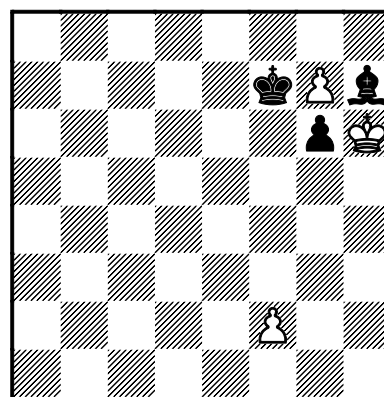
H5 A. Gasparyan
Shakhmaty Baku 1985



Draw

2.Sc3 Rc2 and the pawn promotes or will cost White both pieces.

H6 T. Gorgiev
1st/4th hon. mention Tbilisi Blitz ty 1975
EG48.3048

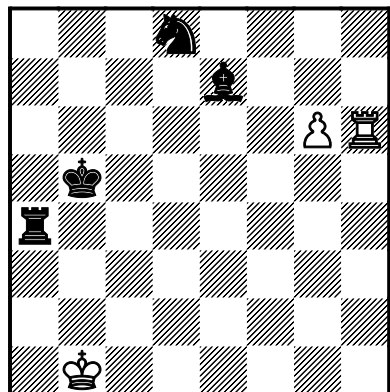


After move 9.Kh6

(H6) Again we have an entangled position. The composer gave 9...Bg8 10.f3 (f4? Kf6; zz) Kf6 11.f4 zz Be6 12.Kh7 Kf5 13.Kh6 Bf7 14.Kh7 Be6 15.Kh6 Bg8 and you have to look twice to see that it's a stalemate. But by a manoeuvre that only seems to lead to an even more entangled position, Black can free himself: 11...Kf7 12.Kg5 Bh7 13.Kh6 Kg8. Like a Houdini!

(H7) We will not discuss the first moves, although these contain mistakes as well. 1.Rh5+ Kb6 2.Rg5 Bxg5 3.g7 Ra1+ 4.Kc2 Rc1+ 5.Kb3 Rc3+ 6.Ka2 Rc2+ 7.Kb3 Rb2+ 8.Kc4 Rb4+ 9.Kd3. Now the solution runs 9...Rd4+ 10.Kc2 Rd2+ 11.Kb3 Rb2+ 12.Kc4 with a merry-go-round positional draw. But Black can improve on this: 9...Rb3+! 10.Kc2

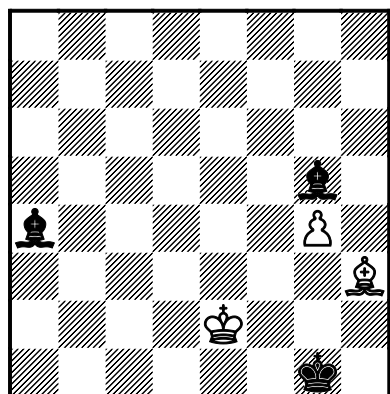
H7 V. Dolgov
Commendation
Shakhmatnaya Moskva 1967



Draw

(of course 10.Kc4 Rc3+ 11.Kd5 Sc6 12.g8Q Se7+) and now Se6 (Sc6)! 11.g8Q Sd4+ 12.Kd1 Rb1 mate.

H8 L. Prokes
Narodni Stred 1943

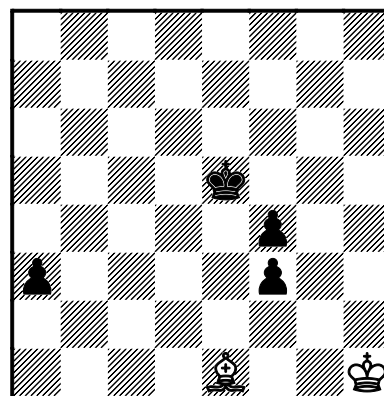


Draw

(H8) 1.Kf3 Bb5 2.Kg3 Bc6 3.Bg2 Bxg2 stalemate. This we can call a threemover. But a complicated manoeuvre involving a couple of triangulations ensures Black a win (not a unique winning line): 1...Bd7 2.Kg3 Be3 3.Kh4 Bd2 4.Kg3 Be1+ 5.Kf4 Bh4 6.Kf3 Be6 7.Ke3 Bc8 8.Kf3 Bb7+ 9.Kf4 Kf2 10.Kf5 Ba6 11.Kf4 Bc8 12.Ke5 Bg5 13.Kd4 Ba6 14.Ke4 Kg3 15.Kf5 Bd2 and White's bishop is lost. That we can call a moremover.

(H9) 1.Kg1 Kd4 (After 1...f2+ 2.Kxf2! (Bxf2? a2;) Kd4 3.Bb4! a2 4.Bf8) 2.Bh4, and 2...Ke5 3.Be1! or 2...Ke3 3.Ke1 with a draw without much flavour. We like the cook much better: 2...f2+! If 3.Kxf2 Ke5 and White is unable to play the move 4.Be1. And when White

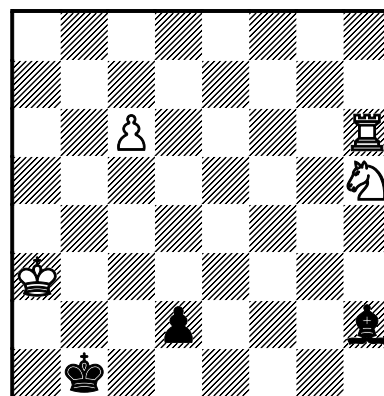
H9 L. Prokes
Slovensky Sach 1941



Draw

takes the pawn the other way (with check!) 3.Bxf2+ Kd3 (threatening 4...a2) 4.Bh4 Ke2 supporting the f-pawn and wins.

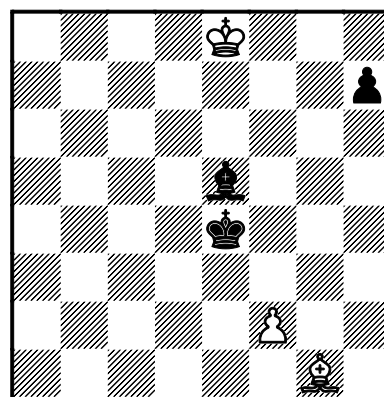
H10 E. Prevorsky
2nd/3rd prize *Narodni Listy* 1940



Draw

(H10) 1.c7 Bxc8 2.Sg3 Bxg3 3.Rh1+ Be1 4.Rh2 d1Q 5.Rb2+ Kc1 6.Rb1+ Kxb1 stalemate. The composer overlooked: 2...d1Q 3.Rh1, pinning and drawing? No: 3...Bd6 mate!

H11 J. Hasek
Revista de Sah 1928

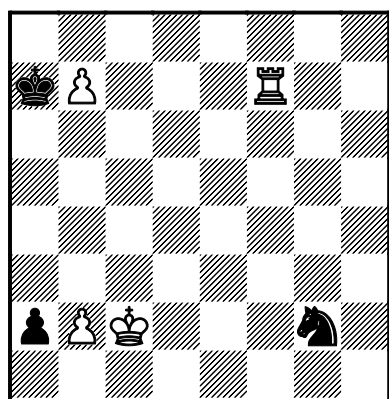


Draw

(H11) Solution: 1.Kf7 Kf3 2.Ke6 Bf4 3.Kf5
 zz h6 4.Kg6 Kg2 5.Kf5 Bc1 6.f4 Kxg1 7.Kg4
 Kg2 8.f5 Ba3 9.f6 Bf8 10.Kh4 Bd6 11.Kh5
 Bf8 12.Kh4 Kf3 13.Kh3 positional draw.
 There are numerous correctness problems
 with this solution. But the move 2...Bc7!
 is outstanding. 3.Kf5 Bf4 and we have the
 main line zugzwang with WTM! Also interesting
 is 3.Kf6 Bd8+, which also explains why 2...Bb8
 would not also have worked, and both squares
 are not accessible.

H12 L. Zalkind

Shakhmaty Listok 1925, version 1926



Draw

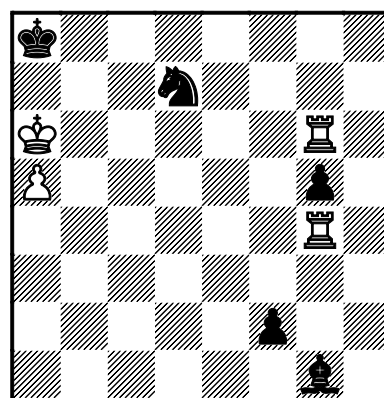
(H12) 1.b8Q+ Kxb8 2.Rf8+ Kb7 3.Rf7+
 Kb6 4.Rf6+ Kb5 5.Rf5+ Kb4 6.Ra5 Kxa5
 7.b4+ Kxb4 8.Kb2 draws. The first thing the
 composer overlooked is that White can play
 the move Rf1 at move 2, 3, 4 and 5, although
 that sacs a rook e.g. 2.Rf1 Se3+ 3.Kb3 attack-
 ing the pawn.

But, unfortunately, the Loman's move com-
 bination fails to two Zwischenschachs:
 6...Se1+! and wK must keep an eye on b2 of
 course: 7.Kc1 Sd3+ 8.Kc2 and, as b2 is now
 covered by wS, Black can capture the rook:
 8...Kxa5 (9.b4+ Kxb4).

(H13) This is the cook we liked best, de-
 spite the forced character of the study: 1.Rg8+
 Sb8+ 2.Rxb8+ Kxb8 3.Rxg5 f1Q+ 4.Rb5+,
 and we print another diagram to enhance the
 effect:

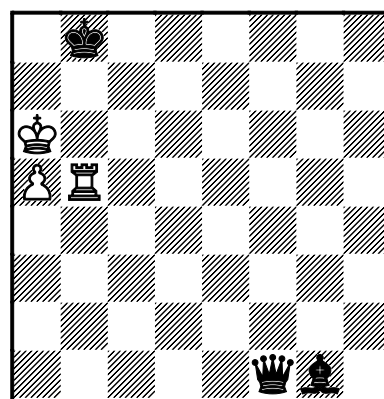
H13 S. Mar

64 1924



Draw

H13 Position after 4..Rb5+

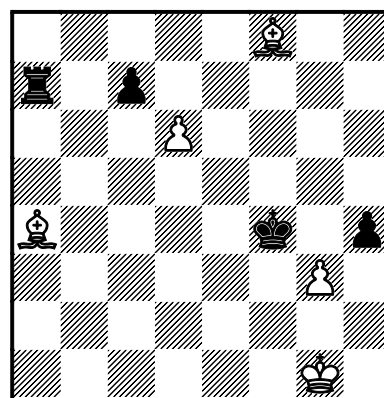


4...Bb6!! (rather than any K-move resulting
 in stalemate). Awesome.

Nice move, and worth a study with colours
 reversed, don't you think?

H14 H. Cohn

*Maestros Latinoamericanos
 y Finales artistic* 1940



BTM, Win

1...Kxg3 2.dxc7 Rxa4 3.Bd6+ Kh3 4.c8Q+ Rg4+ 5.Bg3!! (5.K- stalemate). Another main line is 1...Kf3 2.Bd1+ Kxg3 3.d7 (3.dxc7? Rxc7 4.Bd6+ Kh3 5.Bxc7 with an echo stalemate).

We dislike this setting with bK in check in the initial position, although we applaud the attempt to make something more out of the basic idea. We suppose that **EG**'s readers will be inspired and are able to improve on this. We look forward to seeing your contributions in **EG**'s originals column.

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Will be continued.