Answers to Chances: Competition 7  
by Richard Cowan

North
♠A876
❤J109
♦842
♣KJ7

West leads the ♠Q against South’s 4H contract.

South
♠5
❤AKQ62
♦K75
♣A643

How should South play to optimise his chances of making the contract?

Solution:

Preliminaries
This is the 7th problem in the CHANCES series. It is the first problem where the analyst must seriously consider the consequences of East and West not entering the auction.

Three of the previous deals were slams and, in those cases, the opponents had few points, no suits with possibly decent texture and therefore little cause for bidding at all. I did filter out some extreme hands that they might have bid (say with an 8-card suit or 6-6 in two suits), but this exercise had little impact on the probabilities of any particular holding with (say) West.

The other three competitions involved:
• a 2C opening which would inhibit opposition bidding greatly;
• two 1NT openings where the opposition revealed (on the early tricks) no shape or strength worthy of bidding.

Once again, my analyses did not need to filter out many hands that the opponents might have bid.

On this deal, however, West failed to bid over 1H and East failed to come in after 1H-2H. So I have filtered out hands that each would bid, leaving only those which fail to qualify as biddable. Thus we are left with hands where:
• West could not double or overcall 1S/2S, 2C, 2D/3D, 2NT (for 5-5 at least in the minors) and 2H (Michaels);
• East could not double or bid 2S, 2NT, 3C (just possible with ♠Q1098xx and points) or 3D.

In addition, neither player doubled 4H. In view of the fact that the declaring side cannot have more than 26 HCP for this bidding sequence, I have assumed that any defender with 5 trumps will double (expecting a forcing play to defeat declarer most of the time).

I also build in the usual lead inferences, applying a “lead filter”. West’s lead promises either a singleton, ♠Qx (ugh!), ♠QJx or, if from 4+ cards, the QJ and either the 10 or 9. Furthermore, the ♠Q will not be from shortage if West has 4-5 trumps. The lead of the ♠Q also says that West does not have a singleton diamond in combination with 2-3 trumps.

Mathematical details of the filtration processes discussed above are complicated and I shall not elaborate further.

There are interesting conclusions though. One might think that the ♦A will be onside 50% of the time. When we see the ♠Q lead and take stock of all the hands which have been filtered out, it turns out that the ♦A has a 58.3% chance of being with East.

Why is this? Intuitively, nearly all biddable hands held by either West or East will contain the ♦A. Since West has much more opportunity to bid than East, the bidding being one level lower, the analyst can filter out more of West’s hands that hold the ♦A than he can for East.

Overcalls in spades provide a good example. If West has 5+ spades, QJ10xx(x) say, he becomes a candidate for bidding 1S or 2S, if he has 8+ points (desirably including the ♦A). On the other hand, East, with a spade suit of K10xxx say, needs about 12+ HCP and/or excellent distribution to contemplate a 2S intervention. This intuitive idea converts into numbers. Calculations show that a silent West with 5+ spades has only a 21.6% chance of having the ♦A too, for two reasons: more spades leave less room for diamonds and many hands with 5+ spades and the ♦A would be bid. An East with 5+ spades has the ♦A with a chance of 35.5%. When each defender has 4 spades, the ♦A has a 52% chance of being with East. Overall, the bias is with East.

The ♠Q, being a less critical card in determining whether the opponents bid, has much less bias in its location; it is with East 50.2% of the time.
We can predict that suits will tend to split more evenly after we’ve taken into account the opponent’s silence, than if we’d ignored this aspect. In effect, we’ve filtered out the good distributions for East and (especially) West whenever one of them also has a decent majority of the 15 missing HCP.

No more on this issue, but the chances mentioned below have taken into account the “bidding and lead filters”.

**Line A: draw trumps and hope for 4 tricks from the minor suits**

Win trick 1. Draw trumps in 3-4 rounds.
- If trumps are 4-1 or 1-4, declarer can be forced once more in spades if the opponents get on lead. Play low toward the ♦J.
  * If the ♦J loses, declarer fails on the obvious forcing defense. (East knows that South holds the ♦A and a high diamond and can count 10 tricks if South were to have 5 clubs which are now established. So he assumes only 4 clubs with South and acts accordingly.)
  * If West shows out of clubs, concede also.
  * If the ♦J holds, then play low toward the ♦K, claiming if it holds or if East plays the A. If the K loses, South still comes home if clubs are 3-3.

- If trumps are 3-2 or 2-3, end in dummy and lead a diamond. Now declarer succeeds if
  * the ♦A is onside and either the clubs are 3-3 or the ♦Q is onside, or
  * the ♦A is offside and West has precisely ♦Qxx.

Recall that the nasty 5-0 or 0-5 trump breaks have been filtered out; they would be hopeless. (Chance of success = 44.7%.)

**Line B: Dummy reversal hoping for 3 minor tricks**

Whenever one sees a 4-3-3-3 hand in dummy, one should assess the dummy-reversal potential, especially (as here) when South has only 5 trumps. The aim is make three ruffs in hand; this needs 3 entries to dummy plus a 4th entry to draw trump(s). The 4 entries may include trump cards, but not the intended “boss” trump. Timing must also be right.

Here the timing is perfect. The lead makes declarer play one of dummy’s entries, the ♠A. But the ruffing position is established and this entry is not wasted.

True, the defence may know that trumps break badly and be trying to force declarer. One of the best counters to this is the self-forcing dummy reversal. In any case, an extra trick in trumps is generated.

So in Line B, declarer ruffs a spade with his ♥A, leads a low heart back to the table, repeats the process on tricks 4 and 5 and then ruffs his last spade. The “boss” trump is in dummy and the ♠K entry is still intact.

At this stage the defence knows that declarer didn’t start with a 1-5-2-5 shape as he would not have embarked on a dummy reversal play; drawing trumps and playing on clubs would be better.

Declarer has also learnt quite a bit; he has gained a count on spades and hearts. His subsequent play depends on this. I tediously list the cases -- at the first sign of boredom, skip to the “bottom line”.

West dealt 4 spades and 2 or 3 hearts (25.52%). An attractive line, B(K) say, is to play low toward the ♠K on trick 7.
- West won’t ruff this club, even with his 4-3-6-0 shape (one not filtered out as a 2D overcall). He would endplay himself.
- If he discards a diamond, marking him for 4-3-6-0 (as with 4-2-7-0 he would have bid over 1H), declarer wins, cashes the last trump (pitching a low club) and comes off the table with a low diamond, ducked. The winner of this trick is endplayed.
- If East ruffs the ♠K, West is marked for an unbiddable 4-2-1-6 and East for an unbiddable 4-3-6-0. East exits, per force, with a diamond. If the A, South’s K is the 10th trick; if low, South plays the K which either holds or is lost to West’s singleton A. In any case, South can now claim.
- Normally the ♠K holds. Now declarer cashes dummy’s last trump, pitching a club. He now needs only 3 in the minor suits (compared to 4 in Line A). Now play low to the ♠A, claiming if the Q has fallen. If not, play low to the ♠J.
  * This succeeds if West wins and has 3-4 clubs; he may cash a club but must then lead a diamond, giving South 10 or 11 tricks.
If East wins, he cashes any club(s) he has left and leads his top diamond. Declarer succeeds if East has 3-4 clubs and the ♦A or 3 clubs and either ♦963 or ♦10963 (where South ducks the 1st round).

Given that West has 4 spades and 2-3 hearts, the play of low to the ♣J succeeds with chance 73.7%. This is, however, 1.13% worse than the more mundane line B(J) of low to the ♣J, claiming if the ♣J holds and hoping for the ♦A to be with East (or 3 clubs and ♦963 or ♦10963 with East) if not. So B(J) wins in this context by a whisker over B(K).

West dealt 5+ spades and 2 or 3 hearts (29.27%).
Line B(K) is clearly not competitive with B(J) now. Low toward the ♣Q is best as there are high chances that, even if it loses, the ♦A is onside. Given that West has 5 spades and 2-3, South comes home 87.22% of the time by using line B(J).

East dealt 5 spades and 2 or 3 hearts (14.89%).
Low toward the ♣J is best as spade length with East leaves less room for the ♣Q. If the ♣J loses, East will force with his spade whenever he was not dealt 5-2-3-3 (and defeat South). In this exceptional case, East can only defeat South by leading a diamond and not having the ♦A (nor ♦963). South succeeds with a 67.47% chance.

East dealt 6 spades and 2 or 3 hearts (5.85%).
Low toward the ♣J is still best. If the ♣J loses, East can always defeat South (who succeeds on the 66.87% chance that the ♣Q is with West).

West dealt 4 spades and 4 hearts (4.38%).
The two lines in contention are B(J) and B(K). The former, low toward the ♣J, comes in at 47.89%; the only winning chance if the ♣J loses is to assume that West has 4-4-2-3 without the ♦A. The latter, low to the ♣K, is a 35.21% chance and so is worse.

West dealt 5 spades and 4 hearts (2.43%).
Play low to ♣J. Contract fails if this loses. If it wins, South succeeds if West has either 3 clubs or 1-2 clubs and the ♦A. A 5.65% chance overall. Low to the ♣K always fails.

West dealt 6 spades and 4 hearts.
The contract always fails.

West dealt 3 spades and 4 hearts (4.13%).
Play low to ♣J. Contract fails if ♣Q with East. If not, South succeeds -- a 43.18% chance.

West dealt 2 spades and 1 heart