Counting Distribution

In this document, I will discuss techniques for determining the entire distribution of all 4 hands. This often lets you play as if you cheated by peeking into your opponents' hands! However, the techniques I will discuss are all perfectly legal, and are commonly employed by many experienced bridge players.

Counting distribution is particularly useful on defense. If you can count out declarer's hand, you can often figure out the best defense. This document will focus on counting distribution from the defender's point of view. However, counting the defenders' distribution is also a useful tool for declarer. I will therefore present a few declarer examples as well.

You may think that this topic is much too advanced for you. Please keep an open mind. Hopefully, after you read the discussion and do the examples, you will see that the techniques I discuss are ust common sense. For those of you who like to read mystery novels and see if you can solve the crime before the author reveals the guilty party, you should find this topic particularly fun.

There are two basic techniques that you can use to count distribution --positive inferences and negative inferences.

Positive inferences are straightforward. You can determine many facts about the other hands by the bidding and card play. Here are some examples:

1. Your opponent opens 1H/1S. Therefore, he or she must have at least five spades. (I told you it was easy!)

2. Similarly, your opponent has pre-empted. If the opening bid was a weak 2, the opener has a six card suit. If the opening bid was at the 3 level, the opener has a seven card suit (you already know about more than half the cards in his/her hand!).

3. Declarer opens 1NT. The hand cannot contain more than 1 doubleton (and therefore no 6 card suit), and no singletons or voids. In fact, declarer's distribution should either be 4-3-3-3, 4-4-3-2, or 5-3-3-2.

4. Declarer draws 2 rounds of trump. You have 3 trumps, and your partner shows up with 1. By looking at dummy, you can determine how many trumps declarer has. Since your side started with 4 trumps, declarer started with 9 trumps. Therefore, if dummy started with 4, declarer started with 5. If dummy started with 3, declarer started with six. And so forth.

5. Your partner leads the 2 of a suit against a no trump contract. He/she has exactly four. Why is that? Because partner usually leads a 4 card or longer suit against no trump. Since partner led the 2, he or she has no lower cards, and therefore must have exactly 4.

   By looking at dummy and your hand, you can determine how many cards in that suit declarer has. For example, say you have 3 cards in partner's suit. That means your side has 7 cards in the suit, and declarer and dummy have 6 cards in that suit. Therefore, if dummy started with two, then declarer started with four. If dummy started with three, declarer also started with three.

Negative inferences are similar to the famous mystery story in which Sherlock Holmes solves the crime because the dog did not bark. You can often determine what someone has by what they did not do. For example,

1. Declarer opened 1C/1D. It is almost certain that he/she does not have a five card major.

2. You open 1H and partner bids 1NT. Partner has neither 3 hearts (would have raised to 2H) nor 4 spades (would have bid 1S).

3. Declarer opens 1C, responder bids 1H, opener rebids 1NT. Since the rebid was neither 1S nor 2H, declarer has at most 3S and 3H. Declarer also has at least 4 clubs -- if he/she only had 3C, the hand must contain 4 diamonds, and therefore 1D would have been the opening bid. Look at all the information that can be gleaned from such a common auction!

4. Partner leads the 2 of a suit against no-trump, showing 4. Partner does not have another 5 card suit (unless it was bid by the opponents).

5. You bid a suit and partner does not lead your suit -- the opening lead is a low card in another suit. Partner better have a void!

As defender, you can usually determine declarer's distribution within a card or two by the time trumps are drawn. If you lead a side suit and more than one round is played, you often can determine the

distribution of that suit. Similarly, once trumps are drawn, you know the trump distribution. Finally, declarer has bid, so you have additional information about the hand. I recommend that you develop the habit of counting declarer's hand on every deal; it should become automatic after a while.

One technique that helped me develop my counting skills was to try and count the hand when I was dummy. This can be difficult,because you can only see 13 cards, not 26. However, as dummy you have little else to do anyway, and it makes your counting skills that much sharper. This is hard to do on BBO, since by default you can see all 4 hands as dummy. But you can do this in livve bridge.

Let's look at a hand to see how we can make use of these techniques This was an actual hand that I played, so this is not a purely academic exercise.

Your left hand opponent opens 1NT followed by 3 passes. Your partner leads the 2 of hearts. You observe the following:

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        (Dummy)
        S xxx
        H 10xxx
        D Q10xxx
        C A
                (You)
                Qxxx
                xxx
                KJx
                 Kxx
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You should be able to determine declarer's exact distribution. What is it?

The most clear cut positive inference is the heart distribution. Partner has 4, and you can see 7 hearts between you and dummy – therefore declarer has 2.

The key to this hand is the club suit. There are only 4 between you and dummy so there are 9 clubs between partner and declarer. You can therefore determine the club suit distribution by making use of both a negative inference (partner cannot have 5 clubs, because they would have been led) and a positive inference (declarer opened 1NT and therefore cannot have a six card suit). Therefore, declarer must have 5 clubs and partner must have 4.

Since you have already determined that declarer has 2 hearts and cannot have more than 1 doubleton, you know declarer's entire distribution -- 3 spades, 2 hearts, 3 diamonds, and 5 clubs.

Quiz

Problem 1

Sitting West, you hear the following auction:

<u>S</u> <u>W</u> <u>N</u> <u>E</u>
1H P 2C P
2D P 2H P
3C P 4H P
P   P

What is South's most likely distribution?

This type of auction comes up reasonably often, so you might want to remember your answer for future reference. In fact, when there is a lot of bidding, you can often determine declarer's distribution, particularly once you see the opening lead and dummy.

South's most likely distribution is 5 hearts, 4 diamonds, 3 clubs, and one spade. He could also be 0-5-4-4 or 0-5-5-3, but these distributions are statistically less likely. The important point is that South has at most one spade (so a trump lead may be best).

Problem 2

You are sitting West; your partner is the dealer.

S W N E

       1D

1S P 2S P

4S P P P

You lead a low diamond. Here is your hand and dummy:

North (Dummy)

S KQx

H 9xx

D xx

C Jxxxx

West (You)

S xx

H Q108xx

D xxx

C Qxx

Your partner takes the A and K of diamonds, declarer following with 2 low diamonds. Your partner shifts to the heart J, declarer winning with the A as you signal with the 8. Your 8 is a positive attitude signal, encouraging partner to continue hearts.

Declarer leads a low spade to the K. Your partner wins the A and returns a low heart. Declarer wins the K.

Declarer plays a spade to the Q, partner following with the J. Declarer plays another spade, your partner following as you discard a diamond. Declarer plays 2 more spades, and you discard 2 hearts while partner discards 2 low clubs.

The moment of truth has arrived. Declarer plays the Q of diamonds, leaving you in this position:

North (Dummy)

S -

H 9

D -

C Jxx

West (You)

S -

H Q

D -

C Qxx

You should be confident you will beat the contract, because you have determined declarer's distribution. What is it, and what should you discard?

You can determine partner's distribution. He has shown up with 5 diamonds and 3 spades. Since he played high low in hearts, he has 2 hearts, and, therefore, 3 clubs.

You now know South's distribution (5 spades, 3 hearts, 3 diamonds, 2 clubs). So you should throw a low club.

Problem 3

You are sitting South. The auction proceeds as follows:

S W N E

   2H D 4H

4S P P P

Here is your hand and dummy's hand:

North (Dummy)

S AQxx

H x

D xxxx

C AQ9X

South (You)

S KJxxx

H xx

D Kxx

C K10X

West leads the heart K and then shifts to a low diamond. East wins the A and plays the Q of diamonds, which West trumps. West now plays the heart A which you trump. You play 2 rounds of spades East follows to both rounds,and West plays a spade and then a heart.

Of course, all of you planned the play at trick 1, and realize you must take 4 club tricks in order to make the contract. Because you have determined the distribution of both defenders, you know if you should play for the 3-3 break or finesse someone for the J. What should you do?

You can count West's distribution. He has shown up with 2 spades and 1 diamond. Since he opened 2H, he has six hearts. Six hearts plus 2 spades plus 1 diamond is 9 cards. Since he started with 13 cards, his remaining 4 cards must all be clubs. Therefore, you should play the A then K of clubs. If the J does not drop, you should finesse West for the J. One other point - you should play the 10 of clubs under the A so you do not block the club suit.

Summary

1. Start counting declarer's hand immediately, during the auction when possible, and certainly after the auction. His bidding has told you an awful lot about his hand.

2. Use positive inferences, based on what he has bid. For example, if he opened 1 of a major, you already know he has at least 5 cards in that major, so you already know almost half his hand.

3. Also use negative inferences, based on what he has not bid. For example, if responder bids a suit and opener does not raise, opener has no more than 3 cards in that suit.