‘Law of Total Tricks’   Eric Crowhurst

This is a useful summary/introduction. Bridge players say that ‘surely Crowhurst is not current’?

You might look at this, which refers to hands from the 50’s and 60’s and think the same.

For bridge players (i) who do not get on with Larry Cohen’s two best sellers, (ii) or who do not read bridge books, please read on…?

It is suggested (i) that the ‘Law of Total Tricks’ (Eric Crowhurst) quoted below is current, (ii) that it does not contradict Larry Cohen in any way.

It is suggested it will be of particular interest

(i) To ‘above average to good’ Club players (as an introduction).

(ii) To ‘top’ Club players (as a summary).

THE LAW OF TOTAL TRICKS

The principle problem which has to be overcome in the highly competitive auction is that, while our normal methods of hand valuation give us a very good idea how many tricks our side is likely to make and therefore how many we are likely to go down if we bid on sacrificially, there is no way of telling how the opponents will do in their chosen contract. This is why the notorious ‘phantom sacrifice’ is so common in competitive bridge, for players who are certain that they can sacrifice cheaply tend to do so even if it transpires that the opponents’ final contract was doomed to certain defeat.

[The Unpenalty double convention attempts to solve this problem when the opponents have reached the slam level, and it does so by assuming that any sacrifice will be sufficiently inexpensive and by concentrating on a method whereby the defending side can inform each other how many tricks they are likely to make in defence. Unfortunately, no similar convention is available at the game or part-score level.]

In fact, the only serious theoretical attempt at offering guidance on how high to go in low-level competitive auctions appeared in a magazine article by Jean-René Vernes.* Vernes’ argument centred around deals of this kind:

* ‘The Law of Total Tricks’, *The Bridge World*, June 1969.

NORTH
♠ A 6
♥ 9 7
♦ K 9 6 4
♣ A Q 9 3 2

WEST
♠ Q J 10 9 2
♥ 10 8 5 4
♦ A Q
♣ 10 4

EAST
♠ K 8 7
♥ A J 6 2
♦ J 10 8 5 2
♣ 6

SOUTH
♠ 5 4 3
♥ K Q 3
♦ 7 3
♣ K J 8 7 5

This was Deal 93 of the 1958 World Championship, and the Italians gained a useful swing by making 4♣ on the North–South cards in one room and 2♠ on the East–West cards in the other. It is at this point that we must introduce the concept of 'total tricks' – the total of the tricks made by the two sides, each playing in its best trump suit. On the above deal, the number of total tricks is 18: 10 for North–South in clubs plus 8 for East–West in spades.

The suggestion is that, even though it is not possible in the course of a competitive auction to determine how many tricks the opponents will make, it is possible to predict the number of total tricks. The so-called Law of Total Tricks states that the number of total tricks in hand is approximately equal to the total number of trumps held by both sides, each in its respective suit. In the above example, North–South have 10 clubs and East–West 8 spades, and the total number of trumps is 18, the same as the total number of tricks. However, it is pure coincidence that the number of trumps held by each side is equal to the number of tricks it actually made: it is only the equality between the *total* number of trumps and the *total* number of tricks which obeys a general law.

The fact that the Law of Total Tricks holds true may at first sight seem a little surprising, but a closer look at Deal 93 above will show why it works so well. From East–West's point of view, it was impossible to tell which opponent held the king of diamonds. If it had been in the South hand, West would have made one more trick playing in spades. In that case, however, North would have made one trick fewer in his club contract and this suggests that, while the actual number of tricks made by one declarer will vary according to the location of a key card, the number of total tricks remains the same.

Let us try one more example deal, this time from the 1956 World Championship.

	NORTH	
	♠ J 8 7	
	♥ Q J 7 5	
	♦ A 10 6 5	
	♣ 9 2	
WEST		EAST
♠ Q 2		♠ A K 6 5 4
♥ 10 9		♥ 6
♦ K Q 8 7 3 2		♦ J 4
♣ Q 10 5		♣ A 8 7 6 4
	SOUTH	
	♠ 10 9 3	
	♥ A K 8 4 3 2	
	♦ 9	
	♣ K J 3	

The French team fared poorly on this deal, going one down in 4♦ on the East–West cards in one room and one down in 4♥ on the North–South cards in the other. The total trick figure was therefore 9 plus 9, or 18. And it is again identical to the total trumps – 10 hearts for North–South plus 8 diamonds for East–West, or 18 again.

Closer analysis of this example deal gives another indication as to why the Law of Total Tricks works so accurately. West was unlucky that, with the adverse trumps divided 4– 1, 4♦ had to go one down. If North had held three diamonds and three clubs and South two diamonds and two clubs, West would have made 4♦. In that case, however, South would have lost a diamond and made one trick fewer in his heart contract and here again the number of total tricks would remain constant.

These two convincing examples show that the two major elements of uncertainty – Will a finesse work? Will a suit split well or badly? – disappear when we calculate the total tricks on a deal, and this makes the Law of Total Tricks of considerable interest when we are investigating vigorously competitive bidding.

The formula for predicting total tricks is not 100% accurate. At the table, the number of tricks won tends to be slightly higher than the law would indicate, and this is due to three additional factors:

(a) The knowledge that declarer has of his side's full resources gives him an appreciable edge in the play; if all hands were played and defended on a double-dummy basis, the number of total tricks would be extremely close to the theoretical number indicated by the formula.

(b) If there is a double fit, with each side having eight cards or more in two suits, the number of total tricks is normally greater than the formula would predict.

(c) The number of total tricks is often greater than predicted when each side has all the honours in its trump suit.

The Law of Total Tricks has many practical uses. The principal one is that it enables us to determine a safety level for competitive bidding – one which Vernes calls the Security of Distribution. Consider the following auction:

WEST	NORTH	EAST	SOUTH
1♥	1♠	3♥	3♠

South's bid of 3♠ will show a slight profit if either side can make its contract, even if the other's contract is one down; it will show the greatest profit when both contracts make, and only show a loss when 3♠ and 3♥ both go down. In the first case, the deal has 17 total tricks, in the second 18 and in the third case 16. The figure of 17 is the total-trick minimum at which we can outbid the opponents at the three level. We can therefore say that such a competitive bid is protected by 'Security of Distribution'.

In practice, of course, it is very difficult to determine the total number of trumps. However, players can normally tell exactly how many trumps their side has, and this itself is sufficient to allow the Law of Total Tricks to be applied with almost complete safety.

Let us return to the bidding sequence shown above and let us suppose that South has four spades. If that is so, his side must have at least nine spades between them and it follows that East–West, who have at most four spades among their 26 cards, must have at least eight trumps in one of the other three suits. South can therefore count for the deal a minimum of 17 total tricks, and a bid of 3♠ is likely to show a profit or at worst break approximately even.

The situation is quite different when South has only three spades. In that case, his side could well have only eight trumps and it is quite likely that the deal will yield only 16 or 17 total tricks. It would therefore be wrong to proceed beyond the two level, and a bid of 3♠ is likely to lose or, at best, break even.

Vernes' analysis of this and other competitive situations produces a simple general rule: you are protected by 'Security of Distribution' in bidding for as many tricks as your side holds trumps. This rule holds good at almost any level, but only if the point-count difference is not too great between the two sides and if the vulnerability is equal or favourable; for the rule to operate at unfavourable vulnerability, your side must have at least as many high cards as the opposition.

One final example deal, this time from the 1962 World Championship, shows the Law of Total Tricks in practical operation.

	NORTH	
	♠ Q J 7 ♥ K 6 ♦ Q 10 5 ♣ K 9 6 3 2	
WEST ♠ 6 ♥ Q 8 7 4 3 2 ♦ A 6 3 ♣ 10 8 5		EAST ♠ K 8 3 ♥ A J 9 ♦ 9 7 4 2 ♣ A J 7
	SOUTH ♠ A 10 9 5 4 2 ♥ 10 5 ♦ K J 8 ♣ Q 4	

The bidding started the same way at both tables:

NORTH	EAST	SOUTH	WEST
No	1♣	1♠	No
1NT	No	2♠	3♥
?			

The American North passed at this point, and the Italian West made nine tricks in 3♥. At the other table, the Italian North player pushed on to 3♠, and his partner again made exactly nine tricks. The 3♠ bid is easy to find if we apply Vernes' simple rule. South's rebid of 2♠ showed a six-card suit, and North knew that his side had at least nine trumps between them; it was therefore up to him to compete to the level of nine tricks. Incidentally, it is interesting to note that the total number of trumps on this deal, 18, was identical to the total tricks made by the two declarers in the actual match.