

## Cross-imping – an alternative to Butler Pairs

Cross-imping is a method of scoring Pairs events that is growing in popularity, and is slowly replacing Butler scoring around the world. In fact, outside Australia, Butler-scored events are rare, and cross-imping scoring is very popular. Perhaps the slow take-up in Australia is because it is not widely understood. The purpose of this document is to explain what it's all about and to show that cross-imping is fairer than butler scoring.

Any scoring method involving imps uses the actual score at the table, so like teams, the quantum of the score is important. In matchpoint scoring, it's just your rank in the field that's relevant.

In Butler scoring, the table score is impeded against the room average (usually with some extremes removed, and sometimes just the top part of the room is used.) So if the table result was NS +420 and the room average was +250, the difference ( $420 - 250 = 170$ ) is converted to imps. NS therefore earn 5 imps and EW earn -5 imps.

In cross-imping, instead of imping against the room average, your table result is impeded against every other table in the field, and the total is then averaged (i.e. divided by the number of results) to calculate the imps you earn on the board.

Let's look at a simple example of a 6 table field. This calculation will apply to the two pairs sitting at Table 3 where NS scored +420.

| Table | Contract / result | Score |                     | Imps       |
|-------|-------------------|-------|---------------------|------------|
| 1     | 4H/N making 11    | +450  | $+420 - 450 = -30$  | -1         |
| 2     | 3H/N making 11    | +200  | $+420 - 200 = +220$ | +6         |
| 3     | 4H/N making 10    | +420  |                     |            |
| 4     | 3H /N making 11   | +200  | $+420 - 200 = +220$ | +6         |
| 5     | 4H/N making 9     | -50   | $+420 + 50 = +470$  | +10        |
| 6     | 4HX/N making 10   | +590  | $+420 - 590 = -170$ | -5         |
|       |                   |       | <b>Total</b>        | <b>+16</b> |
|       |                   |       | <b>Divided by 5</b> | <b>3.2</b> |

So the NS pair at Table 3 earns 3.2 imps on this board, and EW earns the opposite i.e. -3.2

The same calculation is performed for each other result, so for the pairs at Table 4 where NS made +200, this is what happens.

| Table | Contract / result | Score |                     | Imps        |
|-------|-------------------|-------|---------------------|-------------|
| 1     | 4H/N making 11    | +450  | $+200 - 450 = -250$ | -6          |
| 2     | 3H/N making 11    | +200  | $+200 - 200 = 0$    | 0           |
| 3     | 4H/N making 10    | +420  | $+200 - 420 = -220$ | -6          |
| 4     | 3H /N making 11   | +200  |                     |             |
| 5     | 4H/N making 9     | -50   | $+200 + 50 = +250$  | +6          |
| 6     | 4HX/N making 10   | +590  | $+200 - 590 = -390$ | -9          |
|       |                   |       | <b>Total</b>        | <b>-15</b>  |
|       |                   |       | <b>Divided by 5</b> | <b>-3.0</b> |

So the NS pair at Table 4 earns -3.0 imps on this board, and EW earns the opposite i.e. +3.0.

The advantages of cross-imping include:

- Cross-imping is considered fairer and more like teams scoring, as imps are calculated using actual bridge results, not artificial averages. The imp scale was determined using bridge results, so to bring non-bridge scores into the equation in unsound.
- Butler scoring has a built in bias. The imps available to NS and EW are often not the same, reportedly up to as much as 5 imps on a single board with the smaller numbers very common. It's possible that a pair could end up 20 to 30 imps worse off just because they moved on the wrong side of the bias all day. With cross-imping, the NS and EW scores always balance.
- Under Butler, you average first then calculate later, which is mathematically unsound. With cross-imping you calculate first then average later.
- It should be that small differences in scores separate players in an expert field, yet with Butler, making that extra trick can mean nothing. It is by no means rare for different scores to score the same imps. For example 2H making 10 compared with the datum may score the same as 2H making 9.
- Under Butler, the extremes are discarded before computing the average. This is unsound, as it suggests that the extremes are always irrelevant which is clearly not always true. Under cross-imps, the scores at all other tables are used.
- Finally, there's the well known example from a top match in Holland in 1994 where Butler scoring was used. A score correction improving the score lodged by one pair resulted in no change to their net imps as the datum also changed, but the change to the datum resulted in another pair moving up the ladder thus denying this pair the prize money they would have received had their score improvement not been lodged.

Regarding disadvantages, the one that is usually cited is that players cannot calculate the match result themselves, which they can in teams events, or in Butler events once the datum has been announced. But this should not be a concern – under matchpoint scoring players are unable to score up themselves – it hardly seems a reason to discard an otherwise sound scoring method.

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