

## Problems with Movements

### *Introduction*

“Movements” is an area where many directors (of course not at the top level) will avoid entering deeply. These TDs take the view that this is an obscure subject, with convoluted methods and solutions, and that either the computer will deal with it, or there will always be someone to whom one can ask. And as a last resort, they can always blame either the movement and the players, or the program and the computer.

However, it is a TD’s job to assure that an adequate movement is chosen and that the tournament develops accordingly.

In the very last few years, we have seen a rapid increase in the abilities of scoring software, making the job of running tournaments a lot easier by smartly releasing much of the burden related to searching, choosing and applying movements. This is a sword of two edges, because it can easily lead a TD to overtrust the software, losing the sight of things going wrong until a point where it is too late to correct, or a point where even in correctable, the quality of the competition is irrevocably compromised.

When such a thing occurs, the scars and memories will prevail almost forever. A long gone event now, but still haunting all that were there, is certainly the Lille Open Pairs... Something went very wrong there. It shouldn’t, but it did. And it was a very valuable lesson in many respects (up to a point where nothing even slightly comparable occurred ever again).

If we can gain with mistakes (from us or from others) and never make the same mistake happen twice, that’s good. And it is even better if we are able, by knowing the ins and outs of running a tournament, to prevent mistakes from happening even once...

That is the main reason why we all should have a solid knowledge of how, why and what can be done about movements. When things run smoothly TD’ing is “easy job”. When they do not, it can be the most stressing and painful of all. And a great part of the skill is to make it look like an easy job.

We will try, in this lecture, to point to some directions and areas where TDs should always feel at ease in order to maximize the chances of a perfectly run event. Due to the extent of the subject we had to somehow focus our attention and we chose to deal mainly with pairs. Some of the general principles can and should also be applied to other forms of the game.

### *Movements and music*

Running a tournament is a lot similar to conducting an orchestra. The players are our performers. The play of the right boards at the right times is the music that we like to hear. If one note is played out of tune, that should not compromise the overall performance and the maestro should be able to correct the performance as quickly as possible. As a good conductor, the TD should be aware of a number of factors that help on this task:

1. The chain of command. On larger tournaments, there is a chief of operations, a chief TD, DIC - Directors in Charge - on each room, floor directors and assistant directors (the structure may not be always as strict or deep, of course). With such a chain in place, the worst thing

that can happen is for two different people to address the same problem and act by themselves separately... often creating additional problems. If you judge that you are able and entitled to act on something, please do... but always report it to the person above you on the chain. If you feel that you may eventually not be entitled or able to act, then you most likely are not... Report it to the person above you in the chain. This creates a recursion that gets the problem addressed at the quickest possible moment by the right person. Never take for you something that is being addressed by somebody else, and never execute something differently from what was transmitted to you by the person above.

2. Good preparation. Never execute a new movement without carefully going through, understanding and testing. The learning curve can be steep, but it will be vertical if you run into a problem in the middle of an event due to bad preparation. Think on how to instruct the players, how the movement develops, paperwork to be given to the players, how to distribute it, papers to pick up during the session, how to do it, etc.
3. Check, check, check. If you are confident that a movement is running according to plan, keep checking it periodically. Maybe it is not very important in a straightforward Mitchell, but you certainly know what means "I played this board already".
4. Listen to Players. They are after all our best friends. A tournament with 100 pairs has 100 pairs of eyes observing everything at the tables. When a player says to you: "—Something seems to be wrong..." sometimes that player is indeed having a problem, and a fraction of those times the problem can be corrected with smaller damage if instead of saying: "—Your job is to play, don't worry, everything is fine" the TD listens carefully to what the player says. Some of the damages in the Lille incident, for example, could have been avoided by simply listening to the first player that had a buzzing sound in his brain...
5. Movements - A Fair Approach. The book by Hallen, Hanner and Jannersten is an outstanding reference work on this area and in many instances it will save your day... We will designate it as "the orange book" through the rest of this lecture.

### *Problems and problems*

When we think "problems", we may think two things:

- "Options" - What movement(s) to choose, how to implement them. The problem is that of choosing a good solution for a tournament, according to the specifications of the S.O.
- "Trouble" - something has gone off track during a session. This is a completely different kind of "problem". It is one that most of the time needs quick action, and some sort of remedy to put things back on track.

## Options on movements

### Macro- and micromovements

Macromovements are related to the way that groups of contestants, as a whole, move from one session to another. Micromovements (Howell, Mitchell, AWL, Farrington, Hanner, etc) describe the progression of contestants and boards between rounds of the same session.

### Moving lines

When there is only one section in a pairs event you usually have a micromovement within the session, and a one-on-one assignment of contestants between sessions.

When you have 2+ sections, a well designed macromovement is important to assure as much as possible a good balance between contestants through the sessions. It is possible - and desirable - to achieve some degree of balance between lines in different sections of Mitchell movements.

One simple approach to the problem is to think of N lines of players as N pairs in a barometer, and use as a basis a barometer movement which, if complete, will give the best possible balance between lines. Usually the barometer will have more rounds than we have sessions, and in this case we pick only some of the rounds of the barometer.

*Example: 4 Sections, 3 Sessions. Schedule for a 4T-Barometer:*

Table	NS	EW
1	8	1
2	7	2
3	6	3
4	4	5

*Pair 8 is stationary and each other pair follows the next lower number pair (1 follows 7). Seven rounds with very good balance.*

The design of a schedule for moving 8 lines (4 sections) along 3 sessions can start by choosing 3 rounds of the barometer (I usually start with rounds 1, 2 and 3) and then try to achieve a setup where:

1. No line is always moving (players enjoy having at least one stationary session).
2. No two lines play all the time in the same direction, or in opposite directions without meeting directly. This is a rough guideline to achieve at least a reasonable balance with an incomplete movement.

For this purpose, change the direction or the position for some of the lines in some of the sessions.

Let us work out the example. Picking rounds 1, 2 and 3 we get:

Session 1		Session 2		Session 3	
NS	EW	NS	EW	NS	EW
8	1	8	2	8	3
7	2	1	3	2	4
6	3	7	4	1	5
4	5	5	6	6	7

3 is always EW, and 4 and 1 are always in opposite lines without meeting. We solve the second problem by making them meet directly (2<sup>nd</sup> session, trade 4 and 3). This switch doesn't create additional problems, and we are left with

one problem only: 3 is always EW. It is possible to demonstrate that this is the optimal solution for the particular problem of 4 sections/3 sessions. It is not possible to meet all the restrictions of the problem. If we try to put 3 NS in at least one session (try to switch 3 and 7 in 2<sup>nd</sup> session, for example) we create two new problems: (3 - 5) and (7 - 4) always in the same line. We might switch (5 - 4) in the 1<sup>st</sup> session... and now (5 - 2) and (4 - 8) are always opposite.

Session 1		Session 2		Session 3	
NS	EW	NS	EW	NS	EW
8	1	8	2	8	3
7	2	1	4	2	4
6	3	3	7	1	5
5	4	5	6	6	7

And as much as we try we will end up always with either two lines either always parallel or always opposite without meeting. One solution for this, sticking with the "optimal" setup, is to allow 3 to be always EW, but order in the 1<sup>st</sup> or 2<sup>nd</sup> session that EW line 3 is stationary in EW, and the boards and NS pairs move.

Anyway, the tries we made above illustrate one principle: solving "lines in the same direction" is more difficult than solving "lines in opposite directions", because in the latter case we can juggle lines on the same direction making some of them meet.

There is of course no need to start with the best barometer setup (any barometer setup will work).

When lines are of equal lengths, or when one of them is one pair short, this type of setup works out very well.

In other combinations of sizes for lines it is often possible to do smart things under two constraints: 1) avoid pairs having byes in more than one session, and 2) avoid pairs meeting other pairs twice. It is easier when the movement is not complete, because then you can juggle the pairs inside the lines, but even with complete movements you can design nice setups for these pairs.

### Number and length of sections.

When deciding on how many sections of how many tables to use in a pairs event, one will very often have a rough idea of the number of pairs to be expected and act accordingly. Several procedures can be used, and each director will certainly have its own pet method, but the possibilities are fundamentally two:

1. Sections of as much as possible the same size (for example, 140 pairs = 2 sections of 17, 2 of 18 tables).
2. Sections of the same standard size (13 tables - 2 boards per round - is a convenient number, but any not divisible by 2 or 3 would do), with the higher section lodging the extra tables as appendixes (in this case, 5 sections of 13, with the 5<sup>th</sup> section having 5 appendix tables).

When choosing between both methods it is relevant to think on the advantages and disadvantages of both (and on the habits of players).

The appendix has the advantage that all play the same boards, providing for better competition, but is slower due to the need of board sharing, and it is easy for something to go astray during the movement. The other method has

as its main advantages the simplicity of running it, the familiarity of most players with straightforward Mitchell movements, the higher speed and the robustness (not easy to send a Mitchell in the wrong direction). What to choose? For qualifying stages, where often players are not very experienced, straightforward Mitchell movements tend to work out better in balance, but this may depend on the habits instilled on the players.

### Choosing specific movements

When there is a smaller number of pairs, the orange book has maps for different types of events that will guide the TD among the hundreds of possibilities. Some techniques that a TD should be familiar with - namely at the club level where the number of pairs keeps changing during the first round - relate to how to convert a movement for N tables in a movement for N+1 (or more) tables, like adding 1 or 1 ½ appendixes, using a Rover or changing the movement to accommodate more tables.

*Example: 7-table Expanded Mitchell, 8 rounds. A board table between 3 and 4, and a pivot table at 7, for a total of 8 moving pairs. One extra table (two pairs) shows up during first round.*

You can easily "upgrade" the movement to a Relay Mitchell. Leave the board table where it is (between 3 and 4), and put table 8 sharing boards with table 7! All NS pairs are now stationary, and there are 8 moving pairs and 8 rounds. No other measures needed.

Many of these techniques can be occasionally useful at higher levels, also. We will not analyse them deeply (they are very well described in the orange book) but don't discard them too quickly. They may well come to your rescue one of these days.

### All-play-all multi-session movements

Movements where every pair meets every other pair once over two or more sessions (with at most a minimal number of exceptions) are typically suited for finals of important competitions. The movement in this case is a combination Howell/Mitchell (the Mitchell takes care of meeting pairs in other lines, the Howell of meeting your own line). Again, the orange book has a guide for every interesting possibility of number of pairs over two or more sessions. The classic 28 pairs, 3x9+1 combination over 3 sessions (Howell of 5 tables, 9 rounds, Mitchell of 9 tables, 9 rounds) is very well known, but the possibilities are numerous.

### *Trouble on movements*

One day you will get a call like this:

*"Hi. I have a small problem... I intended to start a movement of 14 tables, 2 boards per table, Skip Mitchell. Two pairs didn't show up, so I have only 13 tables playing. But I forgot to remove boards 27-28 from circulation! So I have 13 tables of moving pairs, and 14 of moving boards. I am to start the 4<sup>th</sup> round, now, and just noticed. Can you help me?"*

This is an example of a movement going astray because the TD was not careful enough. Is there a solution to it?

You may wish to think for a while after tackling the problem, and we will come back to it later. Some golden rules to start with:

1. When you notice something wrong with a movement and you don't know immediately the remedy, stop...
2. Identify the problem exactly and completely. See what happened, when and where...
3. Never panic. The pressure can be very big in these moments, and it is easy to let fear take over. This is probably the single worst mistake that you can commit. Think...
4. If needed, stop the tournament for some minutes, keep players in their seats and retire to a quiet room. It is preferable to spend 15 minutes reasoning and find a good solution, than to work under pressure and find a bad one in 5.

Before you use a movement, understand how it works. For example, in a Relay Mitchell, how does the share and relay method work? In a Skip Mitchell, why does the skip avoid pairs and boards to meet twice?

On the problem above, it seems at first sight that the mess cannot be sorted out. However, if we stop to think it will be easier than it looks.

The lazy and unthinkable solution is to cancel all and restart.

Another (bad) solution is to keep things going for seven rounds and stop, restarting with new boards for a second mini-session.

The correct approach is to think about what happened and try to restore normality as best as possible. If you do that you may well start thinking about these lines: For 28 boards, we seem to need 14 tables... so it would be ok to have a 14-table Mitchell with one bye in NS and one in EW. However, the bye in EW "stayed" at the same table for 3 rounds... So, to begin the 4<sup>th</sup> round, advance the EW bye to table 3, and let EW pairs 12 and 13 stay at the same table as they were after round 3 (which is the place they would be if they had not overtaken the bye). The boards moved normally (considering a 14-table movement). Announce that from round 4 on there will be a bye in NS14 and also a moving EW14 bye, make the move for 14 tables and see on boards 3 to 6 which pairs will not be able to play them. If possible, match the pairs on an extra round to avoid cancelling the boards. If not, cancel the board(s) for the pairs involved, with an artificial score according to the regulations.

The last (and best) solution comes naturally once we think about how the Mitchell operates. If we let the tournament continue with 13 tables and 14 sets of boards, the problem comes to the surface after the 7<sup>th</sup> round. NS have no problem at all, but EW pair 1, for example, plays in order sets 1, 3, 5, 7, 9, 11, 13 and would next play 1 again. How to avoid this? Simple solution (when you think about it): Make the boards move one extra table down! Now EW 1 in the 8<sup>th</sup> round play set 2, then 4, 6, and so on until the 13<sup>th</sup> round. No byes, no cancelled boards, only one comparison less on each board from 1 to 26 and 12 comparisons also on boards 27-28.

Another movement gone astray: Imagine a Double-Weave Mitchell, which works like this:

*8 tables, 8 sets of boards. NS stationary. Odd-numbered EW pairs move up and take played sets down. Even-numbered EW pairs do the other way around (move down, boards up). After 4 rounds boards move 4 tables up or down instead of one.*

Some years ago I made pairs move 4 tables instead of boards... A fifth round was played but round 6 couldn't obviously start.

Thinking with calm about the mechanics of the movement, what was done, and what were the consequences, again saved the day. Take some thought before reading on...

By making the pairs move 4 tables and the boards just one, the (normal) 8<sup>th</sup> round was completed! So the solution is now simple... Rounds 1 to 4, and 8, are played. We need to go back to round 5 (move from round 8 to 5 is just to make even EW pairs 3 tables up and move boards 3 tables down, and symmetrically for odd EW pairs) or (more elegant solution) restart from round 8 and move backwards to round 7 and then 6 (even EW now move up and take boards down, odd EW move down and take boards up).

The table below depicts in detail the movement of pairs and boards until round 4, then what happened with pairs moving 4 tables, and what should have happened with the correct move (boards 4 tables up or down).

	Round																	
	1		2		3		4		5(8)		5		6		7		8	
NS	EW	Set	EW	Set	EW	Set	EW	Set	EW	Set	EW	Set	EW	Set	EW	Set	EW	Set
<b>1</b>	1	a	2	h	7	c	4	f	<b>8</b>	<b>e</b>	5	b	6	g	3	d	8	e
<b>2</b>	2	b	1	c	4	h	7	e	<b>3</b>	<b>f</b>	6	a	5	d	8	g	3	f
<b>3</b>	3	c	4	b	1	e	6	h	<b>2</b>	<b>g</b>	7	d	8	a	5	f	2	g
<b>4</b>	4	d	3	e	6	b	1	g	<b>5</b>	<b>h</b>	8	c	7	f	2	a	5	h
<b>5</b>	5	e	6	d	3	g	8	b	<b>4</b>	<b>a</b>	1	f	2	c	7	h	4	a
<b>6</b>	6	f	5	g	8	d	3	a	<b>7</b>	<b>b</b>	2	e	1	h	4	c	7	b
<b>7</b>	7	g	8	f	5	a	2	d	<b>6</b>	<b>c</b>	3	h	4	e	1	b	6	c
<b>8</b>	8	h	7	a	2	f	5	c	<b>1</b>	<b>d</b>	4	g	3	b	6	e	1	d

Pairs up 4

## Scoring Problems

Can your scoring program handle the redesigned (13 tables/14 sets) movement? It should...

An important point when thinking about the remedies for movement problems is to know your scoring software, its limitations, and know how to (as best as you can) push it to the limits. You will be surprised with the (good) things that some programs can do when you make them work full time! The problem above, on the limit, can be solved by a scoring program that does not accommodate boards 27-28. For this, you would simply change pair numbers in the scoring sheets from the regular 13-table Mitchell, calculate boards 27-28 by hand and merge the totals. Don't give up easily when you think "the program cannot score".

Another good idea about scoring is to keep your mind open and not use only one program "because it is the best". Every program has strong and weak points, and for some tournaments some programs are better than others.

## Wrong boards played

With some frequency we see contestants playing a board they were not scheduled to play on that round. If they haven't played that board before, and if the mistake is discovered too late (during or after the play), the results must stand. Of course, now the "right" contestants cannot play those boards. When this occurs in a pairs tournament you must go through the movement and see which pairs will not be able to play the board, when that will occur

(to warn them), give artificial scores to contestants not at fault (or schedule a late play between two pairs if possible and desirable), and additionally give a procedural penalty to pairs causing the problem. We usually do not schedule late plays, so that the tournament ends as much as possible on time, but depending on regulations and habits this might be the best solution. This sounds like a lot, but works out quite easily in practice.

### Other recurrent problems

Some problems remind Mr. Blackwood's sentence: "—If I had a penny for each time...". One of these is for example forgetting the skip on a Skip Mitchell. You never forgot? I did, more than once. And the remedy once again is very simple if you think about the mechanics of the movement. The EW pairs skip one table in order to switch from one parity of sets to the other. Pair 1, for example, starts with sets 1, 3, 5, 7, etc. We need an extra movement after at most as many rounds as half the number of tables to break this sequence and give to EW the sets of the other parity. If this extra movement is made at the latest possible moment, EW 1 will start playing 2, 4, etc. If we forgot the skip, EW has set 1 in front of him, and set 2 just on the next higher table. Instead of taking EW to the set (making the pairs skip) just bring the set to EW (make the boards skip one table). If you already ordered the normal move and EW pairs started screaming "I played this board", just say quietly "Yes, I know, I'm very sorry. Please move all boards one table lower"! This will of course have to be dealt with by the scoring software.

There are other recurrent errors that have standard and well thought about remedies. These are discussed in detail in the orange book, and I will just list them here:

1. Relay Mitchell:
  - a. Forgetting the board share and relay
  - b. Board table too close to Table 1 (the share table)
  - c. Board table too far from Table 1
  - d. Too many board sets
  - e. Too few board sets
2. Late pair(s)
3. Leaving pair(s)

This is by no means an exhaustive list of problems you may be faced when running a movement. The limit is in fact your imagination... The ability of humans to make mistakes inadvertently is immense. And it takes a good TD to be able to win this battle against human error...