The Learning Curve

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Fitting together – 1

There is something quite remarkable about methods that we all take for granted. Learn the method, by blue line, place bell or whatever, overlay all the bits, and everything fits perfectly. There is a bell in every place of every row and a place for every blow of every bell. Of course it isn't really a coincidence, it's a consequence of the way methods work, of how they are structured. There are millions of ways to draw wiggly lines on a piece of paper, but the rules for method construction ensure that those belonging to a method fit together.

This might not seem very useful, but studying the way different parts of a method fit together can provide all sorts of useful clues to help you keep right. This month we look at Stedman as an example. Figure 1 explains some Stedman terms in case you are not familiar with them.

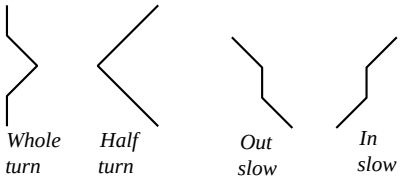

Figure 1: Bits of Stedman

Structure

Stedman is the only principle that many ringers learn (apart from Original, see 2nd July 2004) so it doesn't have a hunt bell to provide a framework. Instead it is organised into alternate 'slow' and 'quick' sixes (ie blocks of six rows). In a slow six the front three bells hunt backwards (leading back-hand). In a quick six they hunt forwards (leading hand-back). In each six, all the bells in 4ths or higher dodge together in pairs. The dodging is pretty straightforward. It is with the front work that people have trouble, so let's see what happens.

Figure 2(a) shows enough Stedman front work to contain the whole slow work for one bell (the thick line). The colours alternate, with blue for slow sixes and red for quick sixes. You will notice that there are also some black bits, which need explanation. A six contains 6 rows, and the five changes needed to get from row 1 to row 2, row 2 to row 3, ... row 5 to row 6. The change that joins two sixes together, ie that gets from the last row of one to the first row of the next, is special because it is the one that allows bells to join and escape from the front work. It is actually a bit of forward hunting on all the bells, but it is not really part of either six.

Look at the leads, and you see leading 'wrong' (back-hand) in the slow (blue) sixes, and leading right (hand-back) in the quick (red) sixes. When changing between forward and backward hunting there is a misfit, which shows itself as some sort of kink, or discontinuity in the line of each bell. Follow any line, and you will find either a snap (single blow turn round) or an odd place on the way in or out. Both change the hunting type.

Now look at bells coming onto and leaving the front (the bits sticking out on the right hand side). At the start of a slow (blue) six a bell comes 'in slow' and at the end of the same six, one goes 'out slow'. In a quick (red) six, a bell goes straight in, leads and comes straight out again. This makes it the 'quick bell' when compared with the 'slow bell', which spends five sixes on the front doing the 'slow work' – the black line in Figure 2(b).

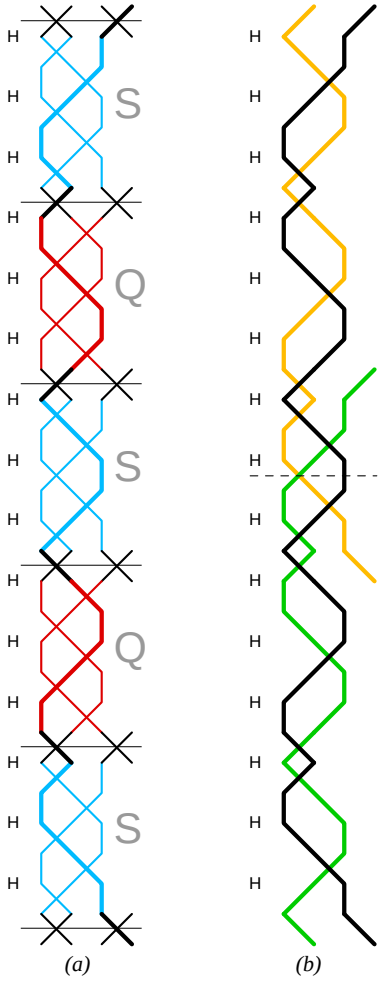

Figure 2: Structure of Stedman slow work

Figure 2(b) shows the same portion of the front work, but with some lines missed out for clarity, and the remaining ones coloured to show the paths of individual bells. The black line is the complete slow work for one bell, with a dotted line at its mid point. Now look at the orange line, which is the end of the slow work for another bell (you see it going out slow just below the dotted line). See how it complements the first half of the black line, with the snaps of the two lines fitting together. The black bell's first whole turn fits with the orange bell's last half turn, then the black bell's first half turn fits with the orange bell's last whole turn. Then the green bell replaces the orange bell on the front, and the first half of its slow work fits in the same way with the remainder of the black bell's work. The black bell's last half turn fits the green bell's first whole turn, and then the black bell's last whole turn fits with the green bell's first half turn.

Sorting yourself out on the front

These patterns are not just fascinating mathematical curiosities – they have real practical value. Stedman front work is especially prone to trips. There is no Treble to provide a clear reference. The switch from forward to backward hunting every few rows can trip up anyone ringing on 'auto pilot'. The extended period that a small number of bells stay together makes mutual mistakes more likely. With the risk of trips on the front, you need plenty of landmarks to help you keep right. Let's see what you can extract from a knowledge of the way the work fits together.

Knowing which way round things are always helps. Think first about the two whole turns.

The whole pull leads are rung wrong at the 'outside' ends of each whole turn (the bits 'facing away from' the rest of the slow work) ie the start of the first, and the end of the last. They go with the wrong hunting adjacent to the 'slow' place on the way in or out.

It follows that the whole pulls on the 'inside' ends of the whole turns are rung right (because the snap in the middle switches the hunting between wrong and right).

The two half turns come at opposite strokes. The first is at handstroke and the second at backstroke. This is a really useful piece of information, because it is surprisingly easy to forget whether you are about to ring the first or second half turn. If you arrive at the front on a handstroke, you know it is the first half turn. Actually that's not completely true, because after ringing both half turns, you again arrive at handstroke to start your last whole turn. But forgetting two things you have done is less likely than forgetting one, and you can't expect miracle cures anyway.

We've already seen how the snaps of pairs of bells fit together, but you can usefully note how the whole pull leads fit too. From Figure 1(a) you can see that the quick bell leads in the middle of a quick six. The bells that precede and follow it are either ending or beginning a whole turn. Since they too are leading right, these must be the 'inside' ends in both cases.

Going in

Another common problem is forgetting which way to go in. The answer to that also lies in the structure. The rule requires you to see who you follow on your first blow in 4ths when dodging 4-5 down, and on your first blow in 3rds. You follow the same bell if the dodges are in a quick six, see Figure 3(a), so since the next six must be slow, and you go in slow. You follow a different bell in these two places if the dodges are in a slow six, see Figure 3(b), and since the next six is quick, you must go in quick.

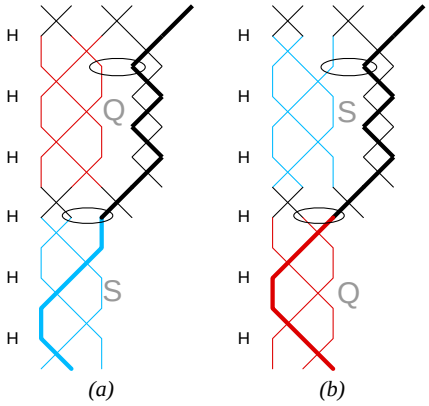

Figure 3: Rule for going in slow or quick

We have only looked at one method, but you can learn a lot about many methods by looking at how the bits fit together in this way.

Tail End

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