Background

In order to absorb new advice, I need to build it on top of how I already ring, or possibly to replace some component of how I currently ring and do it differently. So first a brief description of how I ring (or at least the parts of which I am conscious).

Basic approach

My approach to striking in general is:

- Ring with a steady rhythm (trying to build in any asymmetry needed to compensate for odd-struckness).

- Listen to how the resulting sound fits into the overall pattern.

- If I detect I am out of place, make an adjustment to subsequent blows.

- If I can't hear whether or not I am out of place (for any reason, including the sounds around mine being jumbled) then continue to ring by rhythm until I can hear whether I am striking correctly or not.

My approach to ropesight is:

- Use it for 'navigation', ie checking how my work fits in with what other bells are doing.

- Try not to let visual (mis)cues disrupt the striking process (above).

- But if I get badly out for any reason, then use it to get into the right ballpark.

That all works fine on 8. I have no problem ringing reasonably accurately, even when there is poor striking around me, and no problem knowing where I am even with other bells all over the place. I always know where I am (barring method mistakes) – I can both see and feel where I am, so I never need to count places.

Doing it on twelve

Striking on 12 is much harder because:

- To achieve the same quality of striking, I need to place my bell to a 50% greater timing precision.

- The closer intervals between bells makes it more likely that irregular striking around me will mask the sound of my bell (so I have to rely on rhythm without corrective aural feedback for more of the time).

- With 12 'beats in a bar' it is harder to judge the accuracy of a blow struck somewhere in the middle from the overall compass, especially if the striking around it is a little uneven.

Method ringing on 12 is harder because:

- I can't take in all the ropes as a single pattern that I can just 'read'[1]. So it is harder to spot navigational cues, and more likely that cues will be misread.

- Even scanning for bells in nearby places is less reliable because the variation in position caused by different rope timing can be greater than the visual interval between bells in adjacent places.

Obviously 12 is harder than 8 anyway, but these non-linear effects make the difference far more than the superficial 50%.

Back bell advice

The advice offered (as I remember it) was for the back bells to 'work together' to establish the rhythm (possibly taking less notice of the smaller bells), and to continue to do so even when they are spread out in the row. Two aspects of that advice seem straight forward, but the third, and apparently critical one, doesn't.

1. To some extent, all bells share the task of helping to create the rhythm, but the back bells will have a bigger share because their sound has more influence on the perceived rhythm. In that sense they must contribute more than the average.

2. The greater inertia of the back bells means that they can't attempt to follow any 'high frequency' fluctuations in rhythm. 'High frequency' fluctuations are more likely to come from the smaller bells, but the back bells must ignore it and focus on the 'low frequency' stability. In that sense the back bells share something that (to a degree) ignores the smaller bells.

3. The more literal interpretation of the advice entails the back bells working together to create a 'skeleton rhythm' for the others to fit into, not just by each providing stability, but by explicitly relating their strike positions to each other, even when they are separated – a kind of 'action at a distance'. Doing that would clearly benefit the overall rhythm, but doing it seems to require superior skills. The words and pictures below explain why that seems to be so.

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[1] As an ergonomist, I often apply the rule of thumb: '7±2'. That is the maximum number of items you can include in a menu, a bullet list, or whatever, if you want people to be able to make quick, reliable selections. It relates to the capacity of short term memory – the number of things that you can keep in your head at once without external prompts, or dividing the list into groups. Until writing this, I

Represent the striking as a series of blobs, and for convenience ignore the handstroke gap, like this.
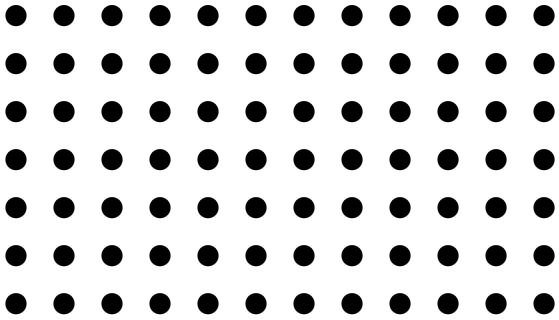
Real ringing will be less regular than this, and I will aim to pick out my bell (shown in green) among the rest.
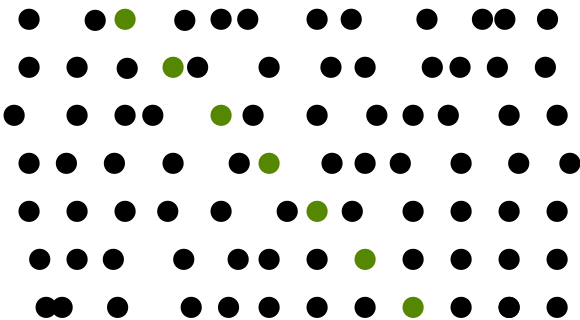
It would be easy to hear that this striking is uneven, but I still need to know whether or not my bell is striking in the right place. The example above shows my bell in the correct place, but most of its blows are not equidistant between the sounds of the adjacent bells. I therefore need some other mental frame of reference to judge where the right places are, for example a set of mental time markers.
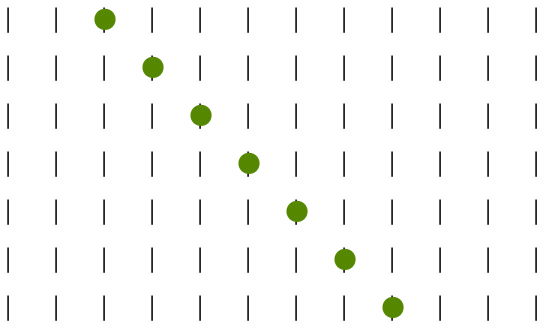
Those time markers need to represent the underlying aggregate rhythm of the whole compass – some sort of 'best fit' to the actual blows[2].
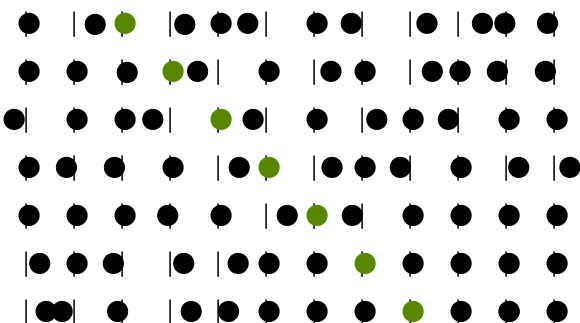
The fact that good ringing is possible shows that the human brain can derive such a framework, even if we don't quite know how. In my case, I suspect that the timing marks nearer to my position are more clearly perceived, and have more weight in judging my position. I am aware of the pulse of the overall 12-bell compass, but I think I focus much more on the part of the rhythm around my own position, so I perceive some time marks more 'strongly' than others, as indicated here by shades of grey.
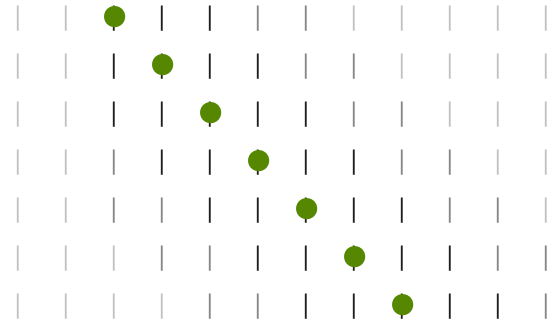
With this weighting, I think my perception of the ringing is probably something like this.
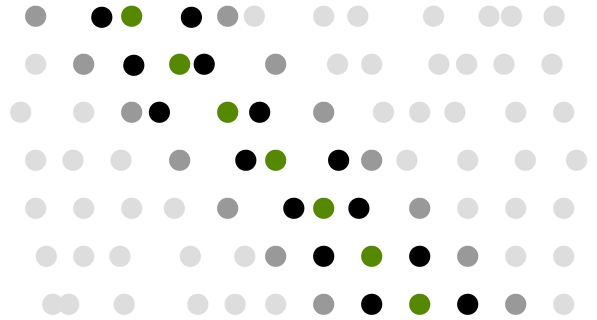
And in terms of diagnosing my own position, it is something like this.
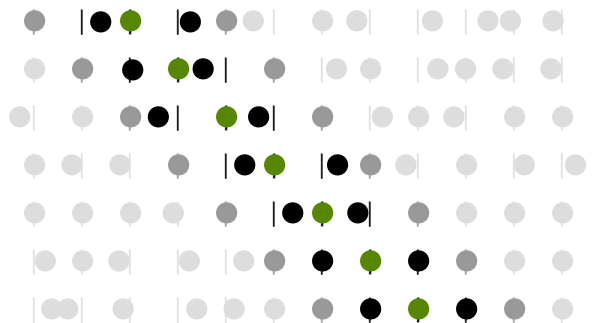
I don't know whether I judge my position directly against the time markers, or whether I use them mainly to form a view about whether the bells next to me are obviously out of place, and should therefore be discounted when considering whether the intervals either side of me are the same. In either case, unless I perceived positive evidence that I was not in the right position, I would try to stick to my rhythm-determined position. (Of course I might still mis-perceive an error when I was in the correct place, and act on it, or I might not perceive a positive indication when I was out of place.)

For the back bells to 'work together', to create a rhythm, would appear to require them to be able create a mental focus not just around themselves, as above, but with a wider span that includes them all (and to a degree de-emphasises the others).
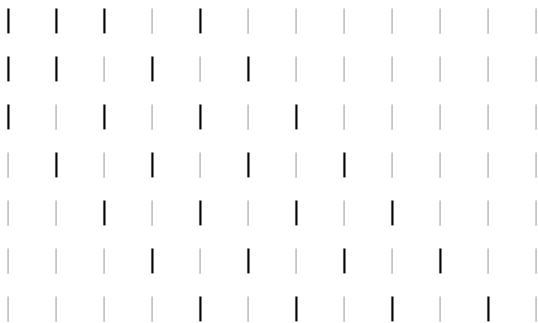
This is the same piece of ringing, nominally plain hunt, with 90ET highlighted blue, and me ringing E.
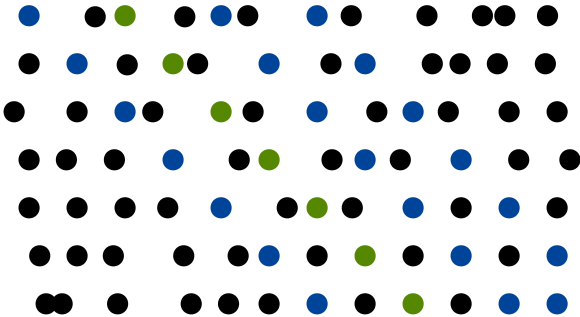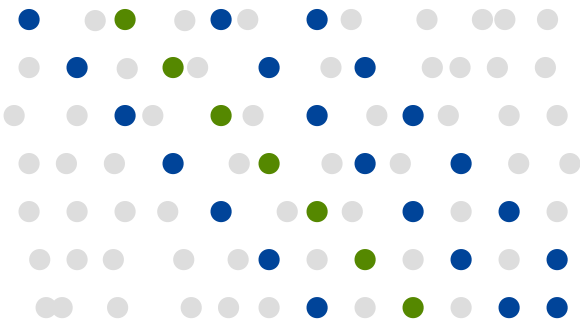

Using the 'natural' weighting, as described above, I would perceive something like this.
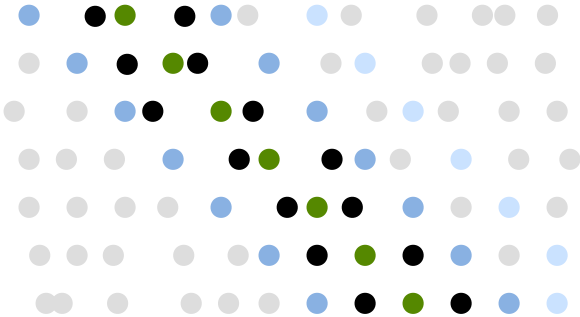
That doesn't provide the required focus on the other back bells. What is needed instead is a weighting that looks like this.

So the ringing above ought to be perceived like this.

As a non-participant, I often listen to ringing like that, since it brings out the alternating nature of the music[3]. But passively listening to enjoy the broad sweep of the sound, is very different from the intense focus on one's own bell, needed to get anywhere near the desired 10-15ms accuracy – a focus which (I think) leads to the 'natural' weighting described above.

Questions

So some questions to check my understanding, and to work out how to improve:

- Does my description of striking based on a narrow 'natural weighting' make sense? (I don't mean is it necessarily the best way to ring, I mean is it a coherent description, and does it seem consistent with your observation of my ringing?)

- Have I correctly interpreted your advice for how the back bells should 'work together'?

- Does it seem plausible to develop a longer range, back-bell selective, mental weighting starting from the process that I describe as what I think currently happens? (Or is it a case of 'if I wanted to go there, I wouldn't start from here'?)

- Or have I seriously misunderstood something?

- Do you have any other helpful suggestions or observations?