The Learning Curve

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Once more with feeling

In June 2000 (*Volume 1, Chapter 13*) *The Learning Curve* discussed the importance of feeling in ringing. We return to that topic and look at how you can develop more effective bell control by improving your feel for the bell.

What to feel

The balance – Awareness of the balance point is the key to full circle ringing. It divides two completely different actions. Below it, the bell will rise and fall – you can't stop it, any more than you can stop a ball thrown into the air from coming back down. Beyond the balance, the bell will not return unless you bring it back, or perhaps it bounces back in an uncontrolled way after hitting the stay. Near the balance, with its weight almost exactly over the pivot, the bell is extremely sensitive to the force that you apply on the rope, and appears to have very little 'weight'. If you cannot sense where your bell is in relation to its point of balance, then you won't be able to control it very well.

Prediction – When *Ringing Skills* was first published, the review in *The Ringing World* commented on the following paragraph:
"Many people think that the main purpose of the rope is to pull the bell. It is not. The most important use of the rope is to allow you to feel what the bell is doing. The more effectively you do that, the less you will need to pull it, and the more your pulling will be steady and measured and effective, rather than hasty and unprepared and inaccurate."
A bell is too heavy to respond instantly like the keys of a piano. Because of its inertia, what it does is the cumulative result of what you do to it over a few seconds. So you need to know where it is going, and then fine tune its movement to make it strike when you intend it to. Listening tells you exactly when it struck, but after the event. Ropesight gives a rough indication of where it will strike, but not accurately. To know where your bell is heading before it gets there, you must be able to feel what it's doing.

Expectation – To control the bell, you need to compare what it is doing with what it should be doing, so you need to know what the correct action would feel like. That means learning the 'shape' of the rise and fall of each stroke. The way the speed varies as the rope rises differs slightly between bells, including how much time it spends over the balance. *The Learning Curve* described three things that influence this shape in December 2002 (See *Volume 2, Chapter 12):* fixed factors (the hand-back rhythm and any odd-struckness), planned factors (hunting, dodging, etc) and reactive factors (deviations from the ideal that you need to correct).

How to feel

Use a light touch – More force equals less feeling. When your muscles tighten up to pull, your arms and hands become more rigid, and less sensitive to small movements. In addition, the force that you apply alters what the bell is doing anyway. It is a bit like the famous 'uncertainty principle' in quantum physics, where the photon of light that bounces off a particle and enables you to see it, also disturbs it, so that you don't know where it is afterwards.

Ring smoothly – Imagine trying to use a pair of weighing scales while riding along a bumpy road. Your readings wouldn't be very reliable. There is a similar effect if your rope handling is jerky, or your body jumps around trying to see who to follow. Each disturbance makes it harder for your hands and arms to sense what is happening on the other end of the rope.

Reach up – Most ringers are told they shouldn't ring with bent arms, but it is more helpful to think in terms of what you should be doing, and why. You can only feel what the bell is doing while there is tension in the rope. The rope isn't taut for the whole cycle, so you need to maximise the time when it is, ie the active part of the stroke with it pulling upwards from your hands, rather than hanging loosely. Even with good co-ordination, this is unlikely with your hands much below chest height, so the higher they go to the top of the stroke, the longer you will be 'in contact' with the bell, and the more likely you are to be able to feel when it needs small corrections in time to make them – on the rise, as well as on the fall. Also, when your arms are pointing upwards, they can be more relaxed than when they are sticking out in front of you, and you are supporting their weight. Pulling (or checking) with your arms more or less in line with the rope is more effective and requires less effort than pulling at an angle in front of you, so it is less likely to interfere with what you feel while doing it. But remember that your hands should never be straight above your head; they should move in a vertical line where the rope hangs – several inches in front of you.

Keep a long stroke – Reaching up and ringing smoothly both encourage a long stroke. As well as keeping in touch with the bell for longer, you can also spread out the effort that you apply, using less force for longer, which in turn helps to maintain a light touch.

Vary the rope length – It's hard to over-emphasise the importance of rope length – the rope above your hands, not the spare bit below them. Having your hands in exactly the right place makes a big difference, and it is most unlikely that where you got hold before pulling off is the optimum. Although it is quite possible to ring with the rope longer or shorter than optimum, you do so at a cost. You need more force, and it eats into your margin of error, so if something goes wrong you are less likely to cope without striking badly. The optimum rope length for hunting up and down is different, and in any case, your optimum length can change during a touch as you settle in to the ringing. If you have to think about rope length, you won't adjust often enough, so try to get to the point where it becomes automatic, like catching the sally. Relax your grip when not actually pulling the rope. Between strokes, your grip should be loose enough that if someone were to catch the rope in mid air, they could tug it out of your hands. It won't fall out, any more than it does when you open the grip of your left hand to grip and release the sally. Relaxing your finger muscles completely between each stroke makes it more natural to adjust if necessary as you re-grip. It also makes ringing much more relaxing.

Be comfortable – You can't relax if you are uncomfortable. Obviously you should wear suitable clothes that don't restrict your movement or have any dangling bits to worry about, but you must also be comfortable with your posture. Forcing your body into stressful positions won't help, though training it to find them less stressful might. Returning to the vexed question of 'bent arms', the obvious solution is 'straight arms', but this is sometimes misinterpreted. How straight is straight, and how far up should you reach? The key word is 'comfortable'. On most strokes, you should be reaching up as far as you comfortably can. So what limits comfort? If the rope pulls your arms out of their sockets or lifts you off the floor, it is not comfortable. If your joints are stiff, then what to you feels quite straight might look slightly bent. If you have long arms, on a light bell with a small wheel, there might not be enough stroke length to go smoothly to full reach. To find your optimum reach, adjust the rope a little until you can feel that you are at full reach but still comfortable. At that point you have optimum control.

Problems to overcome

Some things make it harder to feel what the bell is doing, notably any imperfections between you and the bell. One of the most pernicious is a springy rope. The stretchiness means that you don't feel the bell directly. Ring as smoothly as you can in order not to set off the waves of stretching and slackening that cloud the picture.

Some ropes stick or catch at various points along the way, for example where the sally goes through a guide or pulley block. If that happens on the way up you will feel a bump (and so might the bell) but on the way down, the rope can go slack above the obstruction, cutting you off from what the bell is doing. Ringing with a firmer rope can prevent this. Some times you have to trade off the desire for a light touch with the need to stay in contact with the bell.

Movement of the frame (or tower) can make the bell behave unpredictably, so it might not do what you could feel it was going to do. You can't prevent this happening, and again you need to compromise the light touch. Slight over pulling gives you a margin within which to react to re-assert control on those occasions when the bell decides to drop. Don't pull too hard though, since you must also handle it when it unpredictably rises.

Tail End

The Learning Curve – Volume 1: 1999-2001 , *The Learning Curve – Volume 2: 2002-2003* and *Ringing Skills* are all available from CC Publications.

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