



Playing the cello is a feat of coordination, but Alexander Technique can help, explains **Pedro de Alcantara**

There's a marvellous act in the Chinese circus. A juggler spins a plate on top of a long stick until the plate achieves dynamic equilibrium. She then inserts the stick, plate spinning on top, into a hole on a wooden horse. She spins a second plate on top of a second stick until the plate is balanced, then inserts the stick in a second hole on the wooden horse. She spins a third, fourth and fifth plate, by which time the first is beginning to wobble precariously. She runs back to it and spins it afresh. Then she spins a sixth plate, a seventh one – by now the second and third plates are wobbling, so she runs back and revives the momentum of their spinning. The act goes on, ever more excitingly and

dangerously, until she has balanced 15 plates on top of 15 sticks, inserted in three wooden horses. It takes dexterity, alertness, sangfroid and more to accomplish this seemingly impossible exploit.

In many ways the cellist is a juggler, spinning plates in alternation, in combination and in infinitely varied sequences. The cellist's 'plates' include coordinating the whole body, learning left-hand and bowing techniques, interpreting the musical text and interacting with colleagues, conductor and audience.

The dexterity of the master plate spinner doesn't come naturally to every musician. Study the contrast between the Italian concert artist Antonio Janigro (1918–89) and an emblematic 'plate breaker' – let's call her Roberta – depicted by the Hungarian Robert Berényi in 1928. It's possible that Roberta (who happens to be the painter's wife) is holding the cello for the first time in her life. Yet her awkwardness is typical of many players I've coached over the years, experienced professionals among them. Therefore, I retain Roberta as an imaginary but plausible cellist to whom I give lessons using the framework of the Alexander Technique.

Roberta's misplaced efforts are striking to our eyes, but she herself is almost certainly unaware of them. If we showed her a photo of her playing, she might exclaim, 'Impossible! I do not hold myself like that!' In truth there's a nearly constant gap between what one does and what one feels that one does, a phenomenon Frederick Alexander named faulty sensory awareness. The body contains sensors (called proprioceptors) that give us feedback on matters of position, movement, balance, exertion and so on. The neck is particularly rich in proprioceptors. Since Roberta misuses her head and neck habitually, she receives distorted feedback from those vital sensors. In Alexander's words, she's an 'end-gainer'. End-gaining is the eagerness to obtain results at the cost of a healthy process – the wish to do and to be seen to be doing something. Janigro, unlike Roberta, seems to be doing almost nothing. He keeps end-gaining at bay by knowing when and how to react, and above all when and how not to react, an attribute Alexander called non-doing.

RIGHT Antonio Janigro's playing position is ideal: his head is held high and his spine is elongated, giving him both security and freedom of movement

FAR RIGHT Hungarian artist Robert Berényi's 1928 painting of his wife with a cello illustrates the awkwardness typical of many players



In a Spin

According to Alexander, the best way to analyse someone's coordination is from the head downwards. Janigro wears his head high, atop an elongated spine. His head seems mobile and unconfined; when he played he was able to look at the public, at the conductor or at his hands without shortening his spine. His neck and spine are integrated into a unit and his head and neck are to some extent separated from one another. In contrast, Roberta pulls her head forwards and down, shortening her spine and reversing the points of integration and separation: her head and neck seem fused together and the line from neck to spine is broken. The mark of a well coordinated person is not the position of the head but what Alexander called its direction, a quality akin to the pulls exerted by a magnet on a piece of metal that makes a point of the body tend towards or away from another point. Janigro's head leads his body into expansion, Roberta's into contraction.

Janigro directs his shoulders away from each other while maintaining their connection to his back. Roberta lifts and contracts her shoulders, separating them from the back and over-integrating them with the arms. Janigro's elbows tend outwards (away from each other) and his wrists inwards (towards each other), setting up an elastic opposition between the elbows and wrists that make his gestures supple and clear. Roberta raises her arms and twists her wrists, with dire effects on her sound and her dexterity. Janigro's fingers are active only to the degree needed to do their work; Roberta's are crooked and asymmetrical, and they grip the bow and fingerboard with excessive force.

A good bodily position is partly defined by one's ability to change it easily and quickly. All that is static must contain all that is dynamic and, to some extent, vice-versa: in movement, you should be able to reach repose effortlessly. Janigro's cello rests lightly on his legs, leaving them unimpeded. His feet are primed like a ballroom dancer's, in firm yet light contact with the floor; he could stand up at once if he wanted. Roberta splays her legs, impeding the mobility of her whole body, and chokes the cello with her knees, reducing its resonance.

Roberta puts her cello aside and for a while we work on her general coordination. The head plays a fundamental double role, orienting the body upwards and initiating its movements – a mechanism that Alexander named the primary control. The combined directions of the head, neck and back, which we call her primary directions, are the first thing that Roberta must think about. She must constantly return to these and renew their dynamic balance – they could be seen to represent the first spinning plate. ▶





ABOVE de Alcantara demonstrates the importance of coordinating the head, neck and back to a young student

I ask her to sit forwards on the chair, resting her weight on her sitting bones instead of her thighs. In this position Roberta is able to rock sideways on her buttocks, lean forwards and backwards and turn her trunk in circles, half-circles or ellipses. This isn't to say that she ought to sway her body with every bow stroke; on the contrary, most of the time it's better for her to stay relatively still. But she ought to become able to move whenever she wishes, without losing her direction. Whether she moves or not, then, her body displays latent mobility; attending to it becomes Roberta's second spinning plate.

is a way of bringing the back and legs into play, thereby supporting the work of the shoulders and arms. To be useful, rocking requires that the connection between back and pelvis be maintained in movement. As long as Roberta keeps her primary directions, her rocking coordinates the back, pelvis and legs. If Roberta rocks badly, however, she risks losing her equilibrium.

I hand her the bow and ask her to play the D octave harmonic with her ring finger. As she plays, I ask her to rock from side to side, moving her bowing arm in opposition to the body: she points her trunk leftwards

PLAYING A SCALE PRESENTS ENDLESS PROBLEMS – ROBERTA OVERSPENDS HER BOW AND STRUGGLES WITH INTONATION AND VIBRATO, BREAKING PLATES ALL AROUND

An outside force acting upon the body triggers opposing forces within the body, giving it more vitality than it would have in the absence of such a stimulus. I press my fist between Roberta's shoulder blades and push her forwards. By resisting me – which she must do not with raw muscle power but through subtle adjustments of tonus and energy – she creates connections between different parts of her body, strengthening and stabilising her back. Roberta may choose to resist or not, as the situation demands; her latent resistance becomes her third spinning plate.

Just as a horse thrives under the weight of the rider, the well coordinated cellist benefits from the weight of the cello against the sternum and left knee. I place Roberta's cello – a new plate for her to spin – in its playing position and ask her to use its pressure to enhance her directions.

Now I ask her to rock sideways on her sitting bones. Paradoxical as it may seem, to release wrong tensions in the neck, shoulders and arms you need to increase the right tensions in your back and legs – right in quantity, quality, placing and timing. Rocking

on the down bow and rightwards on the up bow. This helps both the back and the arm. Little by little she becomes able to attend to many elements in turn and concomitantly.

In the photograph of Janigro both of his arms are pronated (rotated inwards, towards his body) rather than supinated (rotated outwards). His pronation helps project the power of his back to the arms, and beyond to the wrists, hands and fingers. If Janigro supinated his left arm ever so slightly, he would soon imitate Roberta's tensions and distortions. Pronating her arms and opposing her wrists to her elbows now becomes another plate for her to spin.

Tap your head with your left hand and rub your stomach with the right one and you will sense the mutual influence between right and left arms. This is called bilateral transfer. We see its effect when Roberta lifts her left elbow too high and misuses her right arm as well, in sympathy with the left. Depending on the way she coordinates herself, however, bilateral transfer becomes beneficial. If she finds a steady contact with her bow on the strings, for instance, the left hand will ▶



ABOVE rocking helps to coordinate the connection between back, pelvis and legs

improve automatically and become stable on the fingerboard. The use of the legs also affects the use of the arms and vice versa. This is quadrilateral transfer – the interplay of energies between all limbs. As Roberta plays the cello, quadrilateral transfer becomes yet another of her spinning plates.

I ask Roberta to play a G major scale in two octaves, four notes per bow. The scale presents endless new problems. Roberta overspends her bow and finds herself stranded for space at the end of each stroke. She forgets to anticipate her string crossings, which become uneven and accented. Her bow skids on the string, making her sound scratchy and unfocused. She struggles with intonation and vibrato. There are broken plates all around her.

But Roberta's biggest trouble is that she performs her scale like a mechanical exercise empty of musical content. If you separate technique from its musical substance, your prowess will impress no one. To help Roberta play more musically I suggest that she count her notes not ONE-two... THREE-four... ONE-two... THREE-four... but ONE... two-THREE... four-ONE... two-THREE... four-ONE...

Borrowing terms from poetics, we call units of 'ONE-two... THREE-four...' trochaic feet and 'two-THREE... four-ONE...' iambic feet. By habit or by accident, Roberta's playing is tediously trochaic, marked by a sluggish rhythm and an overly heavy downbeat. When I ask her to play iambically she tries to feel the iambic feet by nodding, thereby losing her primary directions and muddling her rhythm. But once she understands how to use the propulsive energies of the iambic foot while keeping her equilibrium, her playing becomes more musical, uniform and alive.

Roberta is now coordinating her entire body. She rocks sideways or not as she wishes and is ready to resist any force that acts upon her body. She draws her bow in opposition to her body, pronating both arms and availing herself of quadrilateral transfer. Her sound seems to flow out of the depths of her body and her playing is graceful and pleasing to the

ear. But my duty as a teacher is to bring Roberta to an ever higher level of skill. Having guided her through tasks that she saw as mostly physical (although in truth they engaged her whole being, not just her body), I now challenge her with tasks of intellect, creativity and musicianship.

These too will engage her whole being and may at first cause her to lose her direction and break plates. In her daily practice as a musician, however, she must learn and memorise pieces, rehearse with chamber music partners and perform in front of an audience, and my new demands prepare her accordingly. As she plays her scale, I ask her to modulate: first to G minor, then to B flat major, then to C minor. I ask her to improvise a lullaby in the style of Brahms. I ask her to give me the earth below and the heavens above. And she gives me all of it, spinning more plates than she ever thought possible and joyously breaking many more still. She's an end-gainer no more and has become at one with herself and with the cello.

At the end of our lessons, does Roberta sound like Antonio Janigro? Of course not. That was never my intention. Now at her best, she sounds uniquely like herself. ■

ALEXANDER TECHNIQUE

Alexander Technique teaches you how to coordinate yourself both of the instrument and away from it. The Australian actor Frederick Matthias Alexander (1869–1955) developed its basic principles while trying to overcome his loss of voice when reciting on stage. He realised that what you do is but a reflection of what you want to do. To free yourself from the wrong tensions of 'doing', you have to give up the wrong impulses of wanting to do – an organic and lively process that respects the connections between mind and body and that leads to greater freedom of thought and gesture. The technique is taught in many music colleges and conservatories worldwide. For more information, visit www.stat.org.uk (in the UK), www.alexandertech.org (in the US) or see www.pedrodealcantara.com.