

Pianimals explores these basic actions:

- **Lying down**, which lowers effort throughout the whole self. The support of the floor helps the body let go, enriching sensation and enhancing precision, making it easier to learn new movements. Sinking the hand into the key offers similar benefits.
- **Standing up**. The first straightening of the legs in standing is an important moment in the development of a child's confidence, of their very sense of self. Standing the hand on potent, straight fingers gives the pianist similar physical confidence.
- **Walking**, which is immensely more complex than standing. Balancing on one foot then transferring the weight to the other, the pelvis glides along several planes simultaneously to smooth out the transition. In pianistic walking, the hand's 'hip joint' rides high while the wrist and arm glide to facilitate smoothness. Too much waving of the wrist can disrupt this delicately balanced process.
- **Running**, which is much simpler than walking. Robots have been built that run surprisingly well by springing from leg to leg, but as we go to press, the walking robots are still falling down pathetically. Running is relatively straightforward: between each step, the runner has time to recalibrate equilibrium 'mid-flight.' Fast passages at the piano are also relatively straightforward, if adequate structural-functional preparations have been made 'energizing' the hand from within.
- **Rolling**. The motion of the pelvis in human walking follows a flattened out, 3-dimensional figure-8 trajectory. Rolling on the keys as one plays, the wrist experiences a fluid rotation that smooths out the corollary arm movement (when not overdone).
- **Hopping or leaping** on key, we tend to carry a relaxed hand with the arm, but in human jumping, the legs power the leap. When the fingers power the leap on key, they become more accurate and ironically, more relaxed – their freedom derives from improved function. Heightened activity in the finger lowers strain in the arm – the effort is localized where it has the most effect.

Structure vs. sensation

Pianimals often explores two contrasting modalities: *structural* or *sensorial*. The structural exercises may 'solidify' the hand completely, the better to sense the immense power inherent in well-aligned bones. The sensorial exercises may 'dissolve' the hand completely: bones swimming in 'liquefied muscles' allow the brain to reboot movement, discovering optimal alignment not by force but by sensation. The Central Nervous System (CNS), when offered these two extremes, spontaneously finds the middle – fostering new abilities and improving existing ones.

This is how babies learn. At first their bones are too soft to be structuralized, and the bones grow into shapes dictated by the muscular forces exerted on them. The richer the sensations, the more effective these musculo-skeletal interactions.

'Acquisition' – a special kind of learning

The learning is fun but not superficial. Reading even the simplest of motives (a three-note rising scale for instance) can be difficult for a beginning pupil – but turn it into an exploration of the keyboard from end to end by repeating the motive one step higher each time, and they suddenly discover "I can." They are *playing*, not just trying to play. They are freed from the slavery of the page, becoming creators and developing a proactive relationship to the keyboard. They are *making music*; it is flowing out of them. Returning to read that three-note motive, they now recognize it as something they can do – they have made it their own.

The accompaniments have been composed with this in mind. Some pieces challenge the teacher even more than the pupil – meeting that challenge can spark a heightened creative moment for both players. The sometimes dissonant harmonies can spark creativity as well, returning the pupil to that spontaneous state when they first mashed indiscriminate notes as a baby, long before learning became a job and harmony became a sterile, diatonic affair.

Physical & musical benefits of 'carrying the weight' well

The exercises redress one unintended effect of the arm weight school, a plodding touch that limits ability and musicality, which arises when the hand over-relaxes instead of *standing*. Claudio Arrau has noted the importance of the hand's standing up in weight technique,⁴ and Heinrich Neuhaus also stresses it.⁵ The hand produces the sound easily when it stands well, freeing the arm to do its own job – moving laterally to *join* notes, to shape the phrase.⁶

Effective division of labour between arm & hand

Over-involving the arm in tone production, or over-relaxing it, prevents it from shaping the phrase proactively with lateral movements, and robs the hand of its full potential as well – the hand goes to sleep when it thinks the arm is doing all the work. The hand comes fully into its own when it fully neutralizes the arm's weight, countering the 'down' kinetic forces with a vital inner 'up' action, standing well, moving within the field of gravity instead of succumbing to it – just as the legs 'float' the torso as we stand, walk and run in life. All strain in the arm results from the hand's failure to do this.

The thumb: the ugly duckling, or a swan?

The thumb deserves special attention because of rampant misuse and underuse. Functionally, the thumb is 50% of the hand, its half opposing that of the four fingers. Pianistic walking often happens between one 'leg' (the thumb) and another leg (a finger): when the thumb metacarpal bone (its 'thigh') participates fully, hand potency increases exponentially. Failing to master the complexities of the thumb's movement makes it seem like an ugly duckling, but *Pianimals* restores the thumb to its swan nature, reconstituting its place *under* the hand to eliminate limping and improve melodies, scales, arpeggios and chords.

Don't force

Don't force the pupil to learn the actual piece if that would be a chore. Improvise a musical game imparting the essence of the exercise, and then give the pupil full marks – not for learning the piece, but for *learning*. The child grows more in ability while having fun than while learning under duress. The whole thrust of *Pianimals* is to eliminate the drudgery of piano playing.

- the hand learns to use its skeletal structure to *stand tall* instead of relaxing into limpness
- the arm learns to *shape phrases* with organic, lateral movements instead of 'producing tone' with vertical movements
- the thumb learns to be an '*arm thumb*' with far more structural power than its finger neighbours
- the wrist learns to find the *neutral point* and rests there, floating, free, calm and empowering.

⁴ Dean Elder, *Pianists at Play*, (Kahn & Averill: London, 1986), 38

⁵ Heinrich Neuhaus, *The Art of Piano Playing* (Kahn & Averill: London, 1998), 124-5

⁶ A key element in the teaching of Alfred Cortot (my pianistic great-grandfather).

Make it fun

My late teacher Phil Cohen's epitaph: "There is always another way." Phil used to fool around at the piano, knocking the keys in all sorts of peculiar ways to get unusual, percussive sonorities out of the instrument. He was like a kid, exploring in a carefree way, dreaming up never-before seen ways of using his hand. Doing these exercises should be the same kind of fun.

Fool around – make a game of it

The 'lying down' pieces, addressing what to do *after* one has flopped the hand, are a case in point. Don't traumatize the hand by flopping it from a height – don't drop the baby! Lay it down gently, dissolving it into the keys – and explore unusual ways of moving from this place of security. Make it into a game to help the hand improve while hardly even thinking about playing the piano.

Validate the pupil's reality

Banging is another case in point. If the pupil likes to bang, why not show them how in a functional, musical way instead of stifling their initiative? They have a natural energy that, when harnessed, can be put to good musical purpose (see *Thumb Troll Tromp*, *Forte Flying Fox*, etc.).

In sensorial learning, think less about external form, more about internal function.

In every exercise, sense internally the idea behind it – which muscles are stimulated to new action, what new bone alignments arise. Instead of correcting a hand position, try to develop a new movement that improves it naturally. The improvement stems not from increased strength (though the hand may feel stronger), but from new aptitude. With enriched sensation,