

Group IV – Tom Thumb Takes Handy Harry on Some Big Adventures

Imagine that one of your legs was attached backwards and you had to learn to sit, stand, walk and run with it like that. That would be extremely bizarre, right? But this is more or less the situation with your thumb. Tom Thumb is quirky, and works in a very different way from his neighbours the fingers – and so he deserves a whole group of exercises just for himself. Most of us underuse our thumbs at the piano because we just don't know how to use its various complicated movements fully. This group aims to change all that by giving you a more complete 'sensory picture' of your thumb.

Lesson IV-1 – The Woodpecker

This lesson is like Handy Harry bonking his head, but this time your hand is a bird's beak instead of an infant's noggin.

- Make your hand into a bird beak again: press your thumb really firmly against your bunched fingertips. Peck a key with your bird beak. **[illustration IV-1.1: the hand as a woodpecker instead of Handy Harry]** Or peck *anything* for that matter. Your own forehead, your leg... can you peck your teacher? Watch it, she might peck you back! Then peck the key again. The firmer you make your bird beak, the clearer the sound of the peck.
- How fast can you go? Do you know how fast a woodpecker pecks? Can you go as fast as him? Use your wrist to go really quickly. Do you remember the sound of your fist bonking things? What's different about the bird beak's sound?
- If you compress your bird beak moderately, your wrist stays loose and waves a bit when you peck. But if you compress your bird beak absolutely as strong as possible, your wrist firms up too, and so it's more your whole arm pecking and not just your hand. Which way goes faster, a loose wrist woodpecker peck or a whole arm peck?

When you make a bird beak, your thumb *opposes* itself to the fingers quite strongly. This action of *opposition* makes the thumb unique and differentiates it from all the other fingers – it actually moves in a completely different direction. How, in fact can it play at all, when it most easily moves sideways while the fingers conveniently move the keys up and down?

But the action of thumb opposition, even though it moves in a different direction, is crucial to piano playing – in the following exercises we'll discover just what an essential part it plays in what we do at the keyboard.

Lesson IV-2 – Handy Harry Scratches His Other Leg with His ‘Thumb Foot’

- Play middle C with your right hand thumb.
- Play D with your second finger, but don't let go of your thumb's note.
- Move your thumb sideways along the key C until it slides over onto the note D: Handy Harry's two feet (1 & 2) snuggle together and help each other to hold the note D down. **[illustration IV-2.1]**
- Now Handy Harry's right leg (your 2nd finger) feels itchy. How is he going to scratch it? Begin to slide your thumb up the side of your 2nd finger! Slide it as high as the nail joint (Handy Harry's first 'knee' – or maybe his ankle) and back down a few times.
- Now Handy Harry is itching even further up his leg – slide Handy Harry's left foot (your thumb) as high as the *next* finger joint (his 'second knee') and back down again. **[illustration IV-2.2]** Feel how much exercise your thumb is getting, and the new kinds of flexibility your whole hand has to learn to do this movement elegantly and nicely. Can you scratch different parts of your second finger, a little more in front, or a little more behind? How much of your second finger can you cover?
- Can you slide your thumb even higher than your second finger's second joint?
- Later on do that scratching movement a little quicker. Try it at various speeds. How fast can Handy Harry scratch?!

Lesson IV-3 – Thumb Rolling: Handy Harry Does a Somersault

In this exercise your thumb is your Handy Harry's head, your other fingers his body. Handy Harry has never done a somersault before, and he has to practice each little beginning part before he does the whole thing.

- Dangle your hand in the air with your elbow bent so your arm looks like a heron's neck. Lower your hand slowly until your fingers, dangling lifelessly, limply, just touch the table. Lower your hand a *tiny* bit more so your fingers bend a little and your thumb tip comes to barely touch the table.
- Now just move your hand very slightly to the inside so your thumb begins to roll over onto its nail. Don't roll all the way onto your thumb nail right away, just roll a tiny bit and come back, then a bit further and come back then a bit further, many times, until finally, after let's say 25 times, your nail joint touches the table. **[illustration iv-3.1: Harry's head is the tip of the thumb. As the thumb folds he gradually gets further and further into a somersault]** We do it so many times so we can begin to feel every little joint in Handy Harry's body folding and unfolding, smoothly adjusting to the movement. The slower you go, the more details of this folding and unfolding you can feel. The more you enrich this sensory picture of your thumb, the more effortless and elegant will be Handy Harry's eventual somersault!
- Each time when you roll back up onto your thumb tip, keep going – roll a bit further to the right so your thumb lies more on its pad than its tip. This unbends it more, so you can feel even more just how it re-bends the next time.
- Resting on the back of your thumb's nail joint, now begin rolling even further to the inside! Relax your other fingers, your hand, your wrist, your forearm, your upper arm and even your shoulder in a special way to feel just how you can manage to lie down on your thumb's medial phalange – it's like Handy Harry rolling right over onto his back! **[illustration iv-3.2]**
- If you roll even further, all the way onto your thumb's metacarpal bone, now even Handy Harry's legs have rolled over, you completed your somersault! **[illustration iv-3.3]**
- And now finally roll back the same way you came, and end up standing once again on your thumb tip.
- Do this entire rolling sequence many times, and explore different parts of it. How many places in your thumb and even elsewhere in your body can you sense folding and unbending that you never experienced before?

Lesson IV-4 – Handy Harry Draws a Square on the Ground

- Make a firm, secure house out of your right hand by standing it on all four fingers and thumb. If your thumb is too close to your fingers, the fingers make one wall that is rather unwieldy – make sure that house is sturdy by separating your thumb well out from the four fingers. Virtually all the effort for this standing comes from Louis Lumbrical more than Freddie Flexor. **[illustration iv-4.1: Harry is a house]**
- Slide your thumb sideways a little ways towards your fingertips, but don't reduce the weight on your thumb or your fingers. For this entire exercise, both fingertips and thumb continue to press very firmly. Slide your thumb along a line towards your fingers and back to where it began. It's as if Handy Harry is standing up and tries to slide his left foot closer to his right without lifting it off the ground at all.
- Now slide your thumb sideways *away* from your fingers – Handy Harry begins to do the splits! **[illustration iv-4.2]** Don't really do the splits, but let your thumb go little by little further away from your standing fingers and see how your hand must sink down to let this happen – *without* letting your arch collapse. And come back to your middle standing position.
- Now slide all the way back and forth along the horizontal line your thumb has been tracing on the table.
- Slide your thumb along the other axis – that is, slide forward, away from your body, staying firmly on the table, till your thumb rests close to your fingers and maybe even touches them – don't strain to do this but if you can fairly easily, go ahead. And back to neutral.
- Slide your thumb away from your fingers, towards your body, and back to neutral. Notice how flexible your hand must be to accommodate all these sliding movements. Let your hand become suppler, try to sense where your hand could let go more to let your thumb slide farther – your arch may even sink a little to accommodate this. Let it descend somewhat but keep it potent – don't let it feel weak or empty, don't let it poop out.
- Try sliding your thumb in each of these “four cardinal directions” of movement again. Take your time, and begin to explore little variants in the direction. Instead of straight forward, angle off a little to the right or left. Instead of exactly sideways, curve a little forward or back. How many new places can you discover where you never slid before?
- Finally move your thumb in a big circle around on the table surface, visiting in turn all the places you've already been, and returning to the central neutral point from each point on the circle in turn. How about a circle in the other direction? How about a big square – can you travel along the outside lines of a square to four distant corners with your thumb? How about a diamond shape? **[illustration iv-4.3: Harry tracing his sliding foot along various planes on the ground – I will draw these for you]** The more variations you try, the more you discover just how amazingly supple your thumb can be.

Lesson IV-5 – Handy Harry Draws Circles in the Air

Stand Handy Harry firmly up on his thumb leg, and bunch your other fingers together loosely as if Handy Harry has tucked his other 'legs' up underneath him. **[illustration iv-5.1]** Now instead of your thumb sliding, let's teach Handy Harry to move his body in the "three cardinal directions" you learned yourself earlier in sitting.

- **Lobster Rocking:** Move your arm a little forward and back – now Handy Harry is rocking like you did when you turned yourself into a lobster. Of course Handy Harry can't flex his back as much as you did, but can he stay loose even though he is standing firmly on his 'thumb leg?'
- **Accordion Rocking:** Move your hand left and right to imitate how you turned yourself into an accordion in sitting. Do this as loosely as possible but of course don't let your 'thumb leg' collapse!
- **Corkscrew Rocking:** Twist your hand this way and that as if your thumb were a screwdriver – Handy Harry is now turning himself into a corkscrew like you did before.
- **Gyroscope Circles:** Now combine those three movements so your hand does a big circle while still standing on your thumb.
- Have Handy Harry stand on one of his other legs, let's say your 2nd finger, bunch your thumb and other fingers loosely under you, and repeat this series of movements – the three cardinal directions for your hand plus the big circle to finish.
- Repeat them while standing on your 3rd, 4th and 5th fingers in turn...
- Finally play a very slow scale with standard fingering, doing four wrist circles on each note.

Lesson IV-6 – Reverse Opposition: Handy Harry Does Some Strange Sideways Rocking

- Sit in your chair and push on your left foot. Try to feel how the force of that pushing transmits through to your pelvis, making it rock to the right. Normally we would stiffen against that push to stabilize our bodies, but let your pelvis go, let it rock – It's the 'accordion' move from Group I that opens your ribs on one side while folding them on the other. But now the effort to rock your pelvis comes from a left leg push. When you use other muscles than the usual ones to do a movement, it feels very different inside though it looks the same from the outside.
- Stand your right hand up on your thumb (Handy Harry stands on his left leg), and really stand on the very tip of your thumb – not the flat of the pad, not even the crease of the nail. Now let Handy Harry imitate the movement you just did with your whole body: when your thumb pushes on the table, it makes your hand and arm move to the right. **[illustration iv-6.1: Harry pushing with his thumb leg to make his body and other leg move away – but without falling!]**

This movement is called *reverse opposition*, where your thumb 'un-opposes' itself from the hand. Try to feel what an unusual set of muscles you need to use to do this strange pushing.

- Try bending the nail joint of your thumb so it partially collapses to the *left*. Now when you push to the right, gradually straighten that nail joint. It makes you push through a wider range overall. Straightening a bent nail joint is an important component of your thumb's overall reverse opposition movement.

Lesson IV-7 – Handy Harry-Alligator Makes a BIG Yawn

- Imagine your arm and hand is a sleeping alligator. Rest your right arm, wrist, hand and fingers on a table so they are mashed, but slip your thumb in underneath your hand so that it can be the alligator's lower jaw. Just feel how nice it is for your alligator to doze in the hot Florida sun...
- When he wakes up, what's the first thing he does? He takes a big *yawn*. Don't stand up on your thumb's tip. Instead, leave the entire alligator's lower jaw on the table – leave all three phalanges of your thumb lying there. Roll onto your thumb somewhat so it is even more under your hand, and in that position see just how wide you can open that alligator's upper jaw. Is it so wide he could swallow a horse?! Try that several times.
- Try yawning again but stand up on your thumb now to open alligator's jaws even wider! Could you now swallow a hippopotamus?

What if your alligator suddenly realized someone was watching him? He knows yawning is rude, but his arms are too short to cover his mouth, so he tries to pretend he wasn't yawning at all but just "exercising his jaws."

- Try to fool everybody by yawning as wide as you can and then closing your alligator jaws extremely slowly, so slowly you can hardly see them move... and then open them the same slow way.
- While alligator is yawning as wide as he can, imagine that a little birdie lights right in his mouth. Can you close his jaws so slowly that he doesn't even harm the birdie? Practice this one many times.
- After exercising his jaws for some time, Mr. Alligator may start to feel a bit hungry – uh oh, what now? Well, that birdie is right there and he's awfully hard to resist.... What a nice snack he would make... suddenly *snap*, Mr. Alligator's 'jaws' clamp shut super fast and voila, he's gobbled up a nice tasty breakfast...

There are *five* ways to do this one:

- 1) Your active thumb pushes your relatively passive fingers up
- 2) Your active fingers pull your passive hand up
- 3) Combine these two to make it more smooth, easy and natural.
- 4) Your active arm pushes your passive hand and fingers up – this one only works if you allow your thumb to stand up, turning the movement into a kind of 'passive thumb pushup'
- 5) Combine all these efforts so you really don't know which one did the movement – this is the 'integrated' one

Lesson IV-8 – Alligator Grows Some New Teeth.

When alligator yawned, your bunched fingers formed his upper jaw. Now what if this was a strange alligator, who could close his teeth one at a time instead of his whole jaw? Here you do a thumb push-up individuating each finger in turn.

- Stand on your thumb tip, and open your alligator jaw once again.
- Now ‘un-bunch’ your alligator’s upper jaw; let your fingers spread apart from one another. Ah, take care that tension doesn’t develop in your shoulder as you try to do this. Let your shoulder drop slightly as your fingers gently spread apart. Your alligator now has four jaws!
- Now teach your alligator a trick that *no* alligator has ever been able to do in real life: bite down with one of your ‘jaws’ while the others stay wide open! Use your fingers as four individual alligator jaws, and try ‘biting’ with each one in turn, several times for each jaw. Which one bites best? As one finger bites down, does your thumb push-up weaken or can you really keep your other fingers soaring high up into the air?
- Finally stand on your thumb, yawn really wide, and then wiggle your fingers quickly as if they were playing some fast note pattern, *without* losing the potency of your thumb push-up.
- Continuing to wiggle your fingers while standing tall on your thumb, begin to move your arm forward and back as if your thumb was a roly-poly that rocks around but always comes back to the vertical.

This exercise is excellent for teaching the *differentiation of function* between thumb and fingers. Generally we avoid making a big effort with our thumbs because we don’t know how to localize the effort to its big muscles while leaving the rest of the hand sensitive, relaxed, lithe and moveable. But the thumb really works in a very different way from the other digits – doing this exercise well helps unlock its vast, largely untapped potency.

The next exercise builds further on this idea of tapping the thumb’s unsuspected potential for powerful, differentiated movement.

Lesson IV-9 –Tom Thumb and the Articulated Screwdriver

This exercise demands many unusual movements of your thumb, so remember as you go through the variations to take many rests. Let your thumb ‘feel how it feels’ after each new and unfamiliar experience by taking a break. Your learning will be better when your thumb has a chance to ‘think things over’ and adjust while it’s taking a breather.

- Sit in a very sturdy chair, one that’s so big and heavy that if you tried to push yourself over backwards it wouldn’t budge. What happens if you *do* try to tip your chair up onto its hind legs? It’s so solid that your foot slides forward on the ground and your leg straightens out instead. Try this first with one leg and then the other. Repeat it many times (note: this may not work very well on a carpet).

Slide on your thumbnail edge

- Now rest your hand on a table top, and push away from you with your thumb on the table the same way your real leg did on the floor. Don’t stand up on your thumb – lay it sideways flat on the table, so that the crease between thumbnail and skin lies on the table. **[illustration]** Push on that so that you keep a good, strong pressure on the table but slide away. Your fingers will naturally pop up in the air a bit, don’t worry about that, let them do so – just keep push-sliding that thumb, that’s the important thing. Repeat this many times.

You should feel the effects of this pushing all the way up to your shoulder. Often if you do it well, your shoulder will relax and drop forward slightly. The healthy pressing of your thumb takes over from your shoulder’s unconscious, counterproductive holding effort, and it lets go.

Slide on your thumb pad

- Put the *flat pad* of your thumb on the table right at the edge (so your entire hand, including your fingers, hangs off the table). **[illustration]** Press on the table and push your thumb to slide it away from you in this position, feeling what effect the movement has on the rest of your arm, shoulder and body.

Slide at all the angles in between

- How many different angles between ‘thumb on its nail crease’ and ‘thumb on its pad’ can you find to do this thumb pushing movement? Can you sense that each of these angles evokes a slightly different feeling in your shoulder?

The thumb screwdriver movement

- Begin the movement with your thumb on your pad, then twist your thumb through all those angles you discovered as you go through the movement, so you end up with your thumb on its

nail crease. Your thumb is like a screwdriver – with your right thumb you *unscrew* the screw; later with your left thumb you will screw the screw further *in*. Note that your entire forearm twists as well – how does *this* movement feel in your shoulder?

Make sure your fingers don't tense as you do this. Let your hand fold naturally in upon itself as a natural result of your thumb twisting in this unusual fashion. Leave your fingers floppy and loose.

A further differentiation

- Before doing the first movement again, bend and straighten your thumbnail joint a few times. Then begin the sliding movement with that nail joint bent, and straighten it gradually as your thumb is sliding away from you. Try all the variations:
 - Bend your thumb then straighten it as you slide on your thumbnail crease.
 - Bend your thumb then straighten it as you slide on your thumb pad.
 - Bend your thumb then straighten it as you slide beginning at some angle between your thumbnail crease and thumb pad.
 - Bend your thumb then straighten it while you go through the entire screwdriver movement.

Always go slowly, trying to *sense* all the effects of moving in this strange way. Don't make it an exercise, make it a lesson! Learn by sensation!

- Grab your right thumb with your left hand (use your left thumb and all your fingers to grab). With your left hand acting as teacher, leave your right thumb totally inert and take it through all the variations of this lesson, passively: the left hand provides all the energy for the movement, your right thumb just lies there like it's dead, and lets your left hand drag it and twist it...
- Finally, go through this entire exercise with your thumb on a piano key, or rather, *in* the piano key. Really 'make a hole' in the keyboard by depressing the key, and then push-slide your thumb right into that hole, and go through all the variations you've already explored.

Lesson IV-10 – Tom Thumb Helps Handy Harry Take Some Giant Steps

- Begin with a thumb push-up: stand on your thumb and stretch your 2nd finger to the sky. If your thumb was Handy Harry's legs and your finger his arms, he would be *stretching* and yawning as big as can be! **[illustration]**
- While in the middle of this giant stretch, let Freddie Flexor do a little bit of individual exercise. If your 2nd finger were a heron, it's as if the heron's head wants to bend this way and that to take a look around. Things look very different when he's so high up, and he wants to check things out! **[illustration]** So you stand up on your thumb, stretch your 2nd finger to the sky and then curl your nail joint just a little – waggle it!
- Actually, it's impossible to curl only your nail joint: the one next to it wants to flex as well. Let that happen – it will feel less strained.
- Now let Louis Lumbrical join the game. Add his flexion to Freddie's, curving/curling your finger more and more each time until eventually your 2nd finger gets all the way down to the table. This is different from the original thumb pushup because now your second finger is curved like the bow of a bow and arrow.

Take a step without stepping

- Try the whole 'rearing up, curving in and coming down' again, keeping it slow but making it a more integrated, fluid motion.
- Now try it again, but when your 2nd fingertip comes down to stand on the table, have it stand a little further away from your thumb than before. Handy Harry is trying to figure out just how big a step he could take, if he really tried. **[illustration]**
- Each successive time, stretch your curved 2nd finger even higher and then have it land even further away from your thumb – but never let it lose its curve entirely. Eventually your 2nd can stretch as far away from your thumb on the table as your 5th finger could! Now the arch between thumb and 2nd is very low but it is still curved – it maintains its arch quality.
- After really stretching out as far as you can, raise your curving 2nd finger and step back a little closer to your thumb. Reduce the stretch gradually. Explore the entire area – how many different spots can you touch with your curving, half-walking 2nd finger? How many *dozen* spots? How many *hundred* spots?!

Lesson IV-11 – Tom, Freddie & Louis Help Handy Harry Take Even BIGGER Steps

Repeat the entire previous exercise step by step, but stretching out with one of your other fingers – your 3rd, 4th and 5th in turn. But remember one crucial thing: your 2nd finger still curves the way it did before. Even though it's not playing, it curves like a heron's neck and acts very much alive – it's as if your 2nd really wants to stretch and play, but it decides in the end to let one of the other fingers in on the game.

Lesson IV-12 –The Handy Harry Leg Slide Exercise

- Place your hand on the table top, and once again make Handy Harry stick his bottom up in the air with the help of Louis Lumbrical.
- To differentiate your thumb in this movement, leaving it entirely straight and flat, sweep it towards the tips of your fingers as your lumbricals work to stand your hand up. The heel of your hand stays on the table, your entire thumb lies on the table the whole time – it's as if the entire length of your thumb was a broom, and the broom sweeps the table clean by moving towards the fingertips. Of course, it can't *reach* the fingertips but the closer it gets close, the more your hand stands up into its arch structure – even more strongly than before.

Tom, Freddie & Louis Back on the Playing Field

When you return to a repertoire piece, try a funny experiment: play all your finger notes with a motion like the one from exercise 11, and play all your thumb notes with the screwdriver motion from lesson 9. How different does this make your hand feel? More important, what difference does this make to your sound? Then play as you usually do, but remember the sensation these unusual movements gave your hand. Does your hand feel different, and does it move differently? Does your hand remember what it learned about itself from the exercises, and can it make a different sound because of this?