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On Improving Piano Technique

Experiences reducing tension and discomfort applied to the Etudes Op. 10 by Frédéric Chopin

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Abstract

The purpose of this thesis is to document what the author has experienced and learned in his search for answers to the question “how do I play piano without discomfort or pain?”. In this thesis, the question is specifically investigated through the author’s experiences trying to retrain a playing technique riddled with severe tension into one with enough comfort and ease to enable him to play the Études Op. 10 by Frédéric Chopin according to his musical wishes. First, an exploration of the existing piano technique literature to find information on what constitutes a “healthy” technique was conducted. Next, an extensive period of experimentation with the various ideas encountered followed, where a variety of issues with the author’s technique were identified, many setbacks were encountered, and some insights were gained. Finally, these ideas were applied on the author’s study of the Études until a take of the author playing through the set was recorded. The thesis ends with documenting the conclusions the author has made regarding piano technique based on this process, and finally with some reflections over the experience as a whole.

Keywords: Frédéric Chopin, Études, Op. 10, piano technique, relaxation, tension, fatigue, pain, retraining

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1 Introduction

A tense piano technique can create problems such as tightness and fatigue in various muscles, difficulties attaining speed, power, accuracy and good tone, and pain and injuries from playing. Having struggled with all of these problems, the author of this essay has spent many years searching for solutions. This essay documents what the author has learned from this process and relates it to studying the 12 Etudes Op. 10 by Frédéric Chopin.

1.1 Background

The year before I started my bachelor of piano performance degree at the Royal College of Music in Stockholm, I started experiencing pain in the ulnar (little finger) sides of my wrists whenever I played the piano. Despite many attempts to solve this problem it became progressively worse, until I barely dared practising at all, fearing that I would permanently injure myself. Since playing the piano was very important to me, struggling to even play at all due to physical pain became a very distressing and depressing experience.

I kept searching for solutions from books, websites, internet message boards, DVDs, physical therapists, relaxation methods, and so on, hoping to become able to play again without hurting myself; unfortunately, without much to show for it. A lot of the information I encountered felt confusing or even contradictory, and while I eventually got rid of the most immediate pain after around two years of trying, I found that during this process I had also made myself clumsier and more prone to making mistakes and fumbling passages. Playing was also still far from comfortable and enjoyable, and I found that I could no longer handle many of the pieces I had played before the wrist pain began. Therefore, I continued searching for solutions, hoping that I could learn how to both avoid the pain and discomfort, and play the repertoire I wanted with technical control.

1.2 Aim

The purpose of this essay is to document what I have learned so far in my search for answers to the question “how do I play piano without discomfort or pain?”, and the thoughts I currently have on piano technique as a result. Since the experiences I have written about are highly personal I do not know how useful this documentation is to other people.
2 Method

The essay is based on a case study conducted by me, on myself, and to a lesser degree also on a fellow pianist (see heading 2.3). The conclusions made are therefore based on observations made from my own experiments and experiences.

2.1 Studying existing sources on piano technique

To search for helpful ideas, I read about piano technique in books and on websites, watched various videos and attended piano lessons and masterclasses. I then tried to understand and apply the ideas I found to my own playing to see if they helped resolving my issues.

2.2 Studying the 12 Etudes Op. 10 by Frédéric Chopin

The 12 Etudes Op. 10 by Frédéric Chopin are known to put high demands on a pianists’ technical abilities. For this reason, I felt they could be a useful tool for evaluating if the ideas I encountered were working and if my technique was improving. I therefore started working on them on and off beginning in 2014, hoping to one day become able to comfortably play through the whole set without rest.

2.3 Working with a fellow student

I also worked with my fellow master student and girlfriend Joline during 2016–2019. Despite having a much more relaxed technical foundation than me, she had also started experiencing pain during her studies, starting as pain in one finger joint, soon spreading to all knuckle joints, and a few months later up to her right shoulder. A chiropractor provided some short-term relief, but her issues kept coming back, and neither anti-inflammatory medication nor reduced practice hours solved the problem. By her third bachelor year, her right little finger had started becoming numb and difficult to control, combined with sensations of tingling from the elbow up to the shoulder, especially when playing big chords. To solve this, she had tried to change her technique similarly to what I initially did, unfortunately with the same result that her playing became more insecure and prone to mistakes. In 2016 we started working together a few times per month, exchanging ideas and giving feedback. All comments concerning Joline’s experiences have been included in the text with her permission.
3  Identifying the problems in my technique

3.1  Defining “healthy technique”

Before I developed wrist pain, I had not considered that there might be something fundamentally wrong with my technique. I did know that some people could play better and faster and more difficult pieces than me, but I assumed I would also get there if I just practised more. To me, “practising” meant playing passages and pieces over and over, often broken down into short patterns, first slowly and then faster, first pressing the keys firmly and loudly to the bottom and later trying to make the music sound the way I wanted. Apart from trying to reduce a certain fatigue I could often feel in my forearms through various practice routines, I did not reflect much on if the sensations I felt were “right” or “wrong” and had no idea you could injure yourself playing the “wrong” way. When the pain began, I therefore did not have a clue where to even start to begin fixing the problem, and a lot of my initial search for answers involved trying to understand what I was even trying to accomplish.

This first section of the essay covers what I learned from a number of sources were the characteristics of a “good” or “healthy” technique. This information became the foundation for what I tried to accomplish with my own technique.

3.1.1  Playing should not cause pain or injury

The first thing I learned was that good technique should not cause any injuries or pain, and that I therefore clearly was doing something wrong. The solution I was looking for would therefore involve changing my technique rather than, for example, working around discomfort and injury by reducing how many hours I practised or only practising difficult pieces for short durations. Mark (2003) writes the following on pain:

> Pain in playing the piano can come from any of three causes. 1) It can come from a medical condition or illness, such as arthritis. 2) It can come from trauma such as a sprain or a fracture. Pain from either of these causes is appropriately treated by medical science. 3) Pain can come from inefficient use of the body—poor habits of movement. Almost all pain experienced by musicians falls in this third category. Pain caused by poor habits of movement is relieved by discovering and correcting those habits. If poor habits are not corrected, they can lead to injury, which in turn can cause permanent damage. (p. 1)

On the cure for injury, he writes:

> Now, we know that piano playing need not be injurious, since many people, including some fabulous virtuosos, do it without ever injuring themselves. Therefore, the fact of someone being injured does not prove that piano playing is dangerous in itself. What it does prove is that there was something
in the technique that was stressful, something that with constant repetition over years of playing resulted in injury. The person must learn to play the piano using non-stressful movements. In short, a permanent cure for pianists’ injuries requires movement retraining. (p. 147)

Barbara Lister-Sink, founder of “an educational organization dedicated to promoting a healthful, well-coordinated piano technique, to maximize musical artistry and help prevent potential injury at any point in the career” (Lister-Sink Institute, 2017) writes:

A well-coordinated technique is an injury-preventive technique. In it, the whole body is optimally coordinated with the instrument. Its hallmarks are dynamic skeletal alignment, efficient muscle use, open free joints, and a state of ongoing balance throughout the body. Anecdotal evidence consistently suggests that playing with well-coordinated technique prevents injury. Or, to put it another way, based on the reports of musicians seeking treatment for pain and disability, and the evolving medical understanding of this area, there appears to be a correlation between injury and over-use/misuse of muscles, chronic tension and stress on the joints. (Lister-Sink, 2017)

McLachlan (2014) says:

Indeed, in all technical considerations it is vital to realise that any discomfort or pain signals from your brain indicate that you are doing something wrong and should stop immediately. If you do not feel natural and comfortable as you play (even in the most demanding passages in the Chopin études) then you are out of control and potentially in trouble. It goes without saying that the old sporting cliché ‘no gain without pain’ is completely inappropriate in a musical context. (p. 9)

Thomas Manshardt, the last private pupil of the pianist Alfred Cortot (Manshardt & Amundrud, 1994, p. vii) agrees that the right technique should not cause physical problems:

A properly based technique – hours a day and years of continued exercise are necessary for it – permits a long and healthy pianistic life. As has already been mentioned, Cortot himself was touring with twenty-four Chopin Preludes and twenty-four Chopin Etudes when he was in his eighties. That was not, of course, his entire concert repertoire. Cortot’s pupil Magda Tagliaferro first toured the U.S.A. when she was in her nineties. The present writer is sixty-six: no arthritis, no muscular “problems”, no physical complications of any sort whatsoever in over half a century of playing many hours a day. The list could well be prolonged. (p. 98)

Further sources that indicate that strain, pain and injury can be avoided with the right technical habits include Feuchtwanger, Blido & Seewann (2018), Sandor (1981) and Whiteside, Prostakoff & Rosoff (1997).

3.1.2 Playing should feel easy, effortless and secure

The second thing I learned was that good technique makes it feel effortless to play even technically difficult pieces. This astonished me, since I was used to getting tired in my forearm muscles all the time when I played anything that
was fast or difficult and had assumed it was normal. My strategy for tackling difficulties was therefore built around gradually increasing the tempo on a metronome and repeatedly pushing my increasingly tired arms through passages trying to build the “stamina” I thought I needed to successfully make it through the whole piece (for example in Chopin’s Etudes Op. 10 no. 4 and Op. 25 no. 12, or the second movement of Scriabin’s Sonata No. 2 Op. 19). However, according to several sources, the fatigue I regularly experienced was also a sign that I was doing something wrong. Lister-Sink (2011) says the following on the topic of effortless playing:

I eventually learned how to keep my arms from falling off after playing a piece like Chopin's Etude in F major [Op. 10 no. 8]. (Chapter 2, 03:45)

[...] I realised that playing the piano can be a joy, not only emotionally and intellectually, but physically. I discovered that it is possible to feel better physically after playing a recital or practising several hours than I felt before I started. (Chapter 2, 04:32)

Lister-Sink (2017) also writes:

As used here, “effortless” means the subjective sensation of ease in playing, which happens after we eliminate unnecessary work. If we play with just the right muscles at the right time, while being in balance throughout the whole body, we will not perceive physical effort. Even extremely complex or vigorous movements will feel easy. Also, many technical difficulties that might otherwise have to be overcome simply will not occur.

Sandor (1981, p. x), says that “When the stronger upper-arm, shoulder, and body muscles are properly activated, they assist the weaker muscles and prevent all causes of fatigue.”, while Mark (2003) also indicates that my idea of building “stamina” was wrong:

The amount of physical strength required to play the piano is very little, and endurance is not an issue if one is moving efficiently. Playing the piano is a complex physical skill which involves the whole mind and body and spirit. It requires that we move rapidly and efficiently, but it is not a matter of strength or endurance. (p. 150)

Cortot (1930) writes “Let us once more repeat that fatigue is the worst enemy of a rational training.” (p. 60), and Gieseking & Leimer (1972, p. 107) write “Where fatigue begins, technique ends.”.

3.1.3 The body should remain relaxed while playing

Many sources also emphasized the importance of being “relaxed”, “balanced”, or “free from tension” when you play. In some cases, relaxation of not only hands, wrists, and arms, but the entire body was indicated as highly important both for technical security and beautiful playing, as well as for making playing pain-free and safe. Lister-Sink (2011) states:

Nowadays, the accumulation of muscle tension is often accepted, even by many within the medical community, as a natural by-product of playing the piano. The solution most commonly offered is to take frequent breaks to allow the muscles to relax and refresh themselves. But there is an even better
solution. We believe it is possible to play in such a way that muscle tension is never accumulated, because the muscles continually release their tension and refresh themselves as we play. As we will demonstrate later, it is possible to play even the most demanding technical pieces without accumulating any muscle tension at all. (Chapter 5, 00:42)

McLachlan (2014) states that “Technical security at the piano can only exist when the performer has achieved complete firmness in the fingertips along with total freedom and relaxation in the wrists, elbows and shoulders” (p. 7). Gieseking & Leimer (1972) write that “Relaxation is of the very greatest importance. Only by means of the relaxed arm can impulses proceeding from the brain be transformed, without restraint, into finger movements. This is the quickest way to gain control over the fingers.” (p. 20-21). Lhevinne (1972) says “Perhaps the best general principle is the acquisition of the habit of playing with an extremely loose, floating hand. Rigidity of muscles and velocity never go together.” (p. 45). Cortot indicates that relaxation of the wrists and fingers are part of the principles of an “absolute legato” in his advice for studying Chopin’s Etude in a minor Op. 10 no 2:

The crossing of a lower finger either “over” or “under” an upper one (3rd–4th, or 4th–5th) should be prepared according to the principle of an absolute legato; consequently, avoid any exaggerated raising of the fingers, or contraction or stiffness of the wrist, and be careful that the fingers not playing should remain completely relaxed. (Cortot & Chopin, 1930a, p. 14)

He again emphasises the importance of the wrist’s “outmost flexibility and the complete relaxation of its muscles” in his advice on playing Chopin’s Etude in sixths Op. 25 no. 8, stating that it is “imperative to avoid all stiffening or contraction of the wrist or of the forearm, both while practising and performing this Study.” (Cortot & Chopin, 1930b, p. 56)

The Baroque composer Jean-Philippe Rameau also talks about the relaxation of the hands, wrists and arms in his 1724 essay On the Technique of the Fingers on the Harpsichord:

At the same time as the 1st and 5th touch the edge of the keys, the elbows must fall unconcernedly to the sides, into their natural position, a position which should be strictly observed and never disturbed unless absolutely essential, as when the player is compelled to carry his hand from one end of the keyboard to another.

[…] The wrist must always be supple. This suppleness, which is then transmitted to the fingers, gives them all the ease of movement and all the lightness necessary; thus the hand which, by this reckoning is, so to say, inert, serves merely as a support for the fingers which are attached to it and as a means of conveying them to those parts of the keyboard which they cannot reach by their own particular movement alone. (Rameau, 2003, p. 17)

Cortot says the following on Rameau’s essay:

If we analyse the reason why compared to others, the performing of our best pianists to-day has more flavour, why their playing is more natural, their range of tone-colours richer and more delicate, we shall discover that the foundation of their technique – to which they add all the improvements due
to their personal genius – are the rules plain, precise and moderate of J. Ph. Rameau. (Cortot & Chopin, 1930b, p. 15)

I generally found that relaxation of the rest of the body was discussed more commonly and in-depth in sources from the 20th century and onward, though Eigeldinger (1986) quotes Chopin as saying: “Have the body supple right to the tips of the toes” (p. 29). Lister-Sink (2011) states:

The study of piano technique has traditionally focused almost exclusively on the arm and hand while paying little attention to the rest of the body. However, well-coordinated piano technique requires that we view the whole body as an interdependent unit and understand how all the parts work best together. (Chapter 4, 00:05)

Elsewhere she writes:

Parts of the body not directly involved in playing affect playing; the degree to which one feels connected throughout the entire body affects playing; and the body’s equilibrium or disequilibrium affects playing.

In addition to being the key to good playing, the whole body approach also has implications for retraining. It means that a problem in playing is never just in the playing apparatus. It is an inseparable part of a response by the whole body, and therefore, in order to play better and more safely, there has to be a change in the way the whole body is used. This, of course, is a bigger challenge than simply following instructions for a new way of using the arms and hands, but I believe there is no choice. If the [new coordination] is learned in isolation it may not be fully learned. As a result, the benefits may be limited and the new coordinations may not be assimilated to the point where they are automatic and instinctive. The student may simply learn another way to play with the same risk of injury and the same artistic limitations. (Lister-Sink, 2017)

According to Manshardt & Amundrud (1994), he learned from Cortot that “for the player to feel free to pour forth the feeling of music it is necessary for the player’s body to feel free, and this freedom cannot be felt unless the whole body is able to cooperate in the effort of tone production” (p. 39).

Nicholls (2008) states that understanding how to release tension in the whole body is important for being able to use the arms and hands well:

From the point of view of someone wanting to use their hands, arms and fingers in a complex and intricate way such as playing the piano, good support for the arms is vital. This support can only truly be effective when there is an understanding of how the Use of the whole body, and particularly the back, is involved in the process.

Without useful support, the arms and hands can become both tense and heavy, resulting in a dead, literally heavy-handed sound, that no pianist wants. Attempts to improve this are often made by even more tension that almost holds the hands away from the keys in an attempt to lighten up. This double bind habit is a very difficult one to break. First, excessive tension makes the hands too heavy and then further tension appears to make them unable to make a resonant enough sound. It’s as if the pianist is snatching his hands away from the piano at the same time as putting them on the keys to play. (p. 104)
Further, she describes how sitting habits that involve tension in the body can interfere with the use of the arms:

Many pianists – having either no idea how the back should work, or partial concepts about muscle strength – will tend to sit at the piano with their whole body braced forwards towards the keyboard. Often their lower back will be tightly pulled in towards the keyboard and narrowed. If the pianist is tall or has a long back, they may collapse the lower back into a curve and let their chest sink so as to get nearer the keyboard. Either way, these habits of body use will interfere with freedom of breathing and movement and will contribute to tiredness in a pianist who wishes to practise for extended periods of time. (p. 105–106).

Lister-Sink (2011) states:

It’s absolutely essential as we sit at the keyboard that we support the body with the spine, and the muscles, tendons and ligaments that surround it. Otherwise, we force that function onto other muscle groups that weren’t intended to support the body, thus robbing these muscles of their suppleness, and freedom to perform their intended functions. If we provide appropriate spinal support and maintain perfect balance of our weight over our sitz bones, we are free to play with an exhilarating sense of ease and power.

Unless we maintain the natural curves of the spine, we not only collapse the very centre of our skeletal support system, but we also compromise the healthy functioning of the nervous system. For example, rounded shoulders and a jutting head compress the spinal vertebrae at the neck and impede the flow of information from the brain to the rest of the body. Proper spinal alignment is essential to healthy piano technique. (Chapter 4, 02:29)

These ideas of needing to sit with an upright posture and being relaxed kept re-appearing throughout many of the different treatises and schools of thought on piano technique (Gerig, 2007).

3.1.4 Conclusion

Based on what I learned from various sources discussing piano technique I concluded that the technique I was looking for had the following three characteristics:

- Playing should not cause pain or injury.
- Playing should feel easy, effortless and secure.
- To achieve this, the body needs to remain in a free and relaxed state while playing.

Once I had learned about them, it was therefore always these characteristics I had in mind and tried to figure out how to attain when experimenting with different ideas on my own technique.
3.2 The problems in my technique

This section provides a broad overview of the kind of problems I have discovered and tried to solve in my technique, both in terms of physical symptoms and problems with controlling the instrument, to provide some context before I cover my search for solutions in section 0. These issues were progressively identified during the years I experimented with my technique through comparing my own experience playing the piano to the characteristics of a healthy technique discussed in section 3.1. Comments from health professionals and people with knowledge on technique and musicians’ injuries have also played a role. The issues have been sorted into the following categories: 1) pain and physical problems, 2) musical and technical issues, and 3) specific habits of tension and other issues with how I use my body.

3.2.1 Pain and physical problems

This includes the various intermittent or lasting symptoms of pain and physical discomfort I have experienced as a direct result of playing.

Forearms feeling fatigued when playing difficult music.

This was my main issue before I knew there was a problem with my technique. At its worst, the fatigue could get so bad that I would struggle to play accurately or even get to the end of certain pieces.

Pain and soreness in my wrists, on the ulnar (little finger) side.

This was the first issue that made me realize something was seriously wrong, starting during 2011–2012, often lasting for hours or days after I played. As a result, I often did not dare practice more than very gently for less than an hour a day during this period. Some inflammation of the flexor tendons of my wrists was found by a physical therapist during the autumn of 2012, but the main problem was determined to be pain radiating from nerve compression caused by chronically tense muscles in my shoulders. The pain often disappeared temporarily if I could deeply relax my body away from the piano. During 2013 this issue started resolving (see section 4.2.6).

Tightness and aches in my forearms and hands when playing difficult pieces, for longer periods or when I become too nervous.

This has been the most difficult issue to get rid of, even though it has improved a great deal, and still requires a high degree of discipline, focus and mindfulness if I want to avoid it.

Numbness, tingling and loss of control over the movements of the fourth finger of my right hand.

This issue appeared during the first half of 2014 after I had started playing a lot of technical exercises, hoping to improve my technique now that I was rid of the wrist pain. It is probably the most frightening
issue I have experienced since I thought it might be focal dystonia, an injury that can cause permanent loss of control over the fingers. Luckily, I could revert this issue by further changing my technique.

Cold hands and sleepy, sluggish fingers.

I used to have this issue often, but it seems to have improved a bit the last few years, at least outside of situations where I feel nervous.

Occasional aches in the right side of my lower back, my right knee, or around my left elbow.

3.2.2 Musical and technical issues

This includes the general issues I have had with controlling the instrument; both difficulties with playing difficult passages accurately and with playing the music the way I hear it in my head, since my body would refuse to cooperate and produce the sounds I wanted.

Bad tone

I have struggled with this through the whole dynamic spectrum; instead of a resonant, warm, carrying tone I have had harsh tone in loud dynamics and insecure, non-carrying tone when playing softly.

Bad legato

A “note-by-note” sound, with notes in a melody line sounding separate and mechanically played, instead of bound and intonated into a single, long line, with me being able to hear the issue but struggling to correct it, often massively tensing my body instead.

Bad voicing

Difficulty controlling and varying the loudness of the different notes in a chord or polyphony, for example to play the top note louder or to bring out inner voices; the collective of notes instead sounding with the same degree of loudness in a harsh, heavy-handed way.

Unsteady feeling of pulse, bad timing in general.

I have noticed a strong correlation between me tensing up and a diminishment in my ability to time notes and rhythms with exactness, leading to the pulse of the music becoming unsteady.

Dirty pedal

Difficulties controlling the pedal accurately and changing it cleanly; difficulty preventing my foot from holding the pedal down even when I did not want it to remain down.

Clumsiness, fumbling and making many mistakes

I view this as a musical issue because above a certain threshold, wrong notes, fumbling, unevenness, slurring and dropped notes become distracting, obscuring the music. Technical insecurity has also often
distracted me from listening and shaping sounds because I have been so busy fighting with my body to gain even basic control over the instrument.

3.2.3 Specific tense habits and other issues with body use

This category is an attempt to cover many of the bad habits I perceive that I have acquired, both of involving chronic tension and of tense ways I move my body, and therefore have searched for ways to undo again. I believe these habits are highly interrelated, so the separation into distinct items is therefore somewhat arbitrary, and the list is by no means comprehensive.

Hands and wrists:

Some of my earliest playing involved lifting my fingers high and using them to strike the keys “like little hammers”, which resulted in me generally using quite a lot of force and tension to play. Chronic extensor tension in my fingers acquired after I started trying to intentionally hold my fingers more uncurled due to believing that my fingers were too curled and that I should play with a “flatter” hand. Finger joints often caving in/collapsing when pressing down a key, particularly in my 2nd, 3rd and 5th fingers. Intentionally stiffening the joints of these fingers trying to “stabilize” the collapsing finger joints and make my fingers “firm”, creating tension that spread to my wrists, arms and shoulders. Grasping at the keys and pulling my hands towards my body, trying to use “gripping” motions to get the keys down, creating flexor tension in my forearm as well as up my arms, shoulders and back. Clenching in the knuckle joints in many of the fingers when attempting to feel that the finger movements came “from the knuckle”, as well as from trying to hold the hand in an arched shape. Hands held chronically spread open instead of in their natural resting shape, my 2nd and 5th fingers often sticking out at an angle from the other fingers even when not necessary. Stiff thumbs. Habitually holding up my knuckles by tensing the wrist extensor muscles when attempting to generate an “arch” in my hand. Hands leaning towards the 5th finger because of tension in both the fingers and wrists causing my fingers to press the keys at an angle instead of straight down unless I actively corrected this. Twisting my hands towards my thumbs to avoid having the hand turned towards the little finger ("ulnar deviation"), creating tension in the 2nd finger, thumb and wrist.

Arms:

Putting pressure on my hand with my forearm, tensing up my hand, wrist and arm in response to the pressure on basically every note I played. This was likely one of my main sources of tension before my issues with wrist pain started.
Trying to “hold up” my hands and arms to stop the pressure, causing tension all through my hand (finger and wrist extensors in particular), arm and shoulders, resulting in me playing “on the surface of the keys”.

Holding out my elbows from my body to straighten up my leaning hands, maintaining the tension in the fingers and wrists and creating additional tension in my shoulders.

Twisting my forearms to further straighten up the leaning position of my hands, causing tension all through the forearms.

A chronically high wrist in my right hand due to various tensions.

**Torso:**

Slouching posture, head in front of the torso with a very stiff neck.

Pulling back my shoulders and holding them there trying to correct the slouch, creating tension in my shoulders and back.

Pulling my shoulders forward when later trying to “correct” the excessive pulling back, adding more tension to the shoulders and chest.

Tension in my neck from pulling my head back to “correct” my posture.

Tilting my pelvis forward and holding it in place to “correct” my tendency to sit with a rounded back, creating tension in my back and legs that noticeably hinders my playing.

Letting my pelvis collapse backwards and rounding my back, relieving some of the tension created by tilting it forwards but creating tension elsewhere.

Holding my breath and breathing shallowly, creating tension in my entire body.

Having a chronic “twist” in my posture, i.e., a pattern of holding different parts of my body lopsided or misaligned with regards to each other. Examples include my ribcage leaning towards the right, my left shoulder pulled forward and stiffened, my right shoulder held up and pulled back, my pelvis tilted forward particularly on the right side, my head tilted to the left and more difficult to turn to the right, and various resulting tension patterns in both my arms and legs. When this was at its worst, it could make my right hand feel extremely clumsy. This “twist” can also cause me to lift the right side of my pelvis from the chair when playing in low registers, but without any corresponding lift of the left side of my pelvis when playing in high registers.

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**Figure 1:** My typical sitting posture in 2011, before my wrist pain began. I think it is visible that my neck is very stiff.

**Figure 2:** Pelvis collapsed backwards, rounded back and high right wrist while playing in 2015.
Legs/feet:
General tension and clenching of my legs when playing, some of it likely caused by tension and a lack of feeling balanced and grounded on the chair due to tension in my torso and neck. Clenching my toes and contracting the soles of my feet, especially my right foot, causing issues with dirty pedal changes. Tensing my ankles trying to avoid pressing the pedals down by accident. Digging both my heels hard into the floor, thinking this would give me a more stable sitting posture, instead creating tension all through my body. Twisting both my feet inwards to get them to rest in what I thought was a “correct” position on the pedals.

3.2.4 Conclusion
During the time I worked on my technique I identified the following issues:

Injuries and physical problems: I had experienced many kinds of pain and discomfort from playing, sometimes for long periods of time, and often severely limiting my ability to practise as much as I wanted due to fear of injuring myself.

Musical issues: There were many issues with my ability to control the instrument which I have found to be strongly correlated with my bad physical habits: bad tone, bad legato, unsteady pulse, dirty pedal, and a lot of issues with clumsiness and inaccuracy.

Many tense habits in my entire body: I have acquired many habits of chronic tension and misuse all over my body over the years; in my hands, arms, shoulders, neck, torso, legs and feet, all of which I believe have massively interfered with my ability to play with ease and comfort or handle even easier repertoire.

The next section covers my attempts to find solutions to these problems.
4 Finding solutions to the problems in my technique

4.1 Introduction

Section 0 covers my experiences searching for solutions to the problems in my technique. Sadly, it turned out that learning what I needed to accomplish (a technique that was relaxed, effortless and pain-free, see section 3.1) and discovering some of the bad habits I had acquired (see section 0) was not enough on its own to help me solve the problems I had. I realized I also needed to figure out how to actually get my body to make the changes I wanted, what I actually needed to do to make it play with relaxation, comfort and ease. This turned out to be very difficult and frustrating indeed.

It did not help that the different sources I found often seemed to contradict each other in confusing ways, and that it was often difficult to understand how to do what was described. As a result, I tried to figure out what a wide variety of things meant over the years, and often made things worse when I failed to do so. I tried “using my fingers less”. I tried “using my arm” more. I tried “pulling the keys down”. I tried “being more active in my fingers”. I tried “sitting with better posture”. I tried adopting various positions of my fingers, hands, wrists, elbows, and shoulders. I tried creating a feeling that my finger movements came “from the knuckle”. I tried using “rotation” of the forearm. I tried letting my arm and hand free-fall down onto the keyboard. I tried a variety of gripping and pressing motions with the fingers. I tried making my arms feel heavy. I tried making my arms feel light. I tried “lifting” the sound out of the keyboard. I tried “supporting the weight of my arm with my fingers”. I tried giving my fingers more power by pushing them along the keyboard with my elbow or arm. I tried finding a feeling of having a “hanging bridge between my fingers and my shoulder”. I tried finding a sensation of “energy flowing down/up my arm”. However, I never seemed to get close to the sense of comfort and ease I had learned should be possible.

4.1.1 Outline of the process of changing my technique

To provide some context to how I have ended up working on my technique (see sections Fel! Hittar inte referenskälla. and Fel! Hittar inte referenskälla.) I will first cover a brief outline of the process I went through when trying to figure out what I needed to do.

Many of my most stubborn bad habits were created during 2011–2012 when I first tried to change my technique in response to my wrist pain. It is hard to put into words just how mystified I felt by the fact that the way I had always moved – and which therefore seemed natural – was apparently wrong, and that there instead was some magical set of movements that could make playing feel easy and make the pain go away. In the beginning, being quite desperate to fix my problems as quickly as possible, I therefore did not realize
that I could be misinterpreting what somebody said and fail to connect the words they used to describe piano technique to the correct experience in my body. As a result, I tried many things that seem rather bizarre in hindsight.

Back in 2011 the information on technique that was easily available for someone whose main lead was using Google was much more limited than it is today. Most of the initial information I used therefore came from reading piano websites and message board threads (I no longer remember which ones). My main takeaways were that I was too “tense” and needed to “relax”, that the reason people injured themselves was that they were “using” their fingers “too much”, and that I instead needed to “use my arms” to play.

Since I was used to clenching my muscles hard to feel a sense of control when I played, I could not even conceive of how one could play while “being relaxed”. I came up with a vague idea that I should make my hands limp and put them on the keys like wet pieces of dishcloth, try to move my fingers as little as possible and somehow try to play by pushing the fingers into the keys with my arm, believing this was supposed to give them “power” without “using” them too much.

I also started trying to “hold up” my arms and hands from the keyboard to try to avoid putting too much pressure on the keys, but this just resulted in that I started playing “on the surface of the keys”, becoming very clumsy and prone to mistakes and fumbling (it did not make my wrist pain go away either). I also experimented with adjusting the position of my body in various ways, such as sitting with what I thought was better posture, moving my elbows out from my body and changing the position of my hands, trying to avoid what is sometimes referred to as “ulnar deviation” (Mark, 2003, p. 85) of the hand. Sadly, none of these things really helped and instead established many of my most insidious and chronic habits of tension (see section 4.2.2).

My first break-through came when I started taking Alexander Technique lessons in early 2012 (see section 4.2.6). The lessons made my body feel great and often made the wrist pain – which I at this point was experiencing daily – go away, at least until I played piano again. While the Alexander Technique helped me feel more relaxed and relieved the wrist pain, I still had trouble figuring out how to implement it in my piano technique.

The first book I consulted during this time was On Piano Playing (Whiteside, 1997). This book also seemed to advocate the idea that I should use my fingers less and my arms more, and talked about the body, arms and fingers in terms of a set of levers and fulcrums, but I found this to be terribly difficult to understand, and instead I established even more tense habits when I tried to do what I thought she described. I had similar problems with the next book I consulted – Mark (2003) – because while that book contained information on anatomy and an approach to retraining movements, my attempts to apply the information again resulted in even more tense habits.

The next thing I tried was figuring out how to use “arm weight” and free-fall of the arm in playing after watching video demonstrations by Lister-Sink (2011). Despite her warnings that technique requires hands-on instruction (Lister-Sink, 2017b), I tried to do what I understood of the demonstrations,
supplemented by reading yet more internet message boards. However, I was again unsuccessful; my attempts to let my arm free-fall and use what I perceived as its weight to produce sound made my hands and forearms hurt and I could not understand how to play passagework with fine control and evenness when trying to do this.

In mid-2013 I conceded that my attempts to “use my arms” did not work very well and started trying to move my fingers more actively again. Doing this helped me improve my technical control somewhat, unfortunately with the side effect that this made my forearms feel very tense. However, if I tried to relax, I was back to the useless dishcloth-like hands mentioned before. I kept experimenting with different movements, positions, and exercises, still often introducing new tense habits as a result. This led to a scary situation where I lost sensation in and control over the 4th finger of my right hand for a period in early 2014, but luckily, I could revert this.

Despite these issues, by combining my attempts at reactivating my fingers with working on unlearning the arm movements I had previously tried to use and relaxing my hands and arms, I started seeing a gradual improvement of both comfort and control during 2014–2016. An idea I started using during this time was thinking that I was guiding the movements I used with my fingertips rather than my arms. In 2015 I was accepted to my masters’ degree and was able to practise repertoire around the level I had played in 2011 for about 2–5 hours a day without injuring myself, even if I still felt varying degrees of tightness in my forearms and awkwardness when playing. During 2016 I attempted to learn the whole set of Etudes Op. 10 by Chopin, and while I guess I could sort of play through the set it was not at the tempos or with the technical security I wanted, and I still had trouble with fatigue, tension and discomfort. The improvements from the pain and misery I had experienced a few years before were still enough to make me want to write my master’s thesis on the topic (something I have later regretted!).

The trend of improvement hit a roadblock in 2017 when I adopted a stressful lifestyle that made a lot of tension start creeping back into my body. After I played some of the Etudes from Op. 10 poorly in a masterclass, I decided to again try to figure out how to use my arms and weight to play, since many accomplished pianists seemed to talk about technique using these terms. However, these ideas still felt very unintuitive to me, and instead I just started adding a new set of tense habits into my playing again; by the autumn I realized I had lost some aspects of the technical control I had gained just a year earlier. Attempting to remedy this, I returned to the hand and finger-centric approach. This improved matters somewhat again, but the tense habits I had acquired from the stress and trying to use my arms continued to create problems with tightness and a lack of control, and I struggled to figure out what was wrong and how to resolve it through most of 2018.

During the rest of 2018 and early 2019 I had very limited time to practice due to work and studies outside of music; during this time my technique deteriorated further. In early 2019 I started taking Alexander Technique
lessons again to try to remedy the tension, which provided some relief and reminded me of some helpful concepts the technique teaches.

By the autumn of 2019 to early 2020 I started practicing the Chopin Etudes again, and while they were probably in better shape than in 2016 there was still too much regular tension and discomfort for my liking. One source of stress and tension I had not anticipated was the feeling that on the one hand, I was writing an essay on my experiences improving my piano technique, and while yes, I had improved many things since I started, on the other hand I was still clearly experiencing tension and a lack of control in the Etudes, so in reality I did not really know what I was talking about. This made me feel like a fraud and very vulnerable, and to protect myself from these feelings I became very intent on trying to define a very detailed and definite version of what my “technical approach” actually was and making sure that it was what I was actually doing and that it was actually working. However, the harder I tried doing this, the harder the approach became to follow, and the more constrained I felt by it, and the more problems it caused for my playing. This was even more frustrating since I at this point had succeeded helping my girlfriend and fellow student Joline (see section 2.3) feel comfortable at the piano again thanks to many of the very same ideas I was now trying to write down and felt constrained by.

The 2020 Covid-19 pandemic outbreak completely interrupted all essay writing and practicing since I became rather ill for five weeks, and during isolation all I could do was to focus on de-stressing and working on releasing a lot of the chronic tension in my body. When I came back to the piano, I had an entirely new reference point of how relaxed my body and hands could feel and found that if I was calm and mindful, I could practice new pieces without experiencing tightness. I decided to forget what I had previously written and just try to figure out how I could maintain this new-found sense of relaxation, which proved to be much harder in old repertoire learned with old habits. Some of the ways I work on my technique now come from this post 2020 period. Once the pandemic slowed down towards the end of 2021, I could finally work on the Etudes more regularly again and record a take.

Sections 0 and 4.3 will cover some of my experiences with the many things I tried in more in-depth, the ideas and practices I found helped me the most, and some of the ideas I now have as a result. Section 5 will cover some of my thoughts and experiences from my attempts to practice and record a take of the 12 Etudes Op. 10 by Frédéric Chopin. While my technique generally feels more comfortable now than in 2019 or 2016, I am clearly still not playing anywhere near the level of an international standard professional concert pianist, so I want to add a disclaimer that what follows is just a documentation of my experiences and thoughts, and that I probably still do not know what I am talking about when it comes to technique.
4.2 Releasing tension from the body

Two recurring problems that seem to negatively impact my technique have been a generally high degree of chronic tension in my body both at and away from the piano, as well as a tendency to actively clench muscles all over my body when I do play. While I found early on that practicing relaxation techniques did not automatically fix tense movements in my arms and hands, they have nevertheless helped me both understand my body and some of the tension patterns in it better, as well as how I can work on these things when working on my technique (see section 0). This section, under headings 4.2.1 through 4.2.5, presents some general concepts I have found helpful, and headings 4.2.6 through 4.2.10 cover specific practices I have found helpful.

4.2.1 “Tension” and “relaxation”

An early problem for me was understanding what “tension” and “relaxation” even meant. As mentioned earlier, my first attempts at relaxing involved trying to use my hands like limp pieces of dishcloth, which did not work very well. I also learned from some sources that it was not possible to be completely relaxed, because then you would collapse into a pile of flesh on the floor. Lhevinne (1972) says something similar regarding relaxing the arm:

> Delicacy is inconceivable with a heavy arm. The least suggestion of tightening or cramping of the muscles is literally fatal to delicacy. One may say “relax” the arm; but if the arm is completely relaxed it will do nothing but flop limply at the side. On the other hand, it can be held in position over the keys with entire absence of nervous tension or stiffening, with the “floating in the air” feeling that makes for the first principle of delicacy. (p. 26)

Sandor (1983) says that “total relaxation when playing the piano doesn’t exist” (p. 18). Gieseking & Leimer (1972), seemingly contradicting their earlier insistence on relaxation quoted in section 3.1.3, indicate the following:

> I am often reproached with causing my pupils to play with a stiff wrist. This is not the case, as the tension of the wrist must be slight and must never be permitted to degenerate into stiffness or cramp. (p. 20).

Lister-Sink (2011) also states that a “little bit” of muscle tension is needed:

> “If we are truly using our body efficiently, we can rest our hand on the keys, in a natural arch, without even feeling the little bit of muscle tension we need to support it. Again, it is a question of finding just the right amount of tension, no more, no less.” (Chapter 9, 11:10)

McLachlan (2014), on the other hand, says that “Technical security at the piano can only exist when the performer has achieved complete firmness in the fingertips along with total freedom and relaxation in the wrists, elbows and shoulders” (p. 7). Cortot likewise asks for “the complete relaxation of all [the wrist’s] muscles” when playing Chopin’s Etude Op. 25 No. 8 (Cortot & Chopin, 1930b, p. 56), and commenting on Chopin’s Prelude Op. 28 No. 8 he again mentions the wrist “whose absolute looseness we once again
recommend” (Cortot & Chopin, 1930c, p. 20). Manshardt & Amundrud (1994) say the following of the state of Cortot’s hand: “It turned out that what looked like an arched hand was in fact so loose and so giving that any pressure of the finger against a key was enough to raise the back of the hand.” (p. 18).

To me, these varying perspectives felt contradictory and very confusing. Having flabby hands that I flopped around clearly did not work, but on the other hand, when I tried to figure out how much tension I should add to various parts of my arms and hands, I always became too tense. I eventually concluded that my mind and body do not perceive these words in a purely logical sense (i.e., if all my muscles were relaxed my hand would fall off the piano and I would fall off the chair, so therefore I need to intentionally try to create a small amount of tension in my body), but rather based on the subjective feeling of the experience in my body.

I think intuitively most people can picture a person who is walking in a relaxed, easy manner, and then compare that to somebody who is walking in a tense manner. Though it is true that when you walk, no matter how relaxed you feel, muscles are contracting and releasing to create the movement, how many people would describe that person as walking by “tensing” their legs? For me, it feels more intuitive to say that the person is walking in a “relaxed” way. For me, being “relaxed” when playing the piano therefore means feeling relaxed and at ease while pressing down the needed keys, even though “objectively” there are muscle contractions involved in producing the movements.

At the same time, I have noticed that my mind can trick me into believing I am relaxed when I am not, so I have also used an “objective” measurement. If one considers a muscle or joint that is “relaxed”, “supple”, or “loose”, these words are to me just another way of saying that they are free from stiffness. This is easy to test, since you can press down a key or set of keys and check with your other hand if joints of the hand, wrist and arm are soft and yielding, or become stiff and resistant to being moved in any direction.

In the thesis I use the word “relaxation” to refer to the subjective experience of feeling mentally and physically calm, relaxed and at ease without thinking about the fact that muscles contract and release to produce movement, combined with the objective (testable) fact that the joints are free from stiffness and the muscles supple if somebody checks. With “tension” I refer to the subjective experience of playing feeling tense and cumbersome combined with the fact that joints and muscles are rigid and stiff, interfering with freedom and ease of movement.

4.2.2 Some dangers with trying to “correct” the position of the body

One of the primary sources of my most chronic and harmful habits of tension has been the ways I have tried to “correct” my posture and the position of my arms and hands at the piano. It could be said that the idea that you should “pull your shoulders back”, “tuck your chin in”, “suck your stomach in”, “sit up straight” and so on to get a better posture is quite a widespread notion in
our culture. Since I had a vague idea that my technique might improve if I sat with better posture, I started doing many of these things during the beginning phases of working on my technique. Similarly, if I observed that my arms or hands were in a position that I deemed “wrong”, I tried changing how I held them into an alignment that looked more “correct” (see section 3.2.3 for examples). Unfortunately, this particular way of “correcting” the position of the body has proven to be very destructive both for me (and for Joline, my fellow student and girlfriend mentioned in section 2.3), and there is not one single “correction” I have made that I have not found the need to unlearn again later, with considerable effort and frustration.

In hindsight, it seems logical that forcing my body into a predetermined shape and holding that alignment in place requires increased tension in various muscles and then keeping them contracted to maintain the new shape. In my experience, that tension quickly becomes habitual and is a hindrance to playing the piano more comfortably. For example, pulling my shoulders back and arching my back to sit up straight could make it noticeably more difficult to move my hands around or aim accurately, moving my elbows out from my body to straighten up my hands created more tension in my shoulders, and twisting my forearms and turning my hands to an alignment I thought was more “correct” created nerve compression tingles in my fingers.

According to Feuchtwanger, Blido & Seewann (2018) “Artificial rules for posture such as “chest out, stomach in”, or “stand straight” are damaging and in conflict with good inner posture. They aim to improve posture by increasing muscle tension. However, instead of this they can have the opposite effect and reinforce the bad posture.” (p.24) and Mark (2003) writes:

Conventional wisdom has it that we should “sit up straight” at the piano, we should not “slump” and we should not be “tense” or “rigid.” Instead, we should be “relaxed,” “balanced,” “poised.” But what do people mean by these recommendations? What must we do to “sit up straight”? The question is of vital importance because the answers most people take for granted are wrong and harmful. Our society is the victim of a host of misconceptions about posture. I shall call them Posture Myths. “Chest out, shoulders back, suck in your gut, flatten your butt…” These military-sounding admonitions pop into people’s minds when they think of “good posture.” They certainly are “posture” in one sense offered by my dictionary: “an affected or unnatural attitude, or a contortion of the body.” But they are not good. They are not the source of free, easy movement but of tension, back pain, and misery.

[...] Many people expect standing or sitting to require continual work. For people who believe the Posture Myths, standing or sitting upright will indeed be an effort, for they must constantly hold muscles tense as they attempt to maintain the prescribed posture. If standing and sitting are uncomfortable, the same people may imagine that muscles are weak and in need of strengthening, or that they have bad backs. But often there is nothing wrong except the way of sitting and standing. (p. 33)
So far, I have found making these kinds of “corrections” to the alignment of my body incompatible with getting a more comfortable technique.

4.2.3 Adopting positions through releasing tension

As mentioned in section 3.1.3, good posture and alignment of the hands and arms are still considered important components of good technique in several sources. However, I learned from sources such as Nicholls (2008), Mark (2003), Lister-Sink (2011) and my Alexander Technique lessons that this can also be accomplished through releasing tension from the body. When my posture is hunched or my hands and arms are not aligned in a way that works well for playing, I tend to find that I am holding a lot of tension all over my body – neck, back, shoulders, hands, wrists, and even legs and feet. If I try to fix this by trying to “correct” the alignment of my body, this just results in even more tension on top of the original problem. However, the more of this tension I can release, the more these misalignments seem to correct themselves without me actively trying to “sit up straight” or any other conscious positioning of my body, and coincidentally this also seems to help my playing feel easier and freer. According to Nicholls (2008):

When we realise we are in a state of compressive tension and we want to organise ourselves to move freely and easily about our world, why doesn’t it work just to stand up straight? Why not do exercises to tighten up slack muscles or learn to hold your shoulders back so you don’t slouch?

The answers are a matter of practical reality. You can indeed pull yourself up, straighten your shoulders and adopt an apparently upright posture. Unfortunately for you this is most likely to cause extra difficulties rather than address the original problem. First of all such an approach requires effort and it’s impossible to sustain that kind of effort for more than a few minutes at a time – mostly because you will make that effort by piling another layer of tension on top of the underlying tension pattern you are hoping to change. Secondly, as you are not addressing the real problem – what you are doing to yourself – you are just paddling round the outside the problem, not addressing the fundamental issues. (p. 34-35)

Mark (2003) states:

When we stand or sit upright in balance, our skeleton is largely self-supporting. The bones and connective tissue support our weight and conduct it to the ground (or the piano bench) with little need for muscular effort. We are poised, free to move in many ways, and the movement feels easy and effortless. Our postural reflexes automatically and effortlessly supply the adjustments needed to maintain balance.

[…]

But if we fall into habits of imbalance, we must constantly use muscular tension to counteract the imbalance. When that happens, movement becomes less efficient because muscles that should be available for movement are being used for support. The chronic muscular tension that results from habits of imbalance restricts our movement and over time may distort our shape. Such distortions are very common. (p. 34)
Joline was at first sceptical of this idea, but after working on releasing some of the chronic tension in her neck and chest, she found that this helped her become more upright without having to pull her shoulders back. Previously, when she used to try to “sit up straight”, people sometimes gave her feedback that she was sitting “like a stick”.

This way of working has been a long-term process, but it seems to be easier for me to relax into a better posture now than five years ago, even if I am still no model citizen in this regard (sitting in front of computers in my day job does not help). I also find that trying to force the process along often is counterproductive. If the choice is between a slightly hunched posture versus a stiffly upright one, it seems like the preferable option in the short term – at least when it comes to technical control – is to allow myself to sit with a slightly worse-looking posture if that is where my body feels more at ease, while working long term on ironing out some of the tension that is pulling me down into a slouch. Allowing myself to be aligned the “wrong” way can also sometimes help me find the tensions that are pulling me out of alignment and figure how to release them. According to Nicholls (2008): “When you take out the tensions, the compensations and the compensations for the compensations, what you are left with is an easy upright posture reflecting the good use of the mind and body.” (p. 122).

4.2.4 Some issues with focusing on individual tensions and habits

Many of my attempts at dealing with tension in my body have involved trying to solve problems in specific joints, muscles, or muscle groups, but it seems like this is highly ineffective at best. For example, for many years I had regular issues with my right shoulder feeling “sticky” and stuck when I practised, creating feelings of awkwardness and difficulty when I moved my right hand around. In response, I spent a lot of time focusing my attention on that shoulder, trying to figure out how to relax it. However, even if I could improve the issue, another problem would almost inevitably appear somewhere else in my body. For example, perhaps my entire left arm would start feeling tense instead, and if I could improve that issue, my right shoulder would start bothering me again. This resulted in me spending a lot of time chasing symptoms of tension around my body without finding relief.

Eventually, I started noticing that many of the localized issues of tension and discomfort I experienced seemed to be symptoms of or compensations for tension in other parts of my body. For example, in the case of my right shoulder, the issue seemed to be a part of a pattern of tension all through my right hand, neck, legs and even left hand and shoulder, and it is difficult to say which was the chicken or the egg. When I started tackling tension in my whole body more holistically the issue in my right shoulder became much easier to improve.

According to Nicholls (2008), “Our bodies work as a whole unit, not in separate bits, and we will compensate for tension throughout our whole structure” (p.16), and later uses an example similar to my shoulder:
It may be your hip that causes you grief, but attending to that area alone will only give limited benefit. Attending to what you are doing with your head, neck and back — and ensuring your feet and ankles are free from tension — will have a more profound effect on your whole structure — and help your hip too. (p. 39)

She also illustrates a similar point with back pain:

Back pain tends to be felt in one local area either low back, mid back or upper back. But the misuse contributing to the pain is not likely to be just a local problem, it’s more likely to be global, involving all of you. This is because what you are doing with your body in one area will have an effect on other areas too. A common experience of low back pain is that it shifts to the upper back at a later stage. Even if it is obvious what is causing the pain — such as a disc problem or a specific injury — compensation patterns are likely to put extra demand on other parts of your back and cause pain there too. Instead of chasing the problem up and down your back, it’s more helpful to consider the whole back and that means thinking about your neck, head and legs too. (p. 54-55)

Almost every time I have become stuck on some issue in my body, I have been unable to find relief until I have remembered to zoom out and start addressing tension in my whole body, rather than focusing on individual parts or muscle groups. I am very prone to wanting to micromanage every single little part of my body, but this tends to stress me out, blinds me from listening to my body and often causes me to forget how to relax at all. On rare occasions it can help to zoom in on a localized bit of tension but if I forget to zoom out again and integrate this into the relaxation of my whole body this often seems to become counterproductive. A typical example of this is that I tend to hold some tension in the upper (extensor) side of my wrist, and while it often does help to remind me to let go of my hands and wrists, if I become overly focused on this, I forget to relax the rest of my body.

4.2.5 Mental sources of tension

Another source of tension I have found is stress, anxiety and uncomfortable feelings that I tend to push down. According to the American Psychological Association (2018) “muscle tension is almost a reflex reaction to stress”, and “chronic stress causes the muscles in the body to be in a more or less constant state of guardedness”. Examples they link to stress include shallow, constricted breathing and musculoskeletal tension and pain in the low back and upper extremities. This does correlate with my own experience with stress, anxiety and tension at the piano. This is a very broad topic that I could write another thesis about, so my comments will be undeservedly brief.

I did not realize how much anxiety and stress contributed to my technical problems until I tried to figure out why my attempt to write an essay about my technique was making me have more trouble with my technique than before (see section 4.1.1). I discovered that I was putting a lot of pressure on myself to succeed fixing my technique right now, feeling that I was not allowed to write an essay on my experiences with technique unless I had
figured everything out, and this caused so much stress that I became really tense before I had even played a note when I sat down at the piano. I noticed that I was up in my head a lot and ruminating about what anyone who read the essay might think of my far from perfect technique if they heard me play. I realized that this in fact had been a pattern for many years before writing the essay as well, and that this made it very difficult to set myself up for success, and “just relax” and explore the piano without a goal or being in a hurry.

I also realized that there were other patterns of anxiety that were interfering with my playing. For example, many instances where I made mistakes and fumbled passages were often preceded by me being in my head and either judging myself or worrying about how the listener might judge me if I mess up, followed by a wave of physical tension that often caused me to mess up the very thing I was worried about. Likewise, after I started experiencing chronic wrist pain back in 2011, the fear of hurting myself made me more timid and tense at the piano, further exacerbating the problem. Both me and Joline have occasionally found the need to take a leap of faith, stop being cautious and allow ourselves to move with some courage in order to find our way to a more comfortable coordination.

I find that strategies for dealing with mental stress and tension have been important for my technique in addition to physical practices. During periods where I have felt stressed and anxious from working too much, having stressful relationships, not eating or sleeping well, or other ways of ignoring what I need to feel well, the level of relaxation I have had access to has often been lower and harder to achieve, no matter how many relaxation practices I have thrown at the problem. Solutions for these problems are beyond the scope of this essay but I feel that they should not be underestimated.

4.2.6 The Alexander Technique

One approach for dealing with tension I have found useful is the Alexander Technique, which has helped me with some issues I otherwise seem unable to improve. When I first learned the approach in 2012 it helped me get rid of the wrist pain I originally suffered from, and in 2019, when I relearned it after a period of neglect, it again proved helpful in improving some tense habits I had acquired in the meantime. I also found it endorsed for pianists in sources like Lister-Sink (2011, 2015 & 2017), Mark (2003), McLachlan (2014), Nicholls (2008), Feuchtwanger, Blido & Seewann (2018), and Taylor (2006).

The Alexander Technique was developed by Frederick Matthias Alexander (1869-1955) as a method for releasing tension and teaching better quality of movement (Mark, 2003). Alexander was a stage actor who started suffering from hoarseness and loss of his voice when performing (Taylor, 2006). He discovered that his problems were caused by excess tension in his neck and body and eventually found a solution to these problems (The Complete Guide to the Alexander Technique, 2020). His method proved to be useful for other types of problems related to tension and body use and is now taught by trained teachers both privately and at drama schools worldwide (Nicholls, 2008).
I learned the method through series of private lessons with a teacher, which I heard that was the preferred way since part of learning it involves being helped by the teacher to release tension so that you can experience what the concepts being taught actually feel like. The lessons offered a pleasant experience of how different my body felt when chronic tension was released, initially in basic activities such as standing, sitting and lying down. I was also given some exercises I could do to practice letting go of tension on my own.

One thing I found frustrating with the Alexander Technique was that it was not the quick fix to my technical problems I had hoped for. When I first started having lessons in 2012, I was in a hurry to fix the tension and pain I was experiencing and often tried to take shortcuts to force changes to happen, which was often counterproductive. I was also unable to use the technique to understand what movements I needed to make to play the piano comfortably. Many ideas I encountered in sources piano technique did not fit well together with what I learned from the Alexander Technique: playing the piano often sabotaged sense of relaxation and wellbeing I could acquire away from the piano, and I had trouble reconciling the two and figure out a solution.

According to Lister-Sink (2017) “Studying with a certified Alexander Technique instructor will certainly bring much greater kinesthetic awareness, ease and freedom to your playing. However, that alone will not suffice because Alexander Technique does not deal with the very specific, subtle and complex co-ordinations of playing a keyboard instrument.”. I likewise found that I still needed to understand what I specifically needed to do to play well and maintain the feeling of physical wellbeing.

Now that I have experience with both using and neglecting the technique, I find that if I practice it consistently it helps my physical wellbeing, body awareness and relaxation, while also providing some ideas and strategies I find useful for working on tense habits, both at and away from the piano.

4.2.7 Qigong

A more recent addition to the practices I like using is Qigong. Qigong is an ancient, meditative exercise form from east Asia (Eight Pieces, 2018). My preferred routine of movements to follow is https://www.youtube.com/watch?v=cwlvTcWR3Gs (Eight Pieces, 2018). Going through this routine often makes a noticeable difference for the tension in my shoulders, which curiously enough seems to help my forearms and hands feel better too.

4.2.8 Mindfulness, being present

I also find it helpful to practise mindfulness or “being present” to calm my mind and relax my body. Lister-Sink considers mindfulness as “essential to successful training” (Lister-Sink, 2015, p. 21) when retraining injured pianists, but few of the other piano related resources I consulted discuss this concept, so I have learned about it outside the piano field. The main benefit has been the tools mindfulness provides to calm down the thoughts that can
race through my mind, to free up mental bandwidth so I can be more aware of my body and mentally focused during practice, and to relax my body.

Defining mindfulness or “being present” with words is difficult. I understand it as being in a state where you are noticing and observing what is going on in the present moment, rather than being mentally preoccupied with the past or worrying about things that may happen or goals that you want to achieve in the future. Taylor (2006) speaks of an attitude of mental detachment and awareness, where one simply observes what one is doing instead of striving to achieve something (p. 31 and 97), which sounds similar to me. I find that when I think about the past or future rather than feel present in the moment, I seem to become more tense and mentally unfocused on what I am doing.

To practice mindfulness, I practise slowing down and noticing my in- and outbreath, and observing what thoughts are in my head as they appear and what my body’s various senses are communicating in the moment. My job is to just notice and acknowledge whatever comes up, without judging or trying to change it, projecting labels onto it, trying to force it to be different, running away from it or applying a mentally constructed idea of how it “should” be onto it. Since I often do this, I also practice noticing and acknowledging that I am judging myself, or that I am judging myself for judging myself, and so on. These tendencies all involve the past or the future, but the act of observing and acknowledging happens in the present.

I also practice bringing my awareness to all of my body, feeling the presence of all the parts of it that I usually block out of my awareness, so that I am, for example, not just locked in my head and unaware of how my legs feel. When I can be aware of my feet, legs, lower body, and upper body on a similar level to my arms and hands and can feel my body as a connected whole rather than separate bits that I try to control, I seem to have an easier time relaxing and letting go of some of the tense habits in my arms. Being in my head, ruminating about my relaxation, applying labels and judgements on if what my body is doing is good or bad, being preoccupied with fixing whatever I deem as “wrong” on the other hand seems to create more tension.

Practicing mindfulness has helped me feel better both mentally and physically in many cases, and I have found benefit from practicing carrying this over to the piano. When I can be in the moment and just enjoy the experience of playing, I seem to both play and physically feel the best, though while I am better at it now than before, it is still not a consistent experience.

4.2.9 Breathing

Constricted, shallow breathing seems to be yet another source of tension in my playing. Most resources on mindfulness involve observing and working with your breath to feel more present, focused and relaxed (Nhat Hanh, 2008). According to Nicholls (2008) “The single most useful thing any pianist can do to get a freer use of their hands and arms is to improve their breathing.”, since tense, restricted breathing affects the muscles that move the arms (p.
106), which Mark (2003) agrees with (p. 124). Sandor (1983) also states that tense breathing is problematic (p. 30).

I have found the Alexander Technique’s guidance on breathing (Nicholls, 2008) and my experiences practicing mindfulness using the breath (Nhat Hanh, 2008) to give me the most pleasant and physically restorative experiences when breathing. My understanding is that I feel better when I do not actively try to “do” so much or actively control how my body breathes apart from slowing it down and breathing quietly through my nose, focusing on releasing tension from my body. I think of breathing not as something I must “do” but something my body already knows how to do, that I just try to allow to happen. Nicholls uses the phrase “Take a moment to watch the gentle tide of your breathing, as it ebbs and flows, in and out of your body. Just observe it, and leave it be.” (Nicholls, 2008, track 1). When going back to pieces I learned before I started practicing mindfulness sitting at the piano it has been quite astonishing to see how terrible my entire body can feel after playing just a few bars with my older breathing habits.

4.2.10 Exercise

It might be common sense, but I think it is worth mentioning that I seem to have an easier time finding more comfortable movements at the piano when I move my body and exercise regularly than when I do not. Similar to my experience with the Alexander Technique, however, working out and stretching (and so on) alone do not seem to fix tension created by my movement habits at the piano, or issues that seem to activate from mental stress, and so on. In some cases, I found that I have certain habits of tension associated with certain forms of exercise, and that this tension could get worse if I exercised that way. Joline finds it helpful to do regular shoulder workouts and other full-body exercises such as squats and deadlifts, but the long-term difference in her comfort at the piano came from changing her playing technique, and this has also been my experience so far.

4.2.11 Some final thoughts on relaxing

My main takeaway from trying to figure out how to reduce the tension in my body is that I very easily establish habits of chronic tension, and that every little thing which counters that helps if I want to play the piano better. The approaches I have found the most useful have been the Alexander Technique, Qigong, mindfulness, general exercise, and working on issues with stress, anxiety and other sources of emotional distress. When I feel the most relaxed and physically free, I seem to be more aware of my whole body and feel it as a connected whole rather than just being aware of, for example, my shoulders, arms or hands while being unaware of how I feel everywhere else. I also breathe peacefully in a way that feels calming and restorative, and my mind becomes relatively quiet, peaceful and open.
4.3 Becoming more relaxed while playing

This section covers the some of the struggles I have had with changing my actual playing technique – i.e., what I do to press the keys down – and the things I have found helpful so far. As mentioned earlier, I discovered quite early on that learning to release tension from my body was not enough on its own to solve my technical problems, because even if I could relax away from the piano, discomfort and feelings of tightness started creeping into my hands and forearms as soon as I tried to play again. It took a long time and trying many different things before I started making any progress, which even so remained slow. Some of the things I tried that I could not get to work are covered in sections 4.3.1 through 4.3.5, and the things I have found helpful for lack of better solutions are covered in sections Fel! Hittar inte referenskälla. through 4.3.9.

4.3.1 My struggles with thinking about specific movements

One thing I often encountered in the piano technique literature and had trouble with was analyses of how different sections and joints of the body should be moved or “used”, sometimes regarding a specific segment or joint, such as the hand, arm, forearm, or wrist, and sometimes covering what every part of the arm or even torso should be doing. For example, Lhevinne (1972) writes:

[...] in the manipulation of the fingers on the keys, I direct my pupils to cut out any action upon the part of the fingers except at the metacarpal joints.

The metacarpal joints are the ones that connect the fingers to the hands. Of course, there are exceptions, when the other joints of the fingers come into play. These we shall discuss later; but for the main part we shall progress far more rapidly if we will learn the great principle of moving the fingers only at the joint where the finger is connected with the body of the hand. There was a time, I am told, when the great aim of the piano teacher was to insist that the hand be held as stiff and hard as a rock while the fingers rose to the position shown in Figure 1, in which all of the smaller joints were bent or crooked, and then the finger descended upon the key like a little sledgehammer. The effect was about as musical as though the pianist were pounding upon cobblestones. There was no elasticity, no richness of tone, nothing to contribute to the beauty of tone color of which the fine modern piano is so susceptible. Now, the finger arises in the position shown in Figure 2, and the movement up and down is solely at the point marked. (p. 12–13)

Similarly, McLachlan (2014) talks about developing “strong finger movements from the knuckle” (p. 42), as well as rotary movements of the lower arm and wrist (p. 44), using the thumb, hand, elbow, or upper arm as
pivot points (p. 29) or as the “leader” in lateral shifts (p. 30–31). Whiteside (1997) makes a detailed analysis of how the torso, upper arm, forearm, hand, and fingers should move in for example chapter 5 (p. 30–45) and chapter 9 (p. 76–124). Sandor (1981) likewise describes in detail the movements and positions of the body he thinks one should use to solve technical problems through chapters 4 to 9 (p. 37–137). Manshardt & Amundrud’s (1994) analysis of Cortot’s technique also seems to have some similarities to what Whiteside (1997) and Sandor (1981) write.

Sadly, I have been unable to figure out how to use these types of analyses in a practical sense and trying to do what they describe has often created more problems than it has solved. It seems like my brain takes the descriptions of which body parts are doing what movements as instructions that I should be thinking in my head to make my body perform these movements, but I am not sure if this was intended by the author of the analysis. I seem to perceive what I “do” with my body as the literal words I use in my mind to tell it what to do. Therefore, if my finger looks like it moves “from the knuckle” but I am not thinking “finger, move from the knuckle” I do not perceive this as me carrying out the instruction to move my finger “from the knuckle”. I also tend to easily get locked in my head and preoccupied with the body part I am trying to instruct, trying to make sure I am moving it “correctly”, which seems to pull me out of feeling peaceful, present, grounded, and connected throughout my body (see section 0) and leads to increased tension. It also seems like my mind wants to produce some kind of sensory feedback from the various body parts and joints it is trying to control in order to monitor what is going on and accomplishes this by tightening the muscles involved.

So far, I have not been able to figure out how implement written analyses of movements into my technique without tensing up. Joline’s brain seemed to operate similarly. For this reason, we adopted solutions where we do not actively try to closely control the specific movements of specific joints.

4.3.2 My struggles with understanding weight

Another concept I have had trouble with is the idea of using the weight of the hand, forearm, or whole arm to play. It seems I have so far been unable to connect this word to the correct experience in my body, and my attempts to do so have sadly resulted in some quite problematic habits of tension.

One problem was that different people seemed to mean different things when talking about weight, sometimes seemingly contradicting each other. For example, Lister-Sink (2011, Chapter 9, 18:06) says that “the assumption that the released weight of the arm produces big sound is true”, while Sandor (1981, p. 38) says “The notion that the full weight of the arm produces more sound than a lighter weight is erroneous […] We should not equate great tonal volume with a larger weight but rather with the speed that a longer lever can generate.”. While Lister-Sink (2011) says that the weight of the arm is supported by the torso and Sandor states that “the shoulder muscles, not the fingertips, should always carry most of the arm weight” (Sandor, 1981, p.
181), Manshardt says that muscular support of the weight of the arm is “fatiguing” and leads to “muscular problems” (Manshardt & Amundrud, 1994, p. 44) and that the fingers must “support the weight of the arm” (p. 45).

Pianist Leopold Godowsky seems to say something similar: “In this manner of playing the arm is so relaxed that it would fall to the side if the keyboard were removed from beneath it.” (“Leopold Godowsky”, 1913). Cortot speaks of adding to the fingers “the weight of the hand, of the forearm, and even of the shoulder itself.” (Cortot & Chopin, 1930c, p. 65) and of using firm fingers to “serve as supports to the hand, whose full weight must be used.” (Cortot & Chopin, 1930a, p. 40). Whiteside, on the other hand, seems opposed to the term “weight” and says that “It is exactly the inert pressure of weight which cannot be used for speed.” (Whiteside, Prostakoff & Rosoff, 1997, p. 54).

To make a brief summary of the issues I have had when trying to understand weight, the first issue is that when I have tried to create a feeling I would label as me supporting the weight of my arms with my shoulders, I have acquired more shoulder tension, often gotten cold hands and my fingers have seemed weaker and clumsier. At the same time, when I have tried to feel like I am supporting even a small amount of something I would label as weight on my fingers or tried to understand what “transferring” said weight from finger to finger means, I have ended up putting pressure on the keyboard, stiffening my hands, wrists and arms. Finally, when I have tried to let my hands and arms freefall down onto the keyboard, the impact has made my hands hurt.

Both I and Joline have independently of each other tried to do what we thought was using more weight on the 5th finger and making the rest of the hand lighter to bring out the upper note in chords; for both of us the result was pressure on the keyboard and stiffness in our arms. According to Lister-Sink (2011) this is not what is intended:

> The moment the fingers contact the key bed the weight of the falling arm should be transferred back into the torso, leaving just enough weight to keep the key down, just a few ounces. It's sort of like a falling brick transforming itself into a ping-pong ball on contact. The arms then return to their feeling of utter lightness and buoyancy, because they are again supported by the torso, and not the piano. If we continue to feel heaviness, we are pressing into the key unnecessarily. (Chapter 9, 18:24)

Sadly, the idea of weight transferring weight from my torso to my arm and back to produce a feeling of lightness and buoyancy has so far just felt unintuitive and confusing to me.

One explanation might be that to me, the word “weight” evokes an image of something heavy and seeks to create sensations of heaviness in whichever body part I am trying to use the weight of, and in my experience, a feeling of “heaviness” or “weight” in my body is created by muscle tension. This might be why I have created tense habits when trying to follow advice such as that the “elbow should feel to the pianist as though it were a heavy weight that would swing back to the pianist’s side pulling the hand off the keyboard if it were not for the friction of the fingers on the keys” (Manshardt & Amundrud, 1994, p. 50-51). I have so far not found any other sensation that feels intuitive.
to connect to the words “using weight”, so it is likely that I am misunderstanding something crucial, but I have yet to figure out what that is.

4.3.3 Collapsing and firm fingers

Another problem I have had is that my 2\textsuperscript{nd}, 3\textsuperscript{rd}, and 5\textsuperscript{th} fingers have a strong tendency to collapse the joint closest to the fingertip. Initially, I thought the problem was that my fingers were weak or that I needed to make them firmer and tried to solve this by stiffening the collapsing joint to “stabilize” it when pressing the key. This seems to mainly have resulted in increased tension all the way up into my shoulders and beyond, and I have spent a lot of time trying to unlearn this habit again.

Collapsing finger joints is now something I believe is caused by tension and poorly coordinated movements, rather than a lack of conscious tensing or firming up of my fingers. My fingers seem to collapse the most when there is tension in my knuckle joint or too much pressure on the finger and if I can release a lot of my habitual tension from my hands and arms, the collapsing seems to improve without me trying to make my fingers firm.

4.3.4 Metaphors and imagination

I have had limited success with trying to use various metaphors and imagery to find the right movements. I again seem to often misunderstand or be unable to connect the ideas to the right experience in my body. One example is imagining that the arm is a hanging bridge attached between the fingers and shoulder (this makes my arm feel heavy and tense). Other examples include imagining that “a delicate flower be held in the palm in a way that will not crush it” (Whiteside, Prostakoff & Rosoff, 1997, p. 60) – apparently, I hold delicate flowers in a rather tense manner – Whiteside’s many mentions of fulcrums and levers (also p. 60 among other places) or likening the use of the arm and hand to the “crack of the whip” (p. 40) or a fly swatter (Manshardt & Amundrud, 1994, p. 62). Likewise, I cannot understand Ronan O’Hora’s description of playing feeling “as though you were gripping the edge of a cliff, with a 1,000-foot drop below” (McLachlan 2014, p. 10) since that sounds to me like something that involves enormous strain. Other ideas I have been unsuccessful with include various images of my hand, wrist and forearm being various configurations of arches and keystones (Mark, 2003) and of energy or sound travelling up or down my arm to or from various places in my body. For example, Feuchtwanger, Blido & Seewann (2018, p. 33) suggest that the energy to play a figure in one of their exercises comes from the spine, but I have no idea what this means.

4.3.5 Guiding movements with the fingertips

One of the first ideas I got somewhere with came from an Alexander Technique teacher who in 2013 suggested that I could “guide the movements used in playing with the fingertips”. At the same time, I started letting go of trying to use free fall, weight, or movements of my arms to play, since these
attempts so far had not really helped and in fact made my playing clumsier. Instead, I started studying older schools of piano playing that focused on finger independence and suppleness of the hands and wrists. I found that when I could start deactivating anything I was “doing” with my arms apart from trying to keep them free from tension and replace this with “using” my fingers more, positioning my hands by guiding the movements with my fingertips rather than my arms, my playing started to slowly feel a bit more comfortable and secure. I also found that Feuchtwanger seemed to talk in similar terms, spurring me to further experiment with the idea:

The hand is brought back to neutral position as quickly and often as possible without interfering with the arm’s natural weight. We take care that the thumb is never tense; the wrist is always loose; the arms and elbows follow the movements which are initiated by the fingertips without interfering in them. (Feuchtwanger, Blido & Seewann, 2018, p. 14)

And furthermore:

It is very important that we try never to hold the arm rigidly. One might compare moving from one position to another to a dancer’s leap: the dancer returns gracefully and smoothly to the ground, landing on his toes rather than the soles of his feet (not even Nijinsky was able to remain in mid-air!). Similarly, a pianist should arrive with his fingertips first, without tensing the wrist (one can try to imitate a parachute landing). (Feuchtwanger, Blido & Seewann, 2018, p. 15)

While ideas along these lines continued to help me improve my technique during 2014–2016, from the disastrous state it had been in the previous two or three years, to being able to practice my repertoire a couple of hours a day, there was still muscle tightness and fatigue, and they did not exactly turn me into a virtuoso who comfortably could tear off whatever repertoire I played. To paraphrase a piece of feedback I got from Joline: “I like the idea and it feels good when we try it, but I struggle to consistently achieve it. Sometimes it seems to work, sometimes it does not”. I continued experimenting with these ideas for a while, since I kept catching glimpses of a relaxed, restorative feeling in the muscles of my forearms when using them, continued experiencing a reduction of fatigue in my forearms when playing difficult repertoire, and nothing else had worked so far. However, it eventually started feeling like trying to control my body this way was not fully solving my problems.

4.3.6 Trying to think versus trying to feel my way to movements

When I started trying to fix my technique, I held a base assumption that the main thing I was missing was just which instructions I needed to give to my body to make it do what I wanted. If I just found the correct instructions on how to move my fingers and arms, what angles, amplitudes and force vectors, or how to tell my body to relax correctly, I would be able to just give those instructions to my body and fix the problems I was having. I did expect that this would take some time, but I still assumed that once I had found all of the correct instructions, my issues would start improving at a steady pace.
In 2019 I started questioning this assumption. At that time Joline and I had experimented together for almost three years, and she had made much more rapid progress than me, once again playing without aches or pains using the same ideas I was still seeing inconsistent results from. I asked her many questions about what she was doing, and one difference between us turned out to be that Joline, once she had used the ideas we were experimenting with to find more comfortable movements, recalled the movements through remembering how they felt in her body, not through trying to continuously think about every detail of the instructions again, which was what I was doing. While I was locked in my head trying to think my way to more comfortable movements, she focused on the feeling and experience of making them.

I therefore started trying to let go of mentally trying to directly control all my muscles and joints, and instead figure out how to find and remember the physical experience of those movements that felt more technically secure and comfortable. I tried to trust that even if I was not trying to directly control how different parts of my hands and arms were moving, my body could select an appropriate set of movements, and probably was doing so at least to some degree if I continued to feel physically all right.

To help me with this, I started to more actively do various practices such as the Alexander Technique, mindfulness, and later Qigong, as well as others mentioned in section 0, hoping to raise the baseline relaxation of my body and mind to get a better reference point for how my body and specifically arms and hands could feel. I would then try to practice listening to my body and maintain that feeling in my body while pressing keys. One could say that I worked more on finding an experience of physical wellbeing and comfort in my body, and then on detecting and stopping whatever I found myself doing that would reduce or destroy that feeling, rather than trying to actively “do” so much. Likewise, I practiced mindfulness and Qigong to quieten down my racing mind to be able to listen better to what was going in my body, seeking to practice in a more open-minded, not so goal seeking way, rather than trying to intellectualize about every movement I did. I found that this change helped me make further progress.

4.3.7 How I currently work

The way I work on my technique is now based on finding what the experience of being more relaxed and free feels like in my body and avoiding being locked in my head trying to analyse or micromanage which movements are involved. It is clearly not perfect since it has not turned me into an international standard virtuoso, but it has at least helped me further reduce tension in my body and have some practice sessions where I have felt all right physically. At the same time, there is still tension to eliminate and I feel that there are much higher levels of comfort I have not attained. On bad days I can still struggle or fail to find this technique, and if I keep playing under these circumstances I can experience increased tension, discomfort, mistakes, and some momentary fatigue in some of the Etudes. For more details, see sections 5 and 6.
To try to avoid the problems I experienced when I tried to define a definite step-by-step approach for finding comfortable movements a couple of years ago (see section 4.1.1), what follows is more a list of items of things which seem to be involved when I make progress, or that seem to sometimes help if I become stuck. I am still somewhat hesitant to write these items out in text, because even with this iteration of ideas I notice that if I think about what I wrote in my thesis while practicing, instead of just sitting and “just doing” without thinking so much, I often struggle more to find my most comfortable technique. While I have tried to order the items a bit, in reality I feel they are quite interrelated in the sense that if I neglect, forget, or fail to do one, the others suffer and so does my technique.

Doing relaxation practices away from the piano

As a foundation it seems important that I regularly do practices to reduce tension in my whole body, increase whole body awareness, calm my mind and just generally ground myself, such as the ones described in section Fel! Hittar inte referenskälla., including the Alexander Technique, Qigong, mindfulness, exercise, removing sources of stress and otherwise taking care of myself. When I do this regularly, the habitual level of chronic tension in my body seems to become lower and finding comfortable movements at the piano seems to become easier.

Sitting at the piano

When I sit down at the piano, I can often start breathing shallowly and tensing my body in a variety of ways before even playing a note. This includes “correcting” my sitting posture by trying to actively sit up straight and pulling my shoulders back which makes my body more tense as described in section 4.2.2. To work on this, I use what I learn from the practices I do away from the piano. The general idea is that my body can sit more upright with more physical freedom without my “help” if I can let the chair support my bottom, release tension from my body so that it can expand, breathe calmly so I feel internally peaceful. I seek to leave my body alone and to stop trying to “do” so much to it. I have noticed that if I can find an increased feeling of my body feeling grounded, open, peaceful, and as a connected whole rather than mentally divided into separate parts I am trying to control, I get a reduction of the tension in my arms.

Bringing my hand to the keyboard without playing

During the following items, which are concerned with what I do with my arms and hands, I need to remind myself to avoid mentally hyper-focusing on individual parts of my arm or hand at the expense of breathing calmly or feeling grounded in the rest of my body.

I often start practicing with just bringing my hands to the keyboard without pressing down any keys, while trying to inhibit my numerous impulses to tense my wrists, hands, and fingers while I do so. Starting with holding my hand in the air above the keyboard, I try to relax it
so that my fingers hang rounded, relaxed and supple, the hand hanging slightly (but not heavily) from the wrist. Often, there can be hidden tension even though I think I am relaxed, so I sometimes use my other hand to check for tension/resistance in the fingers, wrist, forearm or upper arm. If there is tension somewhere, my hand hangs at a weird angle (pointing sideways instead of down), or my elbows are sticking out, I often need to release tension throughout my hand, arm and body. Trying to solve the problem “locally” often does not work so well, but it does seem highly important that I can keep my finger joints free from tension.

Once my hand seems relaxed, I practice placing it on the keyboard with the fingertips touching the keys without pressing any keys down. The closer I get to the keyboard, the stronger the impulse to tighten something gets. Often, there will be a tendency to tighten my wrist extensors to “hold up” my hand (or otherwise tense the hand or fingers to “ready” or “position” them in anticipation of playing) even if it has arrived into what looks like a “normal” playing position, so I try to keep the feeling in the hand and wrist the same as when they were in the air above the keyboard. I try to let my body choose a position and movement that feels “natural” and comfortable instead of actively positioning my hands and fingers according to some idea I have in my mind of what is “correct”. I also try to avoid lowering the hand too far so that I have to tighten or “hold up” the fingers to avoid pressing keys down, or otherwise modify the way they are just hanging when they are relaxed. The idea is to have my fingertips just sort of just touching the surface of the keys, without tightness or contraction in any of the fingers (this is surprisingly hard), and with the wrist free from tension.

Overall, I feel like I am focusing on stopping myself from activating habitual tensions rather than on actively “doing” anything in particular. I would say I feel like I am trying to move my hands around in a natural and relaxed manner without overthinking what I am doing, rather than trying to use my arm to place the hand on the keyboard. To me, “using my arm” is experienced as allocating the majority of my mental focus on a particular segment of my arm and trying to control that directly, which is never how I feel when I use my hands to do things that feel natural in my daily life.

Pressing down a key

I practice pressing down keys both starting from the end position described above, and from redoing the previous sequence of lifting my hand, bringing it to the keyboard and pressing the desired key in one movement that I try to have feel natural, like when I just grab some random object in my daily life without thinking. I try to not think too hard about “how” I actually “do” this, but mainly focus on stopping myself from doing anything that destroys the feeling that is present in my arm and hand when my fingers are relaxed, letting my body take care of how the movement is done. For comparison to when
I tried to play the piano with the dishcloth-like hands described earlier, there is an active movement of the playing finger, but I try to remember to not zoom in, hyper-focus and analyse what that finger is “doing”, but to stay in the experience of my body feeling grounded and peaceful, like I do not really know what I am actually “doing”, seeking to press the key down without tensing the wrist or non-playing fingers.

It seems like when I am more relaxed the main sensory input from my body becomes the feeling of my fingertips against the key, and how the action of the keyboard feels under my fingers. I like the idea of “manipulating” the keys rather than hitting them (Feuchtwanger, Blido & Seewann, 2018, p. 26) in contrast to how I used to lift my fingers and strike the keys in the past. If I am more tense, I start getting sensory input from higher up in my hand, arm or body that drowns out the subtle sensations of feeling and moving the key.

Holding keys down with a free wrist

While I am still holding the key down, I use my other hand to check that my wrist is supple and easily moved in every direction. If it is not (this is often the case), I try to release tension in my fingers, hand and wrist until I find the freedom I am looking for. The main culprit is often slight tension that has crept into the finger and wrist joints, often in the extensor muscles (likely acquired when I became scared of touching the piano fearing that I was risking injury, from trying to hold my fingers less curled, and possibly from computer usage). Another regular culprit is that I have placed my wrist in an artificially determined position which seems to force my hand and fingers to tense up. I try to practice pressing and holding keys until I hopefully can consistently succeed doing so while keeping my wrist rather free in all directions and can remember the feeling. I also like doing this with five note clusters and various chords, still seeking to keep my wrist free while holding the keys down. Even if I cannot do this perfectly some days, even small improvements do still seem to help my technique.

Moving from one key to another

Next, I find it helpful to practice moving from the key pressed to another nearby one (for example, in the right hand: moving from E to D using finger 3 to 2, or from E to G using 2 and 4). The question I ask myself is again similar: “how can I press the next key without changing how my forearm, wrist and hand felt when the hand and fingers were relaxed?”. I seem to have a strong tendency to tighten my wrist and stretch out the next finger sideways or into the piano to reach the next key in a way that creates tension. On the other hand, when I can get to another note comfortably the feeling is rather that I am keeping my finger unaware of the fact that it needs to reach another key, and instead the hand just sort of moves enough to place it there, without tensing any of the fingers while I move. I do not perceive this
as me actively deciding to use my arm to move my hand, but rather that it just sort of happens as a result of me wanting to get to the next key without allowing the relaxed feeling in my fingers and wrist to change as I do so.

Chords and octaves

Even when doing chords and octaves, which do require that the fingers are spread out in some way, I find that if I aim to maintain as much as possible of the feeling my hand and wrist had when the fingers were relaxed, chords feel much more pleasant to play. Internally this can feel like my arms and hands are aligned completely different from what I am used to, even if the visual difference is not that great. I would describe the difference like me needing to have my wrists higher and my hands further into the piano than I am used to.

I am not sure that the descriptions above are my actual playing technique perse, but rather exercises and sensations I believe I have perceived and which I try to practice and apply to my repertoire, and which over time seem to help me feel more comfortable. For example, if I notice that I tighten up when using my 2nd finger when playing a certain piece, I can stop and experiment with some of these items until I find a more comfortable feeling when using that finger, and then try to apply that to the passage I am working on.

4.3.8 Exercises by Cortot

In addition to the items described above I like using a few exercises from the book *Rational Principles of Pianoforte Technique* (Cortot, 1930). The first few are from the opening chapter of daily gymnastics (p. 4–7) and include a variety of exercises involving holding down both single notes and chords while moving the fingers or wrists in different ways with the purpose of rendering the “fingers, hand and wrist supple” (p. 4). I feel this helps my work on finding the feeling of holding down keys while the wrist stays relaxed. When I first tried them in 2014, I found some of the exercises impossible to do according to what I understood of Cortot’s instructions, and only by working on releasing tension in my entire body and carrying this over to the piano could I make the exercises feel less awkward. I sometimes think of them as a tool for helping me avoid tricking myself into thinking that I am relaxed when I am not, since some of them mercilessly expose any tension present by feeling either awkward or impossible to do as described.

Another exercise I have adapted for my own use comes from a preparatory exercise for playing chords (p. 77):

Count one, two, three on each triplet. One – to strike the note dropping the hand on the key-board with rapidity, suppleness and decision: two – to continue the movement of the hand below the key-board, lightly touching
the knee, which is taken as a resting point: three – to bring back the hand to the position of attack, that is, at about the height of the shoulder. During this exercise the wrist must be in a constant state of suppleness as well as the hand. The finger used to strike the key, must alone be firm at the moment of playing.

Cortot further asks that you “employ on this chromatic succession all the fingers and all chords of two notes, successively” (p. 77) but I usually do the exercise on fewer notes (still with all fingers) and without counting, since this tends to distract me from focusing on the sensations in my body. With my habitual tension I will feel a sense of being blocked from freely proceeding past the keyboard down to my knee, particularly on my thumb and 2nd finger. If I can be relaxed enough and avoid retaining tension when key has been pressed (there is some activity in the finger used but I am not sure I would say that the finger feels “firm”) the movement from shoulder height to knee can feel smooth, without feeling like the keyboard is blocking me. When working on my repertoire I then try to transfer and retain this feeling when playing with normal, smaller movements.

Despite its usefulness I do have some problems with *Rational Principles of Pianoforte Technique*. Cortot’s instructions are sparse and can be interpreted in a multitude of ways, and I think this makes the book dangerous to use. According to Manshardt & Amundrud (1994, p. 111), Cortot “assumed one knew” how to build technique, and reading his instructions, it seems he intended the book to be used by a master to train their pupils (Cortot, 1930, p. 2). Having slogged through the first two or three chapters a couple of times mostly following the plan set by Cortot – 36 days on each chapter, working for around an hour and often transposing each exercise into every major and harmonic minor key (p. 2) – I have found that the book is highly effective at ingraining whatever faulty habits you employ when practicing the exercises. This is not helped by many of them being mind-numbingly boring to do, which at least in my case leads to a loss of mental focus and perhaps even encouraged a build-up of tension. While slaving through the exercises as diligently as I could did not fix my technique, the book may still have helped me develop some finger independence.

4.3.9 Listening as a part of technique

I see a correlation between becoming more relaxed and the musical results at the piano improving. This includes the quality of the sound, the steadiness of my sense of pulse and my legato. I find that, at least to a certain degree, focusing on listening for the sounds I produce rather than being mentally preoccupied with what my body is doing can also help free up my body.

With legato I do not necessarily mean that the notes physically connected through holding down the key until the next one is pressed, but more importantly that the notes sound connected into one gesture, like in one bowing on a violin or when singing them in one breath. Something I do not think is legato sounds like individual disconnected sounds (“note-by-note”) or being disturbed by unsuitable micropauses, accents or other types of
“busyness”, regardless of if it is bound with the fingers or not. It seems to me like the more I can keep my body free from tension, and the more I can feel like playing a series of notes happens in one physical “flow” rather than as individualized movements I think about separately (like when I try to control or “use” specific finger or arm movements), the easier time I seem to have producing a legato in response to my desire to hear a legato phrase. In the early years of trying to improve my technique I often clenched my entire arm or even my entire body trying wrestle the sound into an acceptable legato, but the results from this were often terrible.

The same applies to the sound I hear coming out of the piano in general. While I feel there is a lot of room for improvement to my sound quality, I find that listening for a clean, resonant quality in my tone as opposed to a rough sound and trying to orchestrate my chords at least helps in my search for more comfortable movements. To orchestrate chords better it seems to me like I need to let my hands and wrists stay supple rather than, for example, stiffening my hands into chord-shaped wooden blocks.

To help me recognize good quality tone I like to listen to recordings of pianists such as Cortot, Rubinstein, Gilels, Rachmaninoff, etc. I do not care much for arguments that “tone does not exist” or that the only way to affect the sound is the speed you press the key down, because even if tone is an illusion, I find it a useful illusion in that case. If I approach the instrument in a tense, forceful way I get uglier tone compared to if I approach the instrument in a more relaxed, supple way so therefore I find listening for tone quality valuable when I practice.

I have not found listening alone to be enough to cure all the problems in my technique. I think listening for tone (or legato for that matter) as a tool for developing technique is only as effective as one’s ability to recognize the quality of sound one needs and for that matter how well one understands how to create those sounds comfortably and efficiently. In my case, considering just how many tense habits I have had to deal with, I have also felt I needed to understand how to control my body to create the sounds I hear in my head.
5 Recording a take of the Etudes Op. 10

5.1 Some difficulties with recording a take

The main purpose of my attempts to research technique was to 1) enable me to play comfortably without aches and pains or injuring myself, and 2) enable me to play the Chopin Etudes and other repertoire I wanted to play. I therefore decided to have as a goal to record a take of the 12 Etudes Op. 10 for this thesis. This turned out to be a bit more difficult than I had anticipated.

When I first tried working on the full set of Etudes in 2014, I could only practice them slowly and still felt quite tense doing so. The next attempt in 2016 went a bit better, but I still suffered from fatigue and tightness, in some cases quite severely. The third attempt was for the 2019/2020 version of the thesis, and while I could reduce tension compared to 2016, I did not feel I was playing comfortably or accurately enough to record a take before being interrupted by the 2020 pandemic. For the next year and a half, I only had limited access to an upright piano with sluggish, uneven action that did not exactly help me relax, and therefore only did some work on the Etudes. When I started having more consistent access to a better instrument towards the end of 2021, I worked on them again hoping to reach the comfort level I had reached in other (easier) repertoire. When I felt that I had started seeing regular practice sessions where I did not feel noticeably tense after practicing the Etudes, I decided to record some takes.

My goal was not to play everything without mistakes or occasional unevenness since I knew my technique would drift in and out of old and new habits, but rather to succeed playing through the set in front of a microphone and camera while feeling about as comfortable as I did when practicing. I felt that some amounts of tension here and there was permitted since I still have bad habits to eradicate, but feeling fatigued, aches or high amounts of tightness was not. My hope was to get a take that accomplished these physical goals with a technical accuracy I found acceptable.

Practicing the Etudes and playing the set in front of a camera and microphone turned out to be different matters, however. Sitting down to play once the camera was rolling was quite nerve-wracking and I felt self-conscious and tense before I had even started playing, especially when I came to No. 2, which is probably the most difficult Etude for me. This caused varying degrees of regression of my technique and made it difficult to capture what I felt was good enough playing of each Etude in the same take. In some ways I am also my own worst enemy, because if I felt I played poorly in one Etude I would be angry with myself and lose mental focus, which did not exactly help me play better in the next few Etudes. At the same time, if I did play well, my fear of playing the next Etude too poorly, ruining a take that was going well would make me more likely to play that Etude worse. My typical response to fear of making mistakes is to brace my hands and body, increasing tension as well as the likelihood that I mess up.
It was also one matter to say to myself that I was comfortable making some mistakes in each Etude, and actually listening to a take and hearing all the imperfections. In the first take I did I fumbled some important passages and therefore recorded for two more days, doing one more take of the set each day. Sadly, my self-consciousness increased after watching and listening to myself play in each take, leading to both my overall body relaxation and technique deteriorating each day, my forearms feeling rather tight after the third day’s take compared to the first day.

After the first three takes I worked on the Etudes on and off for a couple of months, trying to further improve my comfort and relaxation so that hopefully I would do better in the next take. During this time, I started feeling increasingly sick of having to practice the Etudes and just wanted to be done with this thesis, while at the same time feeling like the only way to do so was to force myself to work on all of them as much as I could fit into my schedule. On many days I felt increasingly disinterested and had trouble focusing on my technique work and practicing efficiently.

Once I had improved comfort further, I made a few more takes but felt self-conscious and tense again. Exasperated that a camera and microphone could seemingly wipe out months of work and improvement, I gave myself one more month to work. The first two takes of the final four I did were the most comfortable to play (but still with occasional moments of losing mental focus or becoming anxious with technical problems following suit). The final two saw a deterioration of my confidence, focus and technique and I again felt too tight in my forearms after playing the last one. While part of me wanted to go on practicing and trying to do more takes until I could get one that had the technical and musical qualities I was aiming for, I felt that for the sake of my sanity it was time to move on with my life.

5.1.1 Selected take

It was difficult to choose a take, because the takes with my best playing felt too tense, and others that felt better had too many mistakes. The ninth take (documented as Etudes_20220726_1.wav and Etudes_20220726_1.mp4), while not featuring my most accurate and focused playing felt the best physically, despite being played on a grand with a slightly stiff and strange action that I often had trouble with increased tension on; it was selected for this reason. The Etudes that were the most affected by anxiety were No. 2 and 5, parts of No. 4, the start of No. 7 and some of the middle of No. 10.

5.2 Some thoughts on each Etude

5.2.1 No. 1 in C major

The challenge with this Etude was to play its relentless, widespread arpeggios quickly and accurately without feeling fatigue or tightness in the muscles of
my right hand, forearm or shoulder. Since Chopin’s indicated tempo of 176 bpm feels horrifically fast, I did not try to reach that tempo for the take. While I was generally not bothered by fatigue and could do multiple attempts in a row playing No. 1 and No. 2 (I would typically mess something up in No. 2 and need to restart the take) before continuing through the rest of the set, varying degrees of tension that are enough to affect No. 2 negatively, and can lead to slight feelings of fatigue in some of the passages, can still appear. This is an improvement compared to 2016 when my forearm would always feel quite tired after playing it.

The main thing that helped me remove fatigue is the combination of whole-body relaxation practices with practices to relax my hand and wrist and retaining this feeling while pressing keys. To play this Etude at my most comfortable I need to feel grounded sitting on the chair, avoid holding my breath or breathing shallowly, and generally just work on releasing tension from my whole body (my shoulders seem to become stiff if my neck and back are too contracted, for example). This is typically what fails in correlation with my anxiety, self-consciousness, or lack of focus.

I sometimes feel like I am telling my hand to feel like there are no wide intervals involved at all; that it can continue resting in a relaxed, closed position regardless of what the intervals are, and that my wrist/arm just sort of move my hand as much as is needed to get to the next key without having to reach out with a finger sideways, while retaining this feeling. Succeeding with this makes it feel comfortable to use Chopin’s fingering 1-2-4-5 in bar 31, where I previously felt forced to use 1-2-3-5 (which creates a noticeable feeling of strain in my hand). If I am not as relaxed as I need to be the passage can sound uneven with Chopin’s fingering, but I still prefer to use it since it feels more comfortable, and the risk of mistakes if I become too tense is not really different to any other passage in the Etude, for that matter.

An unexpected source of problems in my right arm has been stiffness in my left hand, wrist and shoulder when playing the octave melody. It seems as if this tension spreads up into my body and affects my entire posture, creating tension in the right arm too. Successfully improving this can surprisingly enough improve the comfort and accuracy of my right hand.

5.2.2 No. 2 in a minor

I find that the 2nd Etude’s pattern of rapid chromatic scales played using fingers 3, 4 and 5 with a chord played on each beat using fingers 1 and 2 is extremely unforgiving to even slight increases in tension anywhere in my body, and particularly my fingers and wrists. While I can force myself to the end of No. 1 even when feeling tense, No. 2 simply falls apart in the same circumstances, and I still find it difficult to play in Chopin’s indicated tempo of 144 bpm. One curious aspect of this Etude is that on the rare days where I could find my most relaxed technique, it sort of almost just played itself fairly comfortably, while on days where I experienced more tension, it could become impossible to not completely stumble and have to restart somewhere.
For this reason, this Etude has been one of my main laboratories for experimenting with technique – if something does not help me play this Etude more comfortably, accurately, and quicker, I have not considered it a useful idea. I have avoided cheats such as leaving out some notes from the chords or taking some of the right hand’s notes with the left hand since my right hand can reach everything and I feel that the whole point of the Etude is to figure out the technique needed to play it as Chopin wrote it. When recording takes, I tended to drop some of the notes of the chords, but this was because of tension in my hand hindering my fingers from moving freely, not intentional cheating.

I struggled for a long time with a noticeable build-up of tension in the muscles of fingers 3-4-5 but could eventually improve this to the point that the tension I can feel at the end of the Etude is usually fairly slight. The idea that helped me was once again to practice feeling as if the fingers are completely unaware that the next note is some distance away and not tempted to strain and reach out sideways for the next note or chord. Example: I play the first melody note and chord (c-e-a with fingers 1-2-4) trying to retain the feeling the hand has when it is gently hanging relaxed from the wrist with relaxed fingers. When moving to the next note (a sharp played with the 3rd finger), I try to not modify this feeling in my hand and wrist at any point. I feel like I am neither actively trying to use my arm to push my hand sideways, nor am I restricting my arm from moving. The hand sorts of smoothly glides into position over the next note, without tightening the wrist. I also practice keeping the fingers not playing free from tension (there is often tension around the thumb or the knuckle of my 2nd finger).

These things have typically started failing when I have been nervous or unfocused and have often needed some repair work after doing one or two takes. As usual, I find that all of this needs to happen within the context of my body feeling as one connected entity that feels calm, grounded and supported by the chair, without me mentally dividing it up into different parts that I try to control.

Like in No. 1, one unexpected source of struggles in my right hand was tension in my left hand and wrist while playing the easy accompaniment. If I practiced improving the coordination of my left hand, I would sometimes go from an uneven and easily fumbled right hand to something I was fairly happy with. Getting a relaxed left hand still requires active concentration from me, and when recording takes, this was difficult to achieve.

5.2.3 No. 3 in E major

The third Etude focuses on polyphonic playing, double notes and chords. The piece starts with an upper melody voice and an accompanying voice both played by the right hand. This is a typical example of where I have not been able to connect the idea bringing out the melody by distributing weight to the different fingers to an experience in my body that brings out the melody without me feeling tense and uncomfortable.
When I first learned this Etude, I had strong tendencies to clench muscles in my arm when trying to play expressively in the outer sections, so this required a lot of work to iron out, but by the time I was recording takes it felt fairly comfortable to play these sections. To become more comfortable, I did the same things as when practicing No. 1 and No. 2, trying to “just play” what I want to hear without thinking about “how” it is done.

The con bravura section in bars 46–54, with sixths that are played with the fingering 2–5, 1–3, 1–3, 2–5, could feel straining in the past, but working as described earlier made this part feel more comfortable. When recording takes, I could sometimes still feel slightly tense when playing this section.

5.2.4 No. 4 in c sharp minor

I originally learned this Etude back in 2011 when I was quite tense but could still “force” myself through it even though my forearms became tired and tight. Probably for this reason there have been many particularly stubborn habits of tension that I have had to unlearn before I could play it without fatigue, and there are many spots that can easily feel slightly awkward that still need further ironing. Sadly, during some of the takes, some old habits would pop up again even if I had felt rather comfortable doing practice run throughs before. While this did not fatigue me, it made me feel a bit uncomfortable and clumsy, resulting in some unevenness or mistakes.

I have again avoided cheats like playing the quarter note in the right hand’s lower voice in bars 27–28 with the left hand. I find that if I can stay relaxed enough the passage is playable with the original hand distribution, though I understand that this exposes me to increased risk of messing this part up or playing it unevenly, which happened in some takes. Since Chopin notated the passage with the more difficult hand distribution and could easily have done otherwise, I feel it was his intention to make you develop the technique needed to securely play the passage as written.

5.2.5 No. 5 in G flat major

This Etude, where the right hand plays exclusively on the black keys, has had an annoying habit of feeling fairly secure to play for periods of time (at least compared to some of the others) only to occasionally deteriorate and requiring a lot of work to get back on track again. When experimenting with trying to consciously rotate my forearm to play it, I could not find a way to make that way of practicing more beneficial than just practicing the way I have already described. One tension pattern in my finger and wrist extensors that occasionally appears comes from my days of trying to play with a flatter hand and/or fingers. Another one seems to come from trying to stretch certain...
fingers sideways or into the piano to reach the next note, tightening my fingers and wrist, instead of letting myself move my entire hand.

5.2.6 No. 6 in e flat minor
This Etude focuses on polyphonic playing, legato and orchestrating multiple voices. Despite it being “easy” to press the right keys in the right tempo, it is has still had very ingrained tense habits that have blocked me from getting the musical results I want. Examples include attempts to play it with finger movements from the knuckle, putting pressure on my fingers and stiffening my wrists when trying to figure out how to use weight, trying to have firm fingers, and positioning my fingers, hands and arms in various artificial ways.

5.2.7 No. 7 in C major
This Etude has been one of the most difficult for me to eliminate fatigue from. For some reason, I could often feel all right until the recapitulation, and then feel a noticeable build-up of tension during the last page. Working on not stretching out my fingers to reach notes but letting the most relaxed feeling in my hand and wrist determine its position for each double note, practicing not disturbing this feeling when moving the hand to each subsequent position helped me improve this a great deal, but as with everything, the issue is not completely eradicated from every playthrough. On certain takes I did not find my technique during the first few lines, making them sound clumsier before I found something more comfortable.

5.2.8 No. 8 in F major
This Etude suffered a lot from the deterioration of my technique when trying to use my arm again in 2017/2018 and has not entirely recovered. I remember passing the hand over the thumb in both directions feeling fairly smooth in 2016, but that this got bumpier and rougher when I acquired new bad habits. The Etude can still oscillate between feeling more comfortable, and a bit forced and rough during certain passages, which was noticeable in some takes. One issue for me when passing over the thumb is perhaps not only tension in the thumb itself but stiffening and reaching out with the other fingers as they are being moved to their new position on the keyboard.

5.2.9 No. 9 in f minor
This Etude has felt fairly straightforward to play during takes, though as with every Etude, there is still tension I need to eliminate, and takes where my mind would drift tended to be worse. I believe the biggest issues with tension have been clenching muscles in my right arm when trying to play the melody expressively, especially in the octaves, and from trying to intentionally hold my right hand in a certain position. In the left hand, there has been issues with
tension which I believe comes from old habits of trying to hold my fingers uncurled, since the widespread figures can encourage these tendencies.

5.2.10 No. 10 in A flat major
This Etude has been my least favourite to practice and was probably the one where I most often failed to focus on what I was doing physically. This has likely made results more inconsistent in this one than many of the others, particularly when recording. I recall a number of takes where I felt all right until I reached this Etude, which ended up being a bit forcefully played with tightness as a result. My understanding is that it is typically the same issue of me reaching out with my fingers into the piano and stiffening my extensors, combined with me contracting my body and losing my grounding, which I compensate for by pressing down forcefully with my forearm, instead of having my hand in a relaxed shape and repositioning it accordingly.

5.2.11 No. 11 in E flat major
While not necessary the hardest Etude to press the notes in, I found this one to be one of the hardest to learn to play without feeling tight in my forearms or even my hands hurting. In many takes I often felt that tension was within acceptable limits until I reached either No. 10 or this Etude, during which I could lose control over my technique and feel too tight afterwards. I perceive this problem to be caused by habits of spreading out or uncurling my fingers in anticipation of the wide intervals, stiffening my finger extensors and wrists. I also noticed a strong habit to stiffen my 2nd finger when it was not in use. If I could keep the non-playing fingers relaxed and avoid the feeling that I was reaching out for the next note with my finger, trying to retain the feeling I have when my fingers and hand are relaxed, the Etude felt more comfortable to play. Part of the reason I selected take 9 was because I did all right with this in that take.

5.2.12 No. 12 in c minor
Despite my left hand and forearm seeming less chronically tense overall, I have had more troubles with fatigue and lack of coordination in them than in my right. I seem to have rather strong reflexes to spread my fingers apart, tensing them, and reach for nearby keys instead of moving my hand, even when it might seem obvious that it is unnecessary such as when playing the very first note of the left hand. I also have a stronger tendency to tense my wrist extensors and “hold up” my hand. I was able to improve these habits until I could play the Etude without fatigue, but there is much room for improvement.
6 Results

6.1 Changes to my technique

It is difficult to quantify what results I have achieved. While I have had practice sessions that have felt fairly comfortable and free from tightness, which is a significant improvement, the results are still inconsistent depending on if I can be focused enough to succeed doing the right things, if I am playing older or more difficult pieces, or my daily form. Regardless of where I fall on this spectrum on a given day, I have not achieved the goal I want, which is to be able to always play for many hours a day while always feeling at ease and tension free. The work continues to be a game of whack-a-mole with the issues listed in section 0, but I would say that most issues have improved a lot, and that overall, there has been a significant reduction of tension in my playing since I started making progress.

Fatigue from playing the Etudes has been significantly reduced and I typically do not feel tired in my forearms after playing through the set. At the same time, there is still too much tension for my liking, particularly when I feel unfocused, under pressure or not in good form. My body seems to be weaving in and out of old and new habits depending on a variety of factors, and pockets of increased tension and momentary fatigue can still appear, especially on heavy or stiff keyboards. If my most comfortable playing was my baseline that I was trying to improve rather than my best, I would be pretty happy with where I am at even if it is still far from perfect.

My understanding of what still affects me the most are some of my earliest bad habits – these seem to be the most stubborn ones that I spend the most time fighting in the practice room. This includes actively uncurling my fingers a bit (from trying to avoid having too curled fingers) and reaching out for notes, stiffening the finger extensors, as well as a habit of tightening the top of my wrist, actively holding up my hands instead of leaving them alone. All of this makes my fingers feel weaker, which I tend to compensate for by forcefully pushing down with my arm, creating further tension. Together with this, chronic tension, tendencies to contract my body, breathing in a restricted way (though it is difficult to say what comes first, tense arms or tense breathing?) and getting locked in my head, becoming preoccupied with just my arms and hands, forgetting to practice feeling connected through my whole body also seem to contribute to my problems.

Joline was much faster and more successful than I at making her playing feel comfortable again using the same set of ideas as a starting point. One year after we had started experimenting, she was able to play pieces with loud chords without pain again. She also found that taking some Alexander Technique lessons helped her. When preparing her master’s exam recital around three years after we started working, where she played Bach/Busoni’s Chaconne in d-minor, Nielsen’s Chaconne op. 32, Poulenc’s Thème Varié and Mendelssohn’s Variations Sérieuses op. 54, she could practise as much as she wanted without suffering from pain or physical issues. She says that
this does not mean she is always free from tension or discomfort. If she is dealing with too much stress or cannot do things that keep her relaxed, such as regular exercise, she can get tense, particularly in her neck and shoulders.

6.2 Conclusions

Reseaching the piano technique literature, I learned that playing should not cause pain, discomfort, or injury, should feel easy, effortless, and secure and that the whole body should ideally be free from tension while playing. I, on the other hand, had many issues with aches, discomfort, clumsiness, and both chronic and playing related patterns of tension in every part of my body. I initially found it nearly impossible to find a set of instructions on what I needed to do to fix my technique that I could successfully understand and implement. I therefore kept working and cobbling together a collection of ideas, practices, and exercises that I now use for a lack of better solutions.

I learned early on that learning to release tension from my body did not automatically fix the problems in my technique, but I still found that reducing tension in my whole body was essential for me to play more comfortably. I also learned that bad posture or alignment of hands and arms can be caused by tension and improved by releasing tension. Trying to correct my posture and hand position by trying to hold body parts in different alignments created even more tension and established many bad habits that affect my playing negatively. I noticed that focusing on local problems with tension was often counterproductive, and that many problems were easier to improve by working on calming myself down and relaxing my whole body, practicing feeling it as one connected whole and saying “stop” to everything I was actively doing instead of focusing my awareness on just one part that I wanted to control or fix. I found that many of my tense habits seemed to be linked to stress and being up in my head and worrying, and that trying to fix tension only through physical practices seemed to be a losing battle if I ignored what was going on in me mentally and emotionally. The practices I found the most helpful for working on these things was the Alexander Technique, Qigong, mindfulness, exercise and working on issues with stress, anxiety and so on.

When working on changing my playing technique, I found that trying to follow analyses of what individual body parts should be doing tended to lock me in my head and make me preoccupied with specific parts of my body, pulling me out of feeling grounded and connected throughout my body and increasing tension. I was also never able to connect the commonly used idea of using arm weight to any experience in my body that helped my technique. I found more success by working on releasing tension from both my body and my hands and fingers, breathing so that I felt more peaceful and grounded and then trying to maintain this state while trying to use my hands in a way that felt natural, like when I take hold of an object I want without thinking too much about what I was actually doing, and trusting that my body could find more comfortable movements for me while I did so. Working in this way showed me that it was indeed possible to play even more difficult passages and pieces while feeling fairly comfortable physically.
7 Discussion

7.1 Why obsess so much over technique?

I find that having to concentrate on my technique and worry about my body cooperating and moving safely is rather boring and steals mental energy and focus I would rather spend working on musical ideas. Giving up playing instead of continuing to struggle for so many years might seem like a better idea, but that has just never felt like an option. When I first experienced pain and later loss of control all that I wanted to do was to be able to play without issues as much as I wanted again. There is also a lot of music I want to play that is still outside my technical abilities. The only solution I can see is therefore to figure out how I can play more comfortably and safely.

I have been told that I seem too perfectionistic with my ambitions. Does not everyone suffer from some tension? While I agree to some extent, I also have to ask – how am I supposed to play all the Chopin Etudes comfortably if I accept a level of tension in my body that hinders me from doing so? It seems sensible to me to at least try to reach my ideal, and let life decide where my limits ultimately are.

I believe that understanding technique is as important as understanding the grammar of phrasing and harmony, musical architecture, style, developing emotional intelligence, and everything else that goes into a moving musical performance. Without good technique, one risks spending years struggling with control, becoming unnecessarily limited in what kind of repertoire one plays, or experiencing discomfort, pain or even injury – what I have done, in other words. The years of misery I experienced when something I loved became a source of pain and struggle are not something I wish upon anyone.

7.2 Thoughts on why I struggle

Apart from the obvious answer, which is that I have not found an approach to technique that I could understand and/or implement practically and have had to make do with what I have been able to cobble together myself, I can see a few more reasons why I struggle. Firstly, I have accumulated so many layers of tension and bad habits that it is simply very difficult to undo it all again. It also seems like certain aspects of my personality and emotional life tend to contribute additional tension. I am also not good at organizing my practice sessions around maximizing progress with the tools I have, while at the same time I prefer practicing for far longer durations than I can focus on finding more comfortable movements. In general, I feel that a lack of a plan or knowledge around tackling such a complex problem as retraining my technique has been a big issue, especially in the beginning when I was just completely lost, often leading to me making things worse for myself before making things better. I do not think any of the things mentioned are set in stone and unchangeable however, so I see no reason to not keep trying.
Another challenge was structuring my practice around the days I recorded. On the one hand, I felt I needed to practice the set slowly before recording to make sure everything was in order, but at the same time this would drain my mental focus making me less able to concentrate on my technique when recording. If I on the other hand tried to record without practicing everything, I would more often find myself being taken by surprise by my body activating older habits in some Etudes. I think the answer is that I should not have tried to record something that was such a stretch outside my comfort zone.

I find it interesting that both me and Joline independently of each other added such a similar set of issues to our techniques when we first searched for advice to solve our issues with pain, while at the same time, she improved much faster using the ideas we experimented with than I did. One reason might be that the filter of our own intuition and experiences makes us understand and work with our own bodies differently, she being more talented than I. Another might be that she had a more relaxed technical foundation and practices in a much more organized manner than me.

### 7.3 Future research

Since I am far from reaching my goal of total comfort, ease and relaxation I want to continue exploring how I can improve my technique. I feel no need to become a virtuoso who plays Godowsky’s *Studies after Chopin* or *Islamey* or the hardest Liszt pieces, but I know that Cortot used to play a programme with Chopin’s 24 Etudes Op. 10 and Op. 25 and 24 Préludes Op. 28, and since I love these pieces, this is something I would love to be able to do. More than anything however, I want to be able to trust that my body habitually chooses safe movements so that I do not have to worry about my technique anymore and can just focus on making music, which is what I actually like doing.

If I reach that goal one day, I think it would almost be my duty to try to help other pianists who experience similar struggles. Though some of the things I have written about seem to have helped both me and a fellow pianist to at least some degree, I feel that I need to actually know what I am talking about and fully practice what I preach before I try to teach anyone anything.

I think I should focus on studying some easier music than the Chopin Etudes after this thesis. I noticed that during the periods I took a break from them, I still made progress with increased comfort, some of which I could transfer over to the Etudes the next time I worked on them. At the same time, it feels like studying the Etudes has made my old repertoire feel easier by comparison. My concern is mainly if it is physically safe long-term to work on the Etudes when I know that my coordination is still too tense.

Since I have been playing with layers upon layers of tension for such a long time, I have my doubts that I will ever attain a completely tension-free technique. However, it seems clear that all improvements I can make help me play the piano more musically and with less technical and physical issues and more pleasure. I feel that fact alone has made my sometimes extremely frustrating foray into trying to fix my technique worthwhile.
8 References


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### 8.1 Internet sources


### 8.2 Multimedia