

## Keys to systematic exploration - a pianist's perspective

*Christina Kobb*



Norwegian pianist Christina Kobb studied piano and pedagogy at the Norwegian Academy of Music (NMH) before she shifted her focus to historical performance practices. After further studies in Germany, the Netherlands and the US, her doctoral research at NMH on 19<sup>th</sup> century piano playing was featured in the New York Times in 2015. She has also presented her work at the Ira F. Brilliant Center for Beethoven Studies in California and at Harvard University. In 2013, Christina was appointed Head of Theory at Barratt Due Institute of Music in Oslo, but left the position to pursue performance and research. Currently, she teaches occasionally at the Norwegian Academy of Music and is co-founder and editor of the Open Access journal *Music + Practice* ([www.musicandpractice.org](http://www.musicandpractice.org))

*Piano playing is my practice. As with many artistic practices, it is supposed to be creative, intuitive, touching, virtuosic and mind-blowing. Nevertheless, routine, boredom, frustration and lack of initiative may threaten musical practices, too. That is, if we forget to explore.*

### **The explorative state**

I love the explorative state of mind! I regard exploration in any practice as integral both to continued development and continued excitement. I like to think of a practice as an ecology of many constituents or actions; on the physical, mental and emotional level respectively. As I am highly motivated to improve my performance, I work regularly on developing all three levels *plus* the interaction between them. I actually practise aligning these levels to each other, actively conditioning myself for an explorative state of mind and being.

I like to think of a practice as an ecology of many constituents or actions; on the physical, mental and emotional level respectively. When they are all engaged in purposeful exploration we are in an explorative state of being.

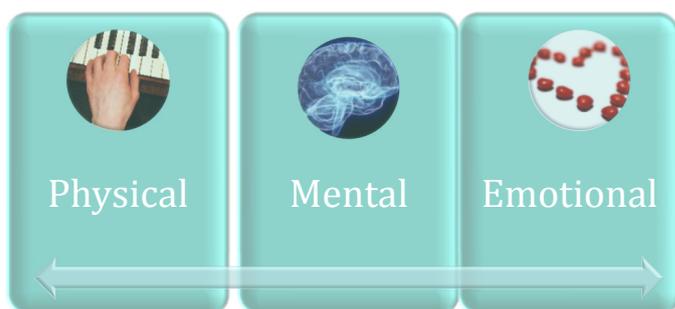
On each level, “renewal of cells” is part of the process, just like everything in nature is in constant growth and adaptation. Have you noticed how even dead branches block the sun? Similarly, removing that which is already dead, redundant or even toxic is vital to secure growth in a practice. And steady growth is, in turn, achieved by channeling all of our efforts - physically, mentally and emotionally - in the same direction.

I would argue that exploration requires planning and conscious decisions. You may stumble on an idea of how to explore something, but once you decide to pursue it, a strategy is vital. The physical level of a practice is usually the best place to start, as it is relatively easy to inspect and adjust. The constituents of the mental condition (cognitive activity) may be a little harder to grasp and that of the emotional level even less tangible. Nevertheless, I keep exploring and will share some of my experience here.

## Understanding your own practice

Paradoxically, we may possess a great skill, yet be unaware of how to explain it. When deeply ingrained in our habits, we can perform complex tasks without conscious knowledge of which body parts does what, and why. We just *know*, we don't know *how*! But if you are to teach well, you must really know your practice. And if you are to teach yourself a new path, you should know which one you are already on.

Reduced to its most basic element, the core question of piano playing is: How should the keys be pressed down to the best effect? And, further: How can I improve my physical, mental and emotional “key pressing skills”?



**Figure 1:** The practice of piano playing depends, like most practices, on the physical, mental and emotional level.

My approach was a historical exploration, attempting to reconstruct the piano technique of the early 19<sup>th</sup> century. I identified all the elements of piano playing described in 200 years old German and Viennese treatises, taught myself the approach and studied the changes in the music. During this process, I developed a strategy for systematic exploration (see below), which may be useful also in other areas.

In this video, you will get a sense of how I worked to relearn piano playing:



<https://www.youtube.com/watch?v=INh84SP6DiA>

## Improvement potential and interdependency

Activities that depend on physical execution, like any sport or playing any musical instrument does, consist of a number of coordinated movements. I regard these as a “set of actions”.<sup>1</sup> There are many possible combinations of arm, hand, leg and foot movements, but at the same time, our physical body sets limitations. For instance, when operating a piano (or any machine), not any hand motion is possible, or expedient, in

combination with any arm motion; the actions have a high degree of interdependence.<sup>2</sup> Hence, the number of basic actions - and combinations of actions - are manageable. Despite the seeming “magic” of a great pianist or sports champion, the complexity of the physical actions is not beyond comprehension; the execution relies on a basic “set of interdependent actions”.

We need to understand how the interdependence of actions affects the learning process: Firstly, since we usually learn a skill as a whole, it is often hard to pin down specific weak spots. If it works “just fine” as it is, it could be hard for some to find the motivation to take it from “fine” to “excellent” by looking for actions to improve. Further, since you can hardly change one action without upsetting the system, more adjustments are usually required if one element is altered. Conversely, the interdependency may cover up some less than ideal actions - and thus conceal the improvement potential.



**Figure 2:** Imagine the “set of interdependent actions” like cogwheels of your practice.

### Strategy for systematic exploration

I like to define the “set of interdependent actions” (or constituents) on the physical, mental and emotional level respectively. Then, I inspect each action, gain an understanding of its overall function, and explore its *improvement potential* in enhancing the practice as a whole. I construct different exercises to practice better ways of executing each action, constituent, transition or sequence. This approach gives me insight about *why* something - big or small - works or does not work. Hence, it allows me to improve my performance, instead of just “hoping I will get better with time”.

My motivation for changing anything at all was that I was simply not happy with the way I played the piano. I figured that to change the sound that was coming out of the piano, I would have to change the sound-creating impulses going into the piano. Here are the various steps, in detail, and some advice for your own exploration:

**Editor:** Is Christina's approach to systematic exploration for improved performance applicable to other practices where perfection in performance is being sought?

- Create a beneficial environment for the exploration process (set aside the time and resources you are willing to invest)
- Break down the matter (the system of operation) into its smallest possible constituents or actions. You may start with the larger actions and become more detailed as you work.
- Isolate and inspect them one by one. Understand the function of each part and how they work together (like you would if taking any motor or apparatus apart).
- Explore the *improvement potential* of each constituent/action, with the goal of enhancing overall performance. Do *not* attempt altering one constituent/action without having understood its function in the whole.

- As you work on *one* constituent/action at a time, observe how various changes affect the system. In fact, a change usually brings an imbalance in the system, which needs to be absorbed by some other action. This may make things worse, or better!
- Explore, experiment, immerse yourself in the various options, considering the operation of the whole from the angle of each constituent/action systematically.
- Explore as many possible combinations as possible (good *and* bad ones), as this will deepen your understanding of how the system operates as a whole. Besides, you might stumble on some good combinations your logic would not have foreseen.
- **To change may mean to add something or to subtract something. Keep both options in mind when it comes to optimizing your practice.**
- Be willing to refuse an idea!! A new idea is not always a good idea - run a relevant test and use your good judgement. Do not change without purpose.
- Pay attention to and develop the more promising combinations, exploring the various options on relevant material.

About halfway into the process, you are ready to set a clear goal for your work. At this point, you know more about the options, and how to make good choices, than at the beginning of the exploration.

Keep in mind that when you change something, your body and mind may resist even excellent changes at first, simply because you are not used to them. If you consider making a change that feels odd, just give it a test period, and keep track of how it develops for a few days or weeks before you decide. Sometimes, there is more than one feasible solution. If so, study how each of them affects the outcome - and decide which outcome you find more desirable. In the proofing, also make sure that the option you choose does not come with any unwanted side-effects.

- Don't mess up more than you're willing to tidy up. Any phase of the exploration process should end with an (intermediate) decision; the three main outcomes being 1) accept 2) decline 3) continue exploration. You may also need the category 'alternative option' (i.e. define the action as not a part of your default system, but useful on certain occasions).
- When you have decided on any new/improved actions or constituents in your system, isolate them once more and construct several exercises for yourself to practice the new elements - and any transitions between old and new elements - specifically. Isolation will keep the "autopilot" from your old system from kicking in.
- Decide on a "proto type" for your system and run tests on relevant material! Adjust where needed. Going back and forth between the actions in your system and the material on which they should operate, is a vital part of creating a successful system. Return to earlier steps whenever necessary.
- Endure the initial discomfort and vulnerability of establishing new habits.
- Keep the overall goal in mind.
- Allow yourself some time to solidify your new/renewed "set of interdependent actions" without excessive strain.

A successful exploration process should result in a “default manner of operation” which is stable, reliable, satisfactory, well-functioning. Yet, the “refinement” period afterwards may be endless (at least in my practice), in perfecting the execution in all situations. For instance, I still work on sitting upright like a baby, keeping my neck straight and body relaxed.



Perhaps you find this strategy too rigid, but the force of rigidity is needed to confront our intuitive reaction, and challenge our current thought and perception. But rigidity may not last forever. Much like you use exact measures of butter, milk and flour to make a dough, and rigid baking molds to keep the goodies in shape in the oven, afterwards, it stays in shape without braces!

**Figure 3:** Frédéric Chopin at the piano. Silhouette by F. Phillip.

### **Exploring improvement potential on the mental level**

The increased awareness on the physical level gave me some hope that I might be able to increase my performance on the mental level, too. Without going into too much musical detail, here is an outline of how I work on the mental level.

**DEVELOP A CLEAR VISION:** I practise the various “tracks” of representation in my mind; I see, hear, feel and touch the music without touching the piano. I envision how my hands move perfectly while I “listen” to the sound of the music as I “see” my fingers press down the keys. Often, I add a track of intellectual information, like chord progressions or patterns in various parts, and formal development. I create a unity of the auditory, visual, kinaesthetic faculties in my mind. Any discrepancy between them must be sorted out. When I do this, mistakes are usually ruled out before they solidify in my memory or even reach my fingers.<sup>4</sup> I practise feeling at ease - and feeling whatever emotion the music contains - as soon as the basic cognitive work is fine. I do all of this over and over with each piece of music, systematically adding “tracks” and layers to the complete picture. I deliberately design the desired result in my explorative state of mind until it becomes my state of being when I perform the music.

### **Exploring improvement potential on the emotional level**

Despite all this talk about technicalities and systematic exploration of piano playing, my honest opinion is that music, first and foremost, is about transmitting and sharing human experience on the emotional level. For this reason, I explore how I better can connect with both the emotional content of the music and with the audience. In the old days, people said that music was the language of the heart. Nowadays, classical music has sadly become more sterile, perhaps due to the recording industry and the many competitions for young musicians. Emanuel Bach, one of the sons of Johann Sebastian, wrote a gem of a piece of advice in his piano treatise of 1753:

*A musician cannot move others unless he too is moved. He must of necessity feel all of the affects that he hopes to arouse in his audience, for the revealing of his own humour will stimulate a like humour in the listener.*<sup>5</sup>

I think the most important way to advance the emotional state of being while playing is to *actually feel* the music - first in the practice room and then by daring to share the feelings with the audience. I take Emanuel Bach's advice and actively practice feeling the various emotions in the music. When practicing a happy piece, I practice feeling happy until I laugh! In a dark piece, I sometimes practice feeling the heaviness until I actually cry while playing through the piece at home, all by myself. In my experience, this embeds the emotions deeply in a piece and makes it easier to portray it confidently and convincingly when on stage.

On a side note, I have one great tip for any hint of performance anxiety (the topic as such must wait for another time): Stay happy. Do whatever you need to keep your mood up. I ignored this fact for way too long. It is very hard to be happy and scared at the same time. Make happiness win!!



### **Overcoming doubt**

Emotional threats may indeed be the hardest to overcome once you reach the point where you have settled on changes to be made. Doubt, fear and discomfort are likely to hit hard during a process of change. All of a sudden, it feels tempting to return to “business as usual” and forget about your potential. Despite all the exploration work, it just feels more comfortable where you used to be!

This is especially true if the change includes a major goal which, potentially, may bring you to a new level. I am in this position now, as I unexpectedly got the chance of presenting a solo recital at Carnegie Hall, New York, demonstrating to the world how my favourite music sounds when applying my reconstructed 19<sup>th</sup>-century technique. Honestly, although I have always wanted to play the piano, I never even dreamed of anything like this!

How do I prepare? I figured that I needed to practise feeling comfortable in my *new realm of ambition*, both physically, mentally and emotionally. On the physical level, I deliberately practise feeling at ease with my “new” technique at all times. Further, I work as I described above (Develop a Clear Vision). Still, I did not trust that this would be quite enough to get me where I needed to be. I felt too hesitant, too doubtful and too careful to tackle the positive changes in my life! How could I teach myself to embrace the new opportunities and throw myself into the unknown? I explored a parallel orbit.

**ESTABLISH A PARALLEL ORBIT:** I decided to challenge my weaknesses of hesitancy and doubt in a completely different environment than music. It had to be an area that was not likely to affect my piano performance if I failed. Personally, I love the sea and I live close by, so I went for open water swimming. The downsides were that I was in bad shape, I get cold very easily and I had no one to partner with. I felt only half competent and half motivated. My analytic brain was shouting loud about the obstacles, and forgot about potential payoffs. In other words, it was indeed quite a perfect parallel orbit.

### **How my parallel orbit worked out**

I started swimming on 8 June and kept going at an average of 5 times a week until mid-October. The temperature fluctuated between ca 13 and 21 °C.<sup>6</sup> I would usually dread to go, and perhaps postpone my swim for a few hours before I finally confronted the waves and endured the initial cold. Then, I LOVED it, no matter the weather conditions. At first, I would just go for a dip, but when my shape improved, I enjoyed longer swims. And I really enjoyed being in the water! Why had I been hesitant?! After swimming for 20 min in 13 °C I felt like a crocodile!! (That is, until my teeth started chattering a little later...). In the back of my mind, the thought of the all-levels open water swim race of in the end of August kept playing. Could I make it? 10 days prior to the 2500 m race, I had still not been able to swim 1000 m without having to rest. But *one week before*, I found the ‘flow’! I had adjusted my technique and I was finally in shape to swim several stretches of 1000 m during the final week. I felt comfortable and strong in the water. On the evening of the race, I went to the island in Oslo on my own, without telling anyone...so no one but strangers would notice if I failed. The weather was less than ideal; 18 °C in the air, 18 °C in the water, and quite windy. Here is a photo from the race:



It felt like forever to swim around that island!! Towards the end, the waves got bigger and forced salty water down my throat as I battled against them with every stroke. But despite being cold and tired, I actually had the strength to finish! I had swum 2500 m in one stretch for the first time in my life - without drowning or freezing to death! It took a good 1h18min to finish fourth to last, but I would do it again. And I clicked “save” on my mental hard disk for the feeling of flow and resilience.

### Conclusions

In the process of exploring improvement potential of all aspects of my practice, the illustration I presented in Figure 1 now seems much too simple and orderly. The fascinating complexity is perhaps better imagined like this:



**Figure 2** Multiple, partially overlapping orbits on the physical, mental and emotional levels.

Both our physical habits and thought patterns become firmly established over time, by many repetitions. I explore to improve my learning strategies and deepen my understanding of my own practice. I explore to enhance creativity and productivity, to stay curious and refine my performance. I like to think of all sorts of habits and patterns as orbits around a core idea like the planets orbit a star. When our thoughts, actions and emotions gravitate around an idea, we accept certain elements and decline others - consciously or less so. It is like a constant “ecology of orbits”, where a repeat of action maintains an existing orbit, but more force is needed to create a new one. As is well-know, our tendency is to gravitate towards familiar patterns. But to explore unknown territory, we have to leave the well-known! To create new orbits physically, mentally and

emotionally, we must dare to disrupt the gravitational balance and command ourselves to change the course. This is the reason we need some rigidity, and also the willpower and discipline to follow through.

But how can you be sure that the unknown territory is in fact better than the well-known? Or that new orbits will be better? You cannot. You have to accept the risk. However, there is nothing wrong with carefully considering whether a major change is worth the risk, time and effort involved. If you find yourself in a place where doubt and discomfort threaten to drag you back to your ordinary orbit after you have decided to make a change, the resistance you feel may decrease if you approach it simply as an allowance to explore an alternative route rather than allowing your mind to be scared of the future.

To summarize, here are my keys to systematic exploration:

- An explorative state of mind, leading to an explorative state of being
- Motivation and willingness to change or improve
- Time and resources according to the ambition of the work ahead
- A clear image of the “set of interdependent actions” of your practice
- A plan for strategic and systematic exploration of your improvement potential
- Immersion in exploration for a period of time, followed by (tentative) decisions
- A clear image of the desired outcome (see, hear and feel inside)
- A “parallel orbit” to attack your weaknesses from a different angle
- Permission from yourself to explore new orbits
- Discipline to carry through (To stay motivated, keep track of how far you have come and keep your goal in mind! And do stay happy!)
- Patience! A seed takes time to grow. Keep “watering” and watch your improved practice unfold from your new state of being!
- Share your experience! This is helpful for yourself and inspiring to others.

I would be fascinated to know if the strategy I have shared in my own practice is used by others in their contexts for practice. Please let me know - Happy exploring!

### Postscript

The swim race was truly something out of my ordinary orbits. You see, not even my one and baby sister, who knows me very well, believed my swim story before I proved it with photos and official lists! Oh, well. Now I use the swimming experience to support my new found piano ambitions. Maybe it is



sort of banal, but my body, mind and emotions now know how to conquer new territory and thrive in new orbits. Will I be thinking of swimming during my Carnegie Hall recital? I will have to tell you later!

**Editor :** You can find out more about Christina, her research and her playing by visiting her website <http://www.fortepiano.no/en/welcome/>

## Image sources

Figure 2:

[http://www.imcberlin.de/fileadmin/Public/Downloads/Application\\_notes/Zahnraeder\\_01.jpg](http://www.imcberlin.de/fileadmin/Public/Downloads/Application_notes/Zahnraeder_01.jpg)

Figure 3: «Orbits» by BrotherNumsi, manipulated and reworked by Christina Kobb.

## End Notes

<sup>1</sup> I share Theodore Schatzki's postulate that "a practice is, first, a *set of actions*". (Schatzki: 'Practice mind-ed order', in Theodore R. Schatzki, Karin Knorr Cetina and Eike von Savigny (ed.): *The practice turn in Contemporary Theory* (Routledge, 2001), p. 48). However, my focus is in more minute than his, as I like to dissect each activity of a practice into their respective set of actions, whereas Schatzki's take is more general; he looks at the establishing of social order, or by seeing practices as consisting of many general actions: "A practice is, first, a *set of actions*. For instance, farming practices comprise such actions as building fences, harvesting grain, herding sheep, judging weather and paying for supplies". (ibid.)

2 One example is elbow position vs. angle of the hand and, consequently, fingering, discussed in my video above.

3 A physical activity is the easiest, but you may also explore a cognitive task, or even a production process in a similar way. Or what about exploring improvement potential for family gatherings...? The purpose is to consider the various elements of the activity, process or interaction involved, and make a conscious effort to improve crucial points; thereby increasing the odds for a better outcome.

4 There are many promoters of various forms of mental practising, yet I have never come across what I propose here: The conscious combination of the aural, visual and kinaesthetic faculties in mental training, including comparison of these three representations/blueprints of the same material. I have just improved my earlier approaches to this. It is quite advanced and I do not yet master it fully, but it seems promising indeed.

5 C. P. E. Bach: *Versuch über die wahre Art, das Clavier zu spielen* (1753). Cited from Essay on the *True Art of playing Keyboard Instruments*, trans. and ed. William J. Mitchell. New York, 1947.

6 Lower temperatures than ca. 13°C make my hands freezing cold so quickly that I do not risk it because of my piano playing.