

Miika Hyytiäinen about his App „Voice Map“

Berlin 2017

Sarah:

Miika, you are writing your artistic doctoral thesis about the communication between singers and composers. And you are creating an App which analyses voices, to help composers understand their individual qualities. You are a composer and performer yourself.

How did you come to love voice as much as you do?

Miika:

I wrote my first music theatre piece at the age of three. Then and ever after I always worked together with other people to create scenes, songs, narration. Back then in my childhood we built it altogether and I played lots of different key roles: I was the director, the composer, the text writer and I performed as well. My feeling is that I'm doing the same things nowadays, only a bit more professional. I don't work together with the kids from my random neighborhood but with other pros. For some reason I still need music and theatre – especially the voice - to communicate about my opinions or experiences. I cannot express what I really want to say through kissing or beating or having sex with them but I need a catalyser, I need art.

And so I compose. But not just through setting text in pitches or harmonies. I need all aspects of the theatre, with light and motion etcetera.

In the communication between singers and composers I sometimes feel like a therapist. There are so many aspects to take care of and can be misunderstood by one side or the other. For instance, if the composer would say: „Just sing the whole thing without vibrato“, a soprano could feel that the composer wants to eliminate her whole personality. Because singers define their voice a lot through their unique vibrato. They offer you anything in exchange, to sing even about the most intimate things – but they are not easily willing to change a part of their identity itself. From this point of view you understand that it is the simple question of expressing your wishes in the right way. If you don't give orders but invite them to search with you for a specific expression – for instance a „white“, innocent colour instead of „non vibrato“ – it will be less problematic for both sides. Neither composers nor singers are mean or

arrogant people. It's all about communication.

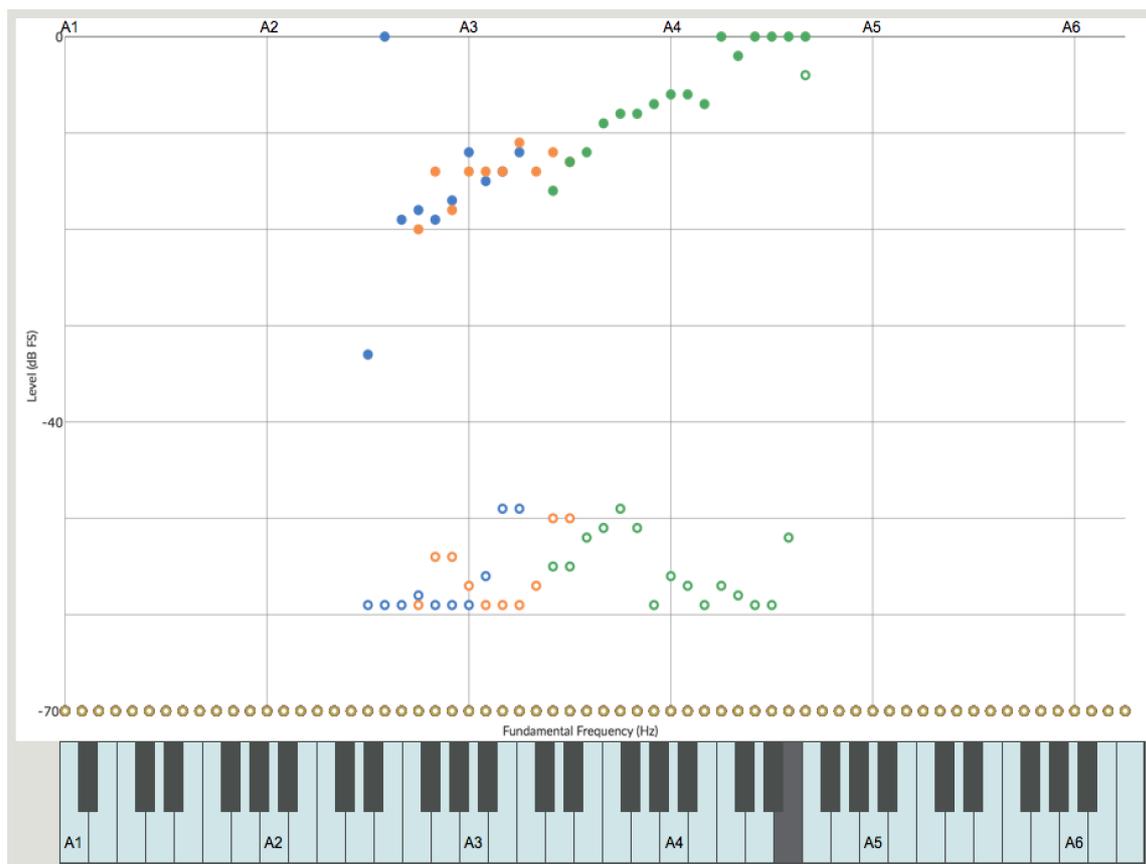
At this moment of classical music history there is a problem. Many young composers can't and don't want to compose for voice and many singers are afraid of composers and new technical demands.

There appeared this historical gap in 1920-1950, the two wars cut the tradition of „classical“ composition and many of the interpreters died or had to emigrate.

But in my opinion the main problem today is a lack of good communication. And to solve a part of this problem I am inventing this App. I call the App and the method Voice Map. I try to create a common language or at least some common ground for singers and composers.

Sarah:

Voice map helps analysing an individual voice in it's different registers with all dynamical options. How does this exactly work?



An example of a Voice Map Analysis for the lowest three areas of a young female singer

I studied mathematics on the side and as a result I am developing this easy, comfortable analysing method. With the Voice Map you can see the possibilities and the different areas of the voice. I call them "areas" although most singers and speech therapists talk about registers. But the term register is very strictly defined (although opinions still differ very much about its definition!). While „area“ is a bit vague and leaves space for us to find out many more different spectrums for each voice. Also I can say that Overtone Singing for me is an area, while I could never call it register. Apparently we can use this term more creatively.

The App also analyses all dynamical possibilities of each voice in its different individual areas.

What I like most about this App is: the composer and the singer have to meet personally before the composition process. In my opinion this is crucial. It's important to NOT compose for a virtual soprano.

One big problem is, that many composers still think: „Soprano?! Ah, that's somehow the high female register. Ok, I'll look up some recordings on youtube of high sopranos. Aha, high c is no problem. And sounds amazing. Well, I'll use it ten times then, and 5 of them are in ppp. Plus lots of Bs and As.“ Then you start writing the piece. You go to a singer in your Academy or you write to your interpreter and ask them: „Can you sing a high c? In pianissimo as well?“ And the singer answers vaguely „Yes, but...“ And the „but“ slipped your mind already. You just finish writing the piece and find out: ouch, the singer of my performance is not able to sing this. At least not in the way I imagined it.

No composers of the past composed their masterpieces without knowing their interpreters very well! Mozart or Rossini would never have written their arias in the way they are if they didn't know the specific strengths, colours, weaknesses of their singers extremely well. Same thing with Aperghis and Berio.

Sarah:

Isn't it more important for composers to first close the gap of knowledge about the Stimmfächer? The term „Stimmfach“ defines general conditions of a specific voice. This term is very important for castings in opera houses or festivals, mainly in Germany (where they have the most opera houses). The fact that many if not most singers are not one distinct Fach but more a Zwischenfach or changing Fächer during their career makes it even more

complicated. For most of the composers the world of Stimmfächer is unknown. Stimmfach is not only Bass, Tenor, Mezzo, Soprano. It includes around 30 different voice types.

(See the german wikipedia <https://de.wikipedia.org/wiki/Stimmfach>)

Understanding the Fächer would mean that they would have to learn a whole bunch of different instruments. This knowledge is not taught systematically at any academy worldwide (as far as I know).

Miika:

I totally agree about this lack. On the practical side I think if you are a composition student it's important to start by knowing ONE voice very well, the voice you want for your composition. And if you are completely familiar with all its aspects – then you can go to the next voice from a similar Fach and find out about the small differences. And after that you can find a voice type which is further away from it. It's a bit like composing a custom tailored piece that also fits many other similar singers. If you learned to create a perfect dress for one person, it will be easier to do the next one for the next person with some amendments – but you already understood the basic skills. Also there will be other voices that are similar enough. Most of the repertoire for voice was once composed for one singer and if the music is good, the others will want to do it too. You can't be too precise, but you can be too vague! If you just write „somehow for any soprano“ it is more like tailoring a potato sack. Any voice can wear it perhaps, but it doesn't fit anyone really nicely.

With Voice Map and it's analysing system you also understand that one voice is always many voices. The passaggi separate one colour and function from the other. In Belcanto you work hard on equalizing all those different areas. But still: Mozart composed Fiordiligi, knowing exactly about the different colours and dynamical changes of all registers! It is important to know all these basics that already Mozart knew about voices in general and his interpreters specifically!

Sarah:

Yes. And from that we can build up and go further to extended techniques and experiment.

How do I have to imagine your App?

Miika:

Voice scientists think voices have more or less 5 registers: low, middle, high, flageolet or falsetto and vocal fry.

Sarah:

Sidenote: Women can't produce a falsetto like men. BUT they are using lots of so called „Whistle Notes“ nowadays – mainly in the Pop-Genre. Mariah Carey, as a famous example, sang up to F7 with them.

Part IV

Miika:

For me it is important that I'm not looking for "the right" answers or right names, but the things that are true for this singer. It should be a starting point for a communication not an answer in a quiz! Maybe they see their voice has seven registers (like overtone singing), or that they have totally different names. He or she decides the names, so that the communication goes smoothly further.

You can see the areas on the app separated with numbers, starting with the lowest pitches as Number One. You can record a voice singing a small scale. Each pitch has to be held for at least 2 seconds. The singer can repeat the scale in different dynamics. Afterwards you can see the pitches as differently coloured dots in the different areas. Empty spot for the most quiet notes, colored for the loudest. Each area has a color of it's own. The colours and the position define the dynamics. All those dots together create a volume curve in decibel.

Voice therapists and academics used a system called Voice Range Profile. I use it as a starting point, but my approach is different: speech therapists use it for defining the healthy functions or the ambitus of their patients. But I'm developing it (as an open source program, so that it is adaptable for developing knowledge) as a communication tool for composers and singers.

Sarah:

I would love to find a tool in that App for analysing different vowels and

formants. Because every Fach has its own areas where vowels work differently. I think that could be very important to study. Vowels plus pitches play a big role not only for the singer's personal comfort but also for the instrumentation.

For instance:

- For light sopranos it can be easier (in certain cases) to cut through instruments in the lower register on e or i – because the frequencies of the singer's formants are higher. It's an acoustical phenomena.
- In the register above A 5 you cannot differentiate very much between the vowels because the fundamental frequency is naturally above the formant's frequency.
- Brass is covering a singer more easily than any other instrument, especially in the middle or low register. Even a soprano in the high register. Because it's sounding in the main frequency and colour spectrum. If you additionally choose the wrong vowel for the singer, you make her/his life (and the possibility to make your piece sound good) even harder.

Those and many more rules are important to study if you use text or any vowels at all in your pieces.

I once used a feedback-tool for formants. You could sing into a microphone and saw on a diagram if you hit the formant, and which of them where and when. Very useful as well for the App probably?

Miika:

Yes, absolutely. But even if we can add this tool: it is clear that there are numerous things which you cannot calculate, analyse and understand with this App. You have to listen, to practise, to talk, to get experienced with live sounds. Music or singing is not pure mathematics, in the end.

Nevertheless I hope the App gives a first common ground for further communication.

With its voice map you could ask the singer: „Could you sing these pitches in another area as well?“ (Like: less vibrato, more vibrato, softer, louder etc) and then work on it together.

I will also add a „list of good questions“ to the Voice Map method, which can help to ask important questions to a singer.

Sarah:

The good thing is: You can use the app with any singer. For example with a singing student, whose voice has (perhaps) not the full resonances and overtones yet, to „tailor“ the piece exactly on her abilities. Another „older“ singer (of the same Fach) could then sing the same piece - only with less effort.

One more question to you as a young composer:

I can see that composers are more interested in instrumental music than in voice, and if they are using voice they reject the techniques and the repertoire of a trained belcanto voice vehemently. They are more interested in the hundreds of different human sounds and chants which were created in the experimental period of the 50ties and 60ties or on other continents. Or in the vocal music of the entertainment business. Or in creating only sounds and no melodic lines anymore. Which I can understand. But still: the european vocal history created an immense treasure of beauty, energising human-produced sound waves of surprising power, melodies which communicate lots of complex emotions, coloraturas as a source of joy and virtuosity plus vocal polyphonic complexity. I think it would be worth to not bury and forget it.

Miika:

I wonder where it went wrong in history. Why do composers not like to compose for voice anymore? I think one of the reasons is that we don't sing ourselves anymore.

Once a singer asked me: „Why does no one of you write such beautiful lines like Bellini anymore?“ My answer is that those Bellini-lines were created when society was completely different. I think this sort of hierarchical reality is still part of our lives. But only small part.

Sarah:

Today our daily input of multiple and contradicting information is enormous. So many layers! We know more about what's going on on the planet than humans ever knew.

Miika:

Additionally my life is mobile: today I'm talking with you in Berlin, tomorrow I'll be in Lapland and Munich and inbetween I've communicated with people from lots of other places.

Simply everything is much more fragmented, shorter, quicker, louder... Our narratives are different. And my music can only reflect what I am experiencing. How I am feeling and thinking as a human being in my time. I don't want to imitate something that is not me and has nothing to do with me or the world in which I live. BUT I think that the european vocal tradition of the past is ONE of those layers of information that we got. And if we bury it, one layer will disappear.

Sarah:

I personally would find that regrettable.