

Not just sound II: an Investigation of Singer Patient Self-perceptions Mapped into the Voice Range Profile.



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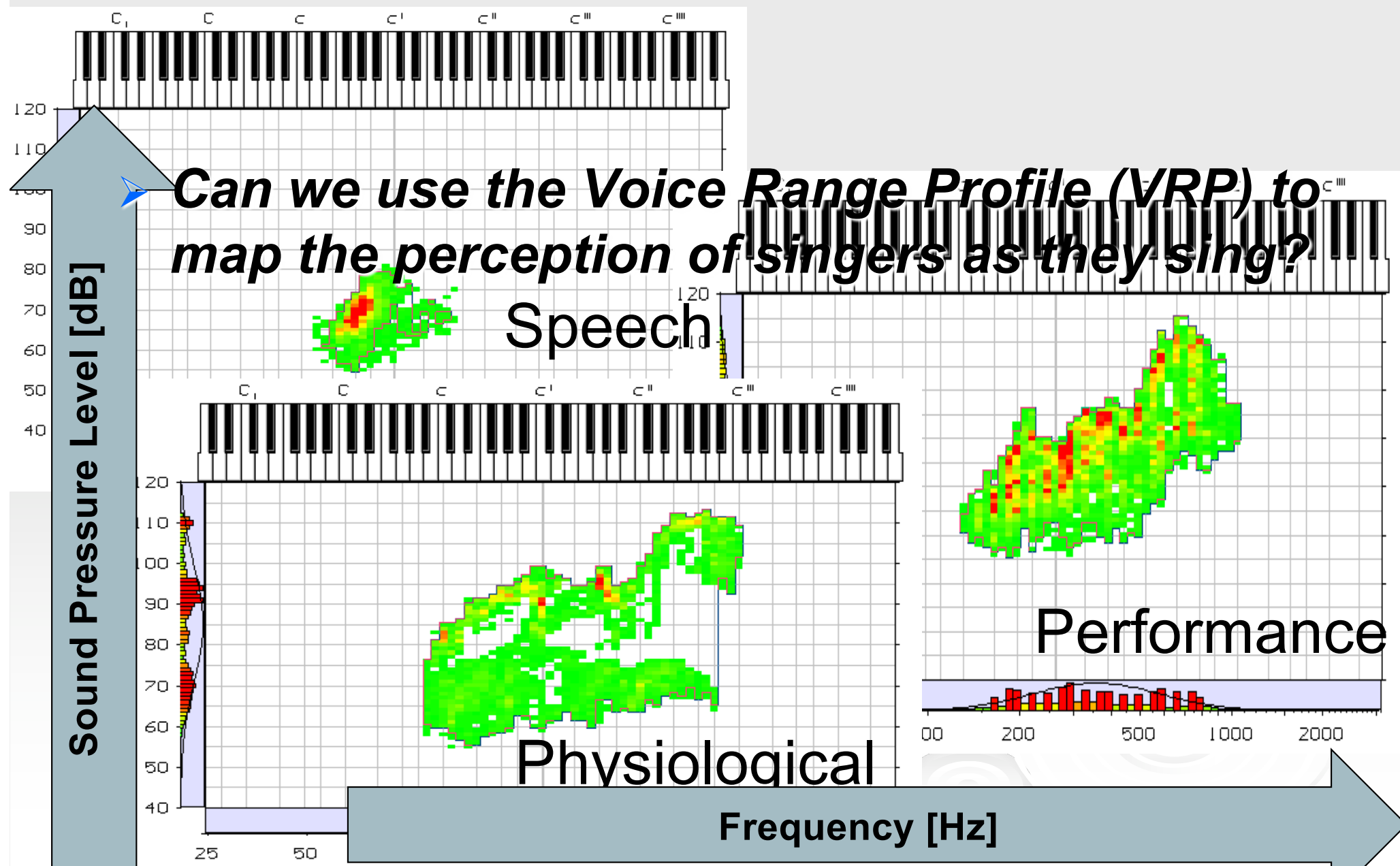
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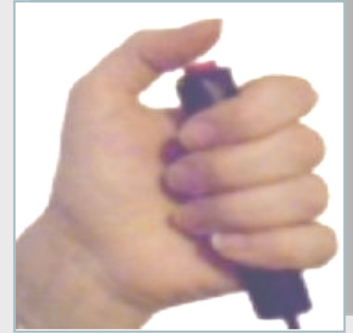
Background

1. Vocal efforts/challenges of singer patients are sometimes not seen in acoustical signals or/and not detectable by ear.
2. The self-perception of the patient has become an integral part to patient examination (WHO, 1980)
 - Ex: The VHI is a common part of voice evaluation Dejonckere's protocol for voice assessment, 2000

Research question



The button:



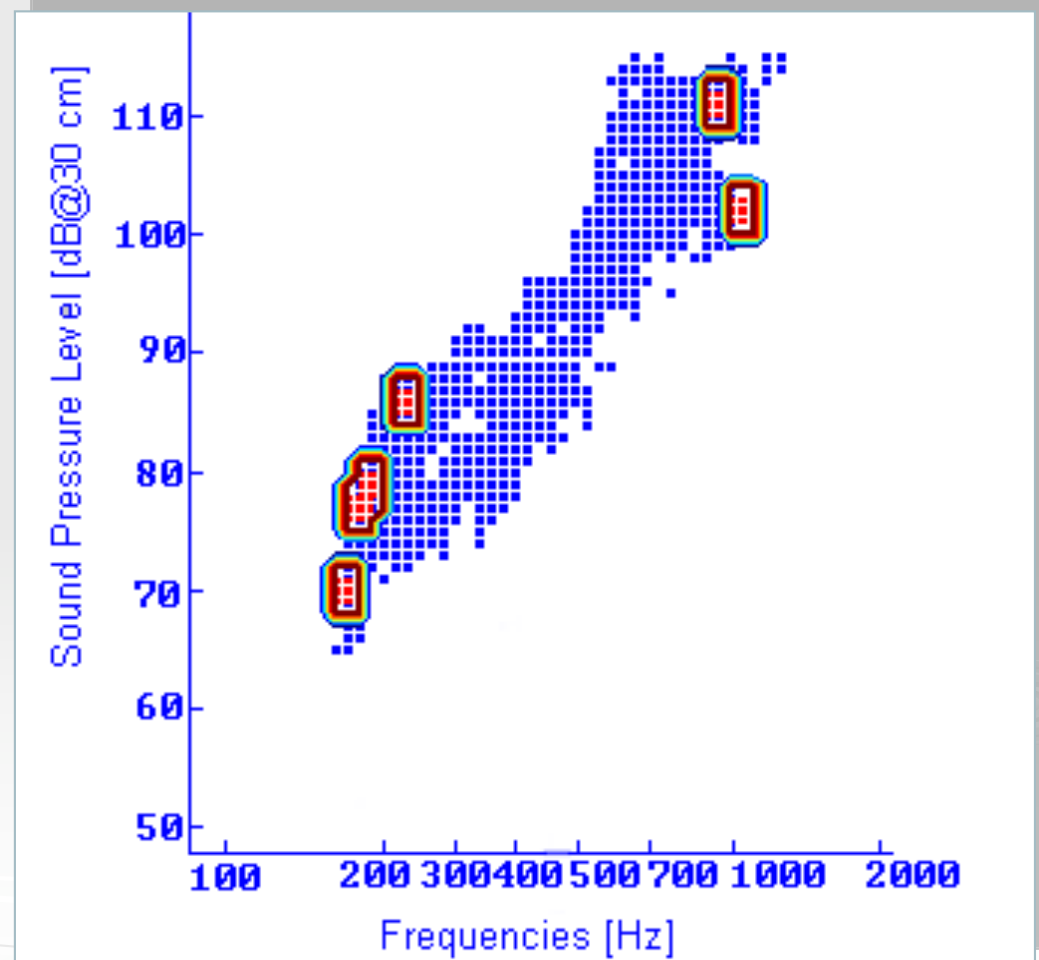
- Plots a mark in the VRP if the subject is also phonating
- Duration and force of press are ignored
- **Instructions:**
“As you sing, press the button at any time you feel vocal discomfort or /and instability. Aim at communicating your sensations during your performance.”

Experiment with a healthy group

➤ 16 healthy singers tested

Results:

1. Remain consistent in their use of the button.
2. Use the button mostly at the extremes boundaries of their performance range



Experiment with a patient group

- 9 females
- 4 males

Diagnosis	Singing Genre
6-Nodules	Amateur chorister (baroque)
5-functional dysphonia	Amateur gospel
1-pharyngo laryngeal reflux	Amateur jazz
	Amateur pop
1-complaint without diagnosis	Opera chorister
	Professional classical
	Students-classical and CCM

Tasks with button

1. Spontaneous neutral speech:
counting in low, medium and high levels
2. A physiological VRP
3. Performance discrete pitch task
(*messa di voce*)
4. Singing excerpt
5. Guided repetition of task 3

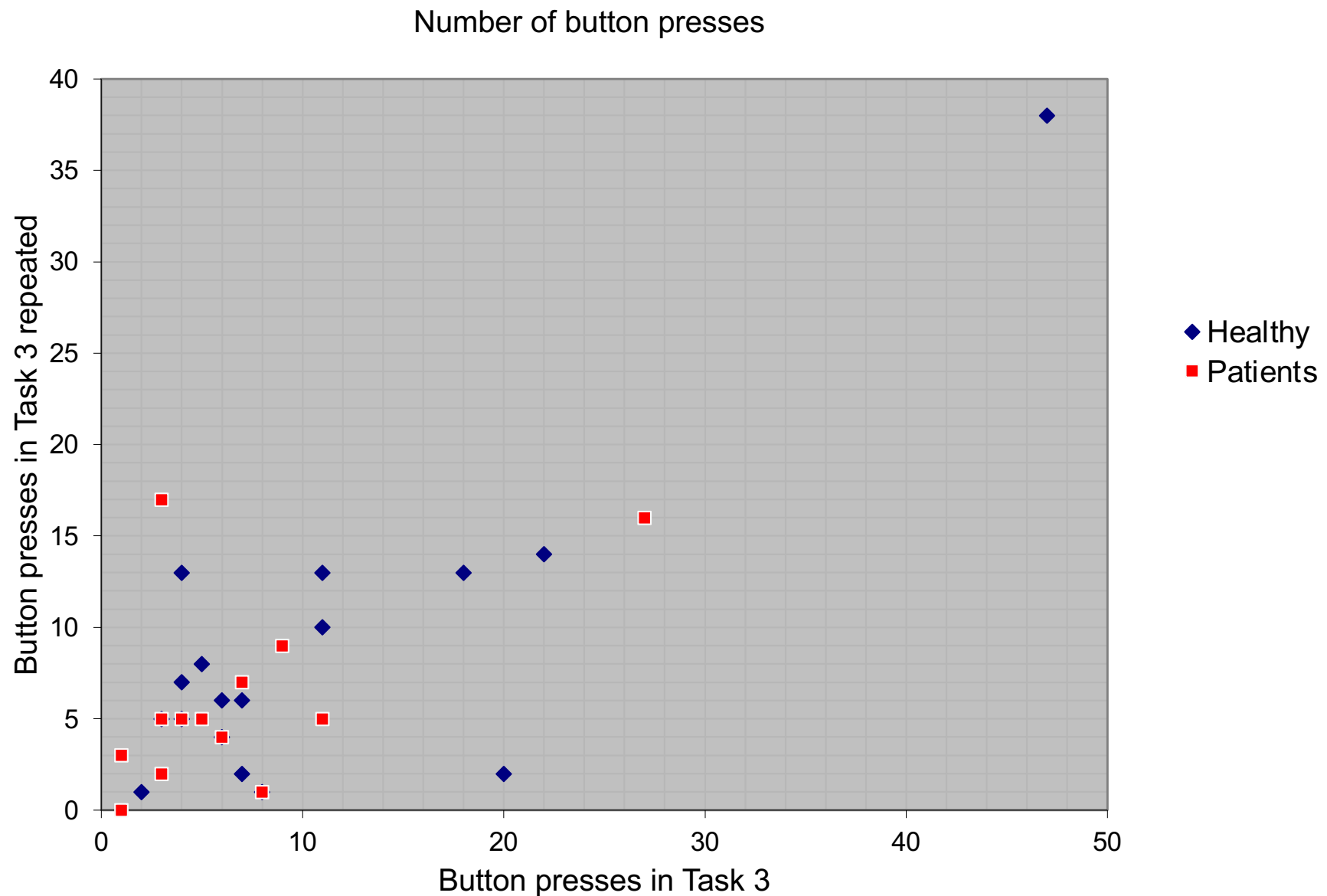
➡ **Post-recording, subjects filled a questionnaire**

Initial expectations :

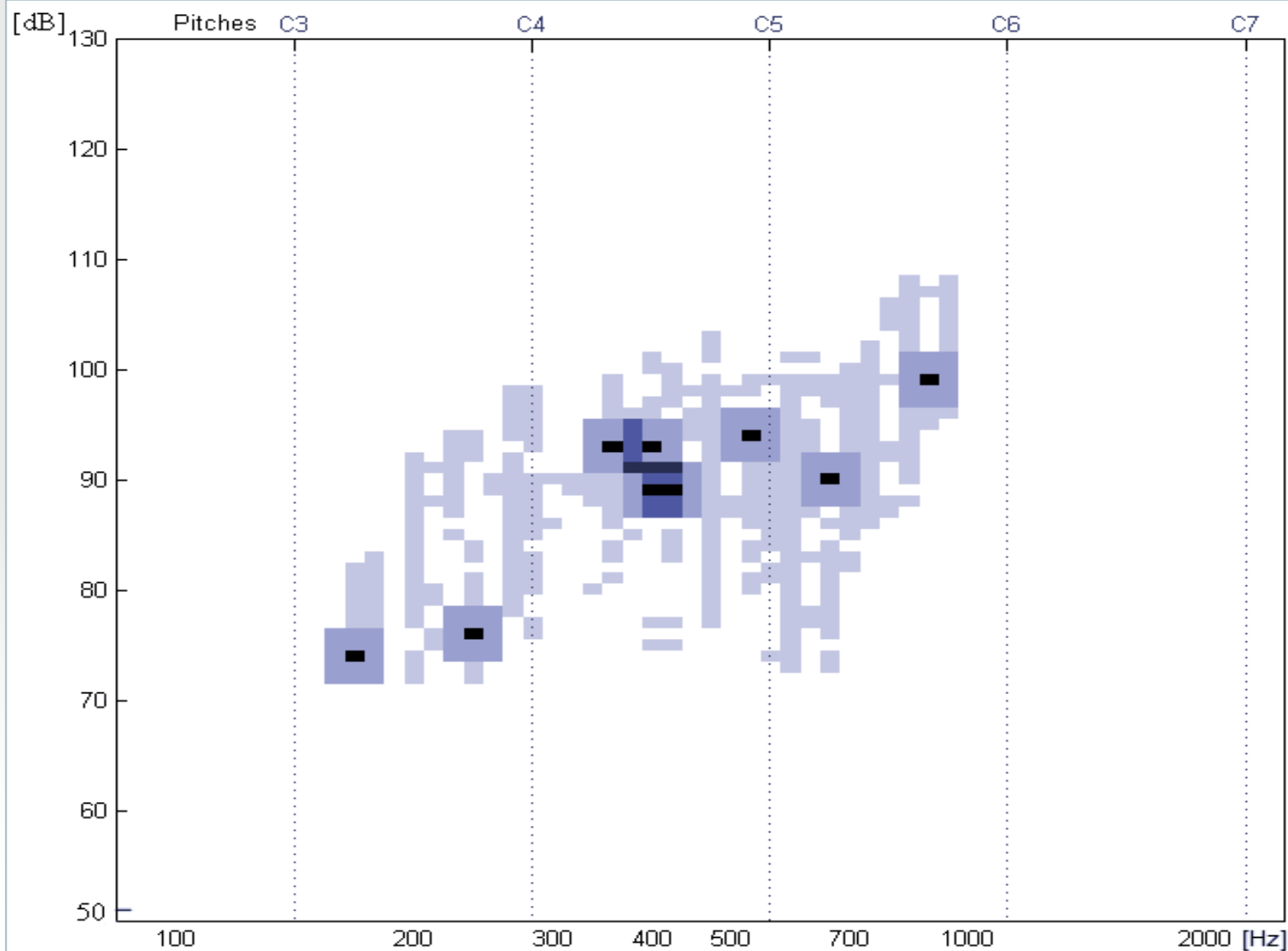
- Singer-patients, having a specific complaint, will be more consistent in pressing the button
- Button presses will tend to be more centrally located within the VRP boundaries

Subject	Original Overlap %	Mean Overlap %	<i>p</i> -values ($\alpha=0.05$)
1	29	11.22	<0.001
2	9	7.66	0.242
3	0	2.03	0.869
4	1	5.60	0.975
5	7	0.31	<0.001
6	14	7.45	0.010
7	13	4.08	<0.001
8	0	0.0	-----
9	5	1.51	0.005
10	24	6.29	<0.001
11	19	1.96	<0.001
12	7	5.66	0.211
13	14	0.47	<0.001

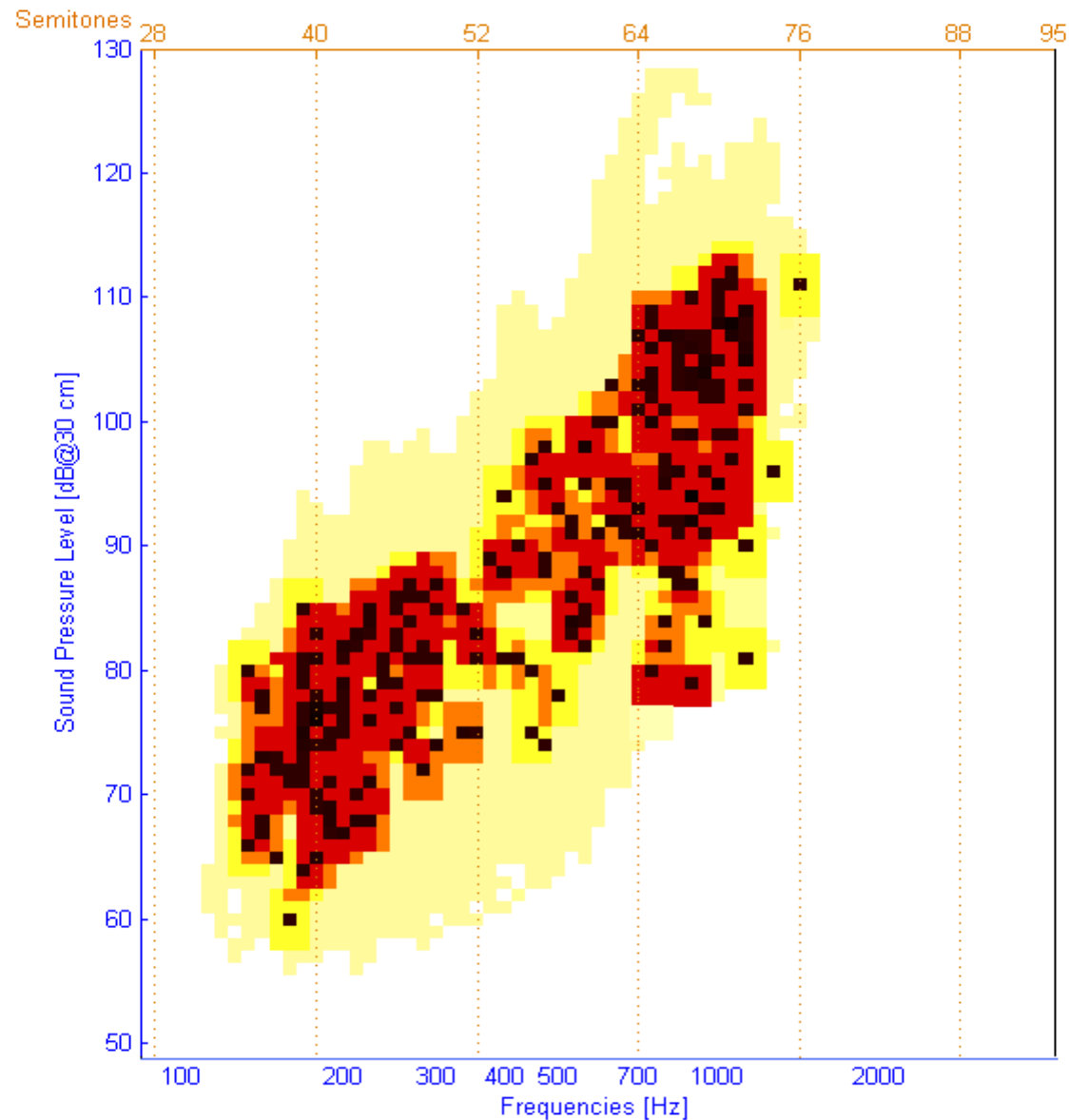
How often do they press?



Where do most button presses occur? (Patient 4: soprano)



Accumulated button presses for Task 3 and its repetition



A Brief overview of questionnaire results

1. Are the highlighted portions in your VRP typical areas of difficulties or/and limits?

■ Q2

■ Q1

2. Do the button presses in your VRP relate well to your singing experience today?



Summary

- The button-VRP seems like a promising tool.
- There are marked differences between button pressing observed in healthy singers and in singer patients.
- Singer patients did not use the button device as much as expected.
- Singer patients were consistent in using the button device.

Thank you for your attention!



Many thanks to Anick for this opportunity to work together.

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