

## EXPERIENCE OF FLOW DURING SINGING

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*In my investigation with the help of a questionnaire, I collected information about flow experiences in singing. What is flow during singing? The unhindered inhalation the unbound resonance, and stream of the voice. Singing music with empathize. Identity the figure, shaped on the stage. Intuition flush lived through during performance. Inspire collaboration among colleagues. The first two experiences have technical origin, the other have performer origin. Both groups of experiences are necessary for beneficial influence the audience. The experience of flow makes the singer free, happy, and the audience will feel it immediately. In my investigation 23 participants took place. 11 females, and 12 males. All of them have performer experiences. They belong to different age groups and represent every voice category in the population usual proportion. 9 sopranos, 2 mezzos, 3 tenors, 7 baritones and 2 basses filled the questionnaire up. There reports about their experiences give for the professional singer education, useful aid. I found differences: in the direction of the air during inhalation, the position of the larynx, where to feel the voice resonance, the conception of the so called “support”, in threshold circumstances for identified performances, in music taste, in expectations from accompanist, conductor, partners, stage manager. The result saws that the personal differences are great, wide, and for result-full education, collaboration with singers must be deeply take into account.*

**Keywords:** flow, resonance, support, empathy, inspiration

First of all I have to make it clear what does “flow” mean during singing. For avoiding the misunderstanding, at the beginning, I use it partly in the same meaning as the world-famous psychologist, Csíkszentmihályi (1997) does. He means “flow” as the sensation, when we almost forget the environment, the time getting on during a personal action, activity, living through happiness. The action, the personal ability, and the conditions are well balanced. The supporting feedback is continuous. The action and the aim become united, self-rewarding.

He analyses also the possibilities of flow-experiences in connection with music. It’s a historical observation, that music is an ancient appliance for systematisation the people’s motion, like in dancing. To influence heart conditions, the state of mind. Create community, fellowship between people. Because music is a special order of sounds, so it is appropriate for ordering,

manipulating people's feelings, sensations, ideas. Csíkszentmihályi (1997) analyses even the levels of music perceptions. First level is the subconscious perception with organs, a simple detection with senses. So it is a passive activity. Second level is the so called "analogous", when the listener, associate pictures, experiences, feelings, memories, histories, spirits for music. The third level is the "analytical" one, when we try to understand the construct, the inner order and proportions of the music, the purposes of the composer. We try to value the quality of composition, the composer, the performance, performers etc. Also Csíkszentmihályi (1997) considers the cultivation of music as an activity, one of the best possibilities for the flow-experiences. Several investigations proved the significance of music education for the new generation. It helps for children to develop their creativity, to diminish the disproportion between the verbal and nonverbal intelligence, to compensate the stimulus handicap originated from the social-economical background and becoming in spirit, in personality, healthy adults. In solving problems, children with music education are more flexible and effective, do it with more pleasure than without (Barkóczi and Pléh, Kokas, Zsolnay and Józsa). It is also a significant fact, that the singing and music education has beneficent transfer influence on other studies, competences. However the result of the research of Janurik (2007) saws, that flow-sensation in singing lessons during grammar school education is decreasing. So several decades after Zoltán Kodály's death, even the new results of the psychological sciences confirm the account of the Kodály-conception, which has step disadvantage even in the author's native country, in Hungary now.

*So, what does the "flow" mean for a singer?* For professional singers, performers is an important sensation *to explore a new solution* on the stage, to find the key for personalization of a character, to get or give inspiration colleague, collaborate creatively with the conductor, with the stage-manager. So the creation would become self-rewarding, would cause also happiness, flow-sensation not only for the performers. For professional phonation, there are also *technical conditions* in management of the air, the so called "support" the free inhalation, the facile resonance, the fluent articulation.

The expression of "flow phonation" or "free-flow phonation" is already used in technical context by Miller (2004) in his study. He means the phonation which can avoid the breathy or pressed solutions, and is able to manner the breath energy always free, applied to the vocalization's needs. Both of the performer and technical conditions are important for the singer to feel flow-sensation during singing, and it is the fundamental condition for the audience to feel catharsis, or to live through one of the music perception levels – see before - at the concert or in the theatre. In my investigation with the help of a questionnaire I try to collect the experiences of professional singers in both conditions. My expectation is that the results give useful aids for education of professional singers.

*Participants:* Some descriptive parameters of the participants group can be seen in table 1, and in table 2.

Table 1. The participants belonged to different gender, age groups. The cross-section is authentic. They had different duration of singing study and professional classical singer experiences past.

parameters	together 23 person				female 11 person				male 12 person			
	min	max	mean	std.	min	max	mean	std.	min	max	mean	std.
age	24	58	37,39	10,92	25	56	37,73	11,65	24	58	37,08	10,72
study	3	20	9,3	3,81	6	15	9,27	2,83	3	20	9,33	4,66
experiences	0,5	34	12,5	10,73	0,5	34	11,86	11,65	1	30	13,08	10,29

Table 2. The proportion of gender is well balanced. The voice category shows the natural distribution. Within the population and also among singers the most common voice categories are soprano for females and baritone for males.

gender	female		male		
voice category	soprano	mezzo	tenor	baritone	bass
number	9	2	3	7	2

I have applied 5 groups of questions. The questions seemed not to be strange for the singers. In general they don't use "flow" as an attributive, for their personal sensations, but all of them understood the orientations of the questions immediately, or after some guidance, or explanation. In my analyses I follow the sequence of the questions.

## Analysis

1. *In which conditions did you feel unhindered inhalation in?* This question retained to the neural, musical conditions, to the state of health, and was interested in the method and direction of the inhalation. Some opinions about the *direction of the inhalation: Marchesi* (1887) write about only mouth in- and exhalation and the elastic manner of the lower jaw. The opinion of *Tóvölgyi* (1907) is not clear. He advises for inhalation the upper respiratory tracts. *Molnár* (1966) argues at the inhalation through the nose. Even when the singer has short time for it, advises the use of both directions. The nose is able to temperate, to filter the air and is noiseless! *Farkas* (1907) advises at every situation the inhalation through the nose for singers. Besides Molnar's arguments he mentions that it is more aesthetic, and the noise can also wet the air, which is important for the throat and the glottis. For *Lamperti* (1931) both of the air ways are suitable, and the inhalation must be always noiseless. *Kerényi* (1985) offers always inhalation through the nose, even when our mouth is opened! His argues are already mentioned before. He emphasizes that the nostrils may not be pulled out, for enhancing the rapidity, because it is not aesthetic, elegant. According to *Miller* (2004) the breathing through the nose brings tranquillity to the whole breathing process, but its capacity is not enough for a singer so combination through the mouth is necessary. *Chapman* (2006) proposes the mouth with pursed lips for inhalation. For *Dayme* (2009) the most important is the effortless

inspiration. At optimal inspiration the air enters through the mouth in which the soft palate is elevated, the tongue and the muscles of the oropharynx are relaxed. The muscles of the abdomen are also in elastic condition.

Table 3. List of the answers for the first question

questions	number of valuable answers female/male	kind of answers female/male		
neural condition	<b>11/12</b>	quiet <b>6/7</b>	optimal <b>3/1</b>	indifferent <b>2/4</b>
state of health	<b>11/11</b>	healthy <b>8/10</b>	indifferent <b>3/1</b>	
direction	<b>11/11</b>	nose <b>0/1</b>	mouth <b>2/2</b>	mixed <b>9/8</b>
method	<b>10/10</b>	all at once <b>8/8</b>	distributed <b>2/2</b>	
musical condition	<b>9/11</b>	yes <b>6/6</b>	no <b>3/5</b>	

From the answers the neural and the health conditions seem the most important influential conditions in connection of the inhalation. Although is strange the big number of the indifferent answers. The mixed – both through nose and mouth – direction of inhalation shows the popularity of a concrete solution! From a practical view the “all at once” inhalation doesn’t seem the best, because it would make the abdominal muscles tense. The big number of “no” at the last question shows the participant’s professionalism.

2. *When did you feel your voice ringing automate?* This question was interested in what parts of the body helped the air-handling, which is the position of the larynx during phonation, where does the respondent the ringing, the resonance of the voice feel, and what does for the participant the “support” mean? Some interesting opinions about “*place of resonance*” in the past: Marchesi (1887) distinguish three registers for females – chest, medium and head – which belong to three different resonator chambers of the vocal tract. The changing of the position of the larynx directs the air column to the different registers. With blending the registers can be established the homogeneity of the sound. According to Farkas (1907) there are only two registers for both of females and males singers. The origin of the difference is in the function of the vocal folds. In well-trained singing voice every resonators take part in good proportion. Lamperti (1931): “the focus of the voice is like a fixed star in your head”. When the head is well balanced, rightly poised and is pulsating, then can reinforce the voice. Kerényi (1985) denies the exactness of the expressions like “chest” or “head” resonance, the existence of the different registers. Good resonance of the singing voice – according to Kerényi - is the result of the deep breathing and the good function of the voice source. For every well-trained singing voice the deep breathing gives the “found-amplifier”, the vocal tract with head cavities the “overtone-amplifier” and the skeleton the “stable structure”. In every tone all of them are stand by. Sundberg’s thinking can be only from the opinions about registers extrapolated. He accepts that “head register” works only by females beside chest, middle, vocal fry and whistle. For males he accepts modal (normal, mixed), falsetto and vocal fry. Miller’s (2004) opinion about resonance is very special. According to him the

sensations of a singer during phonation are very different, special and individual. The placement of the tone is impossible, but if somebody feels that his voice rings “forward” then it is excellent! For him the connecting of the “head resonance” besides forming nasalised consonants has to be avoided. He accepts different registers for both females and males voices, in them the voice timbre is different, but the aim of good teaching to unite the registers. Chapman (2006) mention that there is no scientific consensus on the singing registers yet. She agrees that the source of different registers is in the operation of the vocal folds. She distinguish five registers (vocal fry, chest, middle, head, whistle) for females, and four (vocal fry, modal, head, falsetto) for males, describing the exact differences of the vocal fold function. For her the major contributors in resonance of the singing voice are the larynx, pharynx and the mouth. The nasal cavities are useful only for nasalised sounds, and there use in classical singing should be very limited. According to her it would need more research whether professional singers are able to sing at the same time with open velar port and lifted high palate without forming unpleasant nasalised sounds. Dayme (2009) emphasizes that it is important to separate sensation from function! She accepts that every singer is physically unique, and the sensation of vibration and resonance in their head is important as a perception of their own sound, but has no real function. The origin of the different registers is in the different vibration of the vocal folds not in the different places, chambers of resonance. Fundamentally two vibration methods of the vocal folds are possible. The “heavy”: when the whole mass is vibrating and touch along the edge in wide area. The “light”: not the whole mass is vibrating, and touch hardly only at the free upper border of the edges, supported only by the vocal ligaments.

Table 4. List of the answers for the second question

questions	number of valuable answers female/male	kind of answers female/male				
		belly wall	ribcage	diaphragm	mixed	
parts of the body	<b>10/11</b>	-	<b>1/0</b>	<b>1/5</b>	<b>8/6</b>	
position of the larynx	<b>10/11</b>	rigid -	flexible <b>8/6</b>	sunk <b>2/4</b>	stilted -	neutral <b>0/1</b>
place of resonance	<b>10/12</b>	breast -	pharynx -	mouth <b>0/1</b>	head <b>2/4</b>	mixed <b>8/7</b>

From the sub-questions, three can be processed with the help of a Table 4. Most of the participants use for ringing voice every three useful parts of the body (belly wall, ribcage, diaphragm,) together. Many of the males use only the diaphragm, which seems to be a misunderstanding, because it is a passive muscle. Fortunately most of the singers use the flexible position. The rigid and the stilted would belong to other artistic genres, like musical or folk-song. The sunken position is more frequent at males, shoving that for deep tones singing darken is a common mistake. The neutral would mean the unconscious operating of the larynx. Behind one answer – neutral - would be a mixing up with the flexible one. The answers on the question “place of resonance” show that most of the participants feel in all of the “registers” (chest, pharynx, mouth, head) the resonance. The head resonance is also very accentual!

For the fourth sub-question – personal opinion about “*support*” – the answers were varied. It is not a real surprise, because it is an evergreen topic since several centuries. Before analysing the answers I summarize some important opinions from the literature. Ancient Italian singing masters, didn’t used the expression “support”. According to Marchesi (1887) the natural, deep breathing is the appropriate for singing, like during sleeping, when the whole lung is expanded. For respiration the diaphragm and the abdominal wall are the adequate basis. According to Tóvölgyi (1907) the only good solution for singers is the so called “lower abdomen-chest” breathing, with maintaining the inhalation position by the top-chest muscles. For Farkas (1907) the “support” is the fond retraction of the abdominal wall at the bottom of the thoracic. The sound is like the abacus on the column of air. For Lamperti (1931) the most important is the incorporated breath, the compressed air, with what the bottom and the top of the lungs are fulfilled, which is well guided, controlled, co-ordinated and restrained. Is important the low breath beside what the “hollow” feeling in the head, neck, chest-down to the waist can maintained. For him the “support” (*appoggio*) is the permanent subglottic pressure during phonation. Mihályffy considers the balance of activity and passivity during inhalation - mostly through the nose - means the “calm”, which the singer has to maintain as the base. During exhalation the air-stream has to be driven to the hard palate behind the teeth, and to the entrance of the nose. For let the voice run, “beading” the air has to be made easy. Molnár (1966) consider the combination of the low-rib and diaphragm breathing the best, when the direction of the airstream from the bottom of the lung up to the glottis is direct. He means this airstream like “support”! He recalls Müller-Brunow’s (XIXth century) old metaphor for “support”, about the caoutchouc ball and the vertical water-jet of the fountain. It’s also important, that he makes clear, the “support with diaphragm” is impossible, because this muscle is active only during inhalation, and the abdominal wall and the back muscles are working during exhalation. The “support” at Kerényi (1985) is self the airstream, the column of air inside the lung. If the singer use the deep breathing than it will work automatically. The most frequent default is the press of the belly. For Sundberg the “support” means, presumably the well balance of subglottic pressure and the glottal resistance, avoiding the pressed or the breathy phonation as well. For Adorján (1996) the deep breathing, like during deep sleeping, and maintaining the expanded ribcage mean the base for singing. In other words it’s the balance of permanent exhalation, and the sigh-like inhalation. Nádor (2004) differentiate two tips in breathing. One group of the people is active during inhalation, and the other group is during exhalation. The “support” for the first group is the maintaining the expanding tendency of the chest. For the second group the opposite, the narrowing tendency of the chest. According to Miller (2004) the maintenance and control of the position of inhalation to the end of the music section, is the virtual “support”. The pull in, or extrusion of the abdominal wall are equally incorrect, wrong. Chapman (2006) admits that great controversy exist still over the issues around “support” and breathing. For her the “support” is the singer’s complete control about the compressed air during singing. As the singer’s accelerator works the anterior abdominal wall and as his brake works the sides and back of the abdominal girdle and the diaphragm. Dayme (2009) think, that the breathing pattern of every people, so of every singer is individual. The shape of the rib cage and the operation of it is also very personal. Excessive tension in muscles of breathing and of the vocal organs inhibit the free vibration of the vocal folds, and so the sound. The “support” for Dayme is the maintenance of subglottic pressure, with the help of the

postural and rib cage balance, and the efficient function of the abdominal muscles and the diaphragm. These conditions ensure a steady expiratory flow of air, forming a stable base of platform. The singer can develop as an artist, if this process, the muscular control becomes unconscious reflex.

The answers of the female participants: - the security of the air-keeping, air-calibration (3), - the support the air-column down (3), - control of the breathing muscles (2) - support with diaphragm (1), - support with the abdominal wall (1), - maintaining the widening of the rib cage (1).

The answers of the male participants: - the control and keeping of the inhaled air (4), - control of the body's condition (2), - support with the diaphragm (2), - support with the muscles of abdomen (1), - operation like an accordions (1), - no answer (2).

The answers show that the imaginations about support are still very different, and obscure. Further physiological investigation would be necessary.

3. *When did you feel resonance with the music?* What kind of tempo, rhythm, tone-character, volume, music-style, accompaniment by? What personality characteristic for the accompanist or conductor at? From the sub-questions, six can be processed in a Table 5. The answers show the well education, the big experiences and the versatility of the participants. The number of the "every", mean "all the same" is rather high. In tempo the moderate, in rhythm the kept and the running, in sound character the legato, in volume the moderate are the most frequent. The participants sing opera and operetta, on stage, so their answers on the fifth and sixth sub-questions are understandable.

The last sub-question is about the convenient personality of the accompanist. The answers of the female participants: "let it be" - quiet (3), - adaptive but decided (3), - cooperative, with breathing (2), - attentive, sensitive, flexible (2), - definitive character (1). The answer of the male participants: cooperative, like a chamber partner (4), attentive, sensitive (3), quiet, submissive (1), - no answer (4).

The answers purely show the different of genres. For males is more implicit, that the accompanist is submissive.

Table 5. Lists of the answer for the third question

questions	number of valuable answers female/male	kind of answers female/male				
tempo	<b>11/11</b>	quickly <b>0/1</b>	moderate <b>4/4</b>	slowly <b>2/4</b>	-	every <b>5/2</b>
rhythm	<b>11/9</b>	sharp <b>1/0</b>	syncope -	kept <b>3/4</b>	running <b>5/2</b>	every <b>2/3</b>
sound character	<b>9/10</b>	staccato <b>2/1</b>	legato <b>5/6</b>	-	-	every <b>2/3</b>
volume	<b>11/11</b>	piano <b>1/1</b>	forte <b>0/2</b>	moderate <b>7/5</b>	-	every <b>3/3</b>
style of music	<b>10/10</b>	baroque <b>3/0</b>	classical <b>3/3</b>	romantic <b>2/4</b>	musical <b>1/1</b>	every <b>1/2</b>
accompaniment	<b>10/9</b>	piano <b>2/2</b>	orchestra <b>3/4</b>	other -	acapella -	every <b>5/3</b>

4. *When did you feel emotional identity with the performed figure? What was the age, genre, cultural identity, historical period, character of the figure?*

Table 6. The answers of the female participants

questions	number of valuable answers females	kind of answers females				
age	10	young 7	middle-aged 2		every 1	
genre	11	woman 9	girl 1		trouser role 1	
culture	9	Hungary 1	Italian 2	Russian 2	other 2	every 2
historical period	10	XVII.th. 1	classic 2	romantic 4	every 3	
character	10	lyric 3	soubrette 2	dramatic 3	every 2	

Table 7. The answers of the male participants

questions	number of valuable answers males	kind of answers males				
age	12	young 3	middle 4	old 2	every 3	
genre	11	man 9		every 2		
culture	9	Hungarian/ Italian 3	French 1	every 5		
historical period	9	middle Ages 2	classic 1	romantic 1	every 5	
character	10	lyric 2	buffo 4	dramatic 2	every 2	

The answers on age, genre and character are connection with the personal age, genre identity and the kind of personal voice ability of the participants. The identification with culture shoves the fresh tendency all over the world that theatres try to perform operas, singing on the original language of the libretto. The favourite historical period for females – romantic – proves their sensitivity. It is interesting that for high rate of the males the topics, subjects of the questions are neutral, or all the same.

5. *When did you feel flow of inspiration – connection with music, role or stage-action shaping, - during performance or rehearsal? Whose, what's influence – stage-manager, partner, unexpected situation, indisposition, mood?*



Table 8. Answers of the 5<sup>th</sup> question

groups	stage-manager	partner	situation	indisposition	mood	conductor
female (11)	9	9	4	6	10	1
male (12)	10	9	5	6	8	0

Answers show that all of the circumstances are important, but mostly the personal conditions (stage-manager, partner, mood).

## Conclusion

Being opera singer with experiences is not an everyday profession. That is the explanation of the small number of the investigator group. All of the five questions with their sub-questions were relevant, were familiar for the participants. Dynamism, flow experiences are common for singers during singing both in connection with the sound and also in connection with the emotions. The answers show big variation specially, in the technical topics. Such a research can help for the participants to summarize their opinions in connection with these topics and make their practice more conscious. It would help for the singing education, and would inspire further investigations! Today scientifically unfounded education is already not acceptable. Obscure ideas aren't helpful even for the professionals, and don't enhance the confidence for the teachers.

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