

The timbre vocabulary of professional female jazz vocalists

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Female jazz singers have a large common vocabulary of timbre descriptors that indexes their practically oriented timbral knowledge. We aimed to explore and document that vocabulary by constructing an inventory of timbre descriptors and their physiological or technical correlates. A vocabulary of some 250 terms with definitions, synonyms, and antonyms was assembled from transcriptions of lessons and interviews with six professional jazz singer-teachers. The vocabulary includes such diverse terms as *Mickey Mouse*, *instrumental*, *natural*, *nasty*, *compact*, and *suspended*. Almost the same vocabulary was used to describe the vocal quality of commercially available recordings. During lessons, timbre descriptors tended to be less important than advice on style, breathing technique, and interpretation. Teachers used their timbral vocabulary intuitively and were often surprised when confronted with it in an interview. They used timbral descriptors to achieve interpretive goals, even if they did not fully understand the physics and physiology (e.g. ideas about voice “placement”). The results highlight musically important aspects of vocal timbre that are worthy of more detailed gestural and acoustical investigation.

Keywords: timbre; vocabulary; female jazz vocalists; teaching

Our research focuses on timbre descriptors used by professional female jazz vocalists. Timbre is at least as central for performance and pedagogy in voice as for other musical instruments. A sizeable vocabulary of timbre descriptors is necessary to help a student to understand the timbral possibilities of his or her instrument and to achieve specific timbral goals. To our knowledge, the diverse and colorful timbral vocabulary of jazz singers has never been the subject of systematic investigation.

Individual differences in vocal timbre depend in part on physiological differences in the vocal folds and vocal tract (Mathelitsch and Friedrich 2000). They also depend on singing style. In the jazz tradition, singers are encouraged to develop an individual timbre that reflects their vocal personality. The widespread use of microphones makes it easier for jazz singers than for “classical” singers of opera and lied to develop “natural” timbres and phrasings that are similar to that of the speaking voice (Ferstl-Pilaj *et al.* 2005). Especially the female voice with its special singing traditions (e.g. belting) has been standing in the center of research in the last years (Miller 2000). In recent research on the timbral vocabulary of pianists and guitarists, Traube collaborated with performers to explore and document their collective knowledge base (Traube and Depalle 2004, Bellemare and Traube 2005). They considered gestural timbre descriptors as part of the feedback loop between hearing and motor control of performer or teacher, related timbre descriptors to speech sounds and a musician’s ability to “speak” through the instrument, organized timbre descriptors in a multidimensional space, and related timbre descriptors to performance gestures and the acoustical signal.

In our exploration and documentation of the timbral language of female jazz vocalists, we adopted a similar approach. We aimed to construct an inventory of timbre descriptors and their technical, physiological, and cultural correlates as part of a broader documentation of singers’ practical knowledge about sound and of the acquisition and sharing of that knowledge in the oral tradition of vocal teaching.

METHOD

Participants and materials

Participants were six professional female jazz vocalists who were teaching at high school, undergraduate level at music schools in Graz, or the Kunstuniversität Graz. The age of the teachers ranged from 25-46 years (mean=35). Lessons were recorded on a Handycam. All participating students were female and had been singing jazz for at least two years.

Procedure

We first asked six female jazz singers and their teachers if they would agree to being videotaped while teaching. We informed them that the study was about jazz singing and its pedagogy. The teachers were unaware that we intended specifically to study the role of timbre in their teaching and the specific words

and expressions that they use while teaching. All of them consented. The students sometimes felt uncomfortable with the situation, and we once stopped recording at the student's request.

All teaching was in the German language, but teachers occasionally used English terms, since English is regarded as the international language of jazz and the texts of all songs were in English. The videos were not transcribed in full. Instead, we noted all words that directly or indirectly describe timbre, and transcribed the context in which they occurred. The list of timbral descriptors used by each individual teacher was presented back to the same teacher during a short interview. She was then asked to give synonyms and antonyms of each word in the list, to sing an example of each, to explain how each is produced, and to name jazz singers who produce that timbre. The interviews were transcribed in full and data was obtained from all teachers (see Table 1). We also asked teachers to describe the vocal quality of excerpts from contrasting commercial recordings of female jazz vocalists. The recordings were chosen to cover the greatest possible variety of vocal qualities. There were fifteen examples, each lasting 15 seconds. They were played to each participant in a different random order. Any timbral descriptors used during these descriptions that had not previously been used were entered into the table.

After we had collected about 200 words, we contacted the participants to consider the words again. Each participant was presented with the words they had used themselves (about 15 words), plus 15 words chosen randomly from the words used by other singers. Participants were first asked to give descriptions, synonyms, and antonyms, and were then asked whether each word primarily described sound, technique, or expression. At the end, we had an inventory with 250 words.

RESULTS

Table 1 is an excerpt from our original table of 80 words used to describe specific vocal qualities during lessons. Since the teachers spoke more about technique than timbre, many timbral descriptors refer to the corresponding technique. For example, some participants repeatedly used the terms "open," "pressed" versus "relaxed," and support.

Table 2 is an excerpt from the larger table that we compiled after the interviews. The complete table includes all timbral descriptors used in teaching or interviews, definitions, and information about who used the word in which part of our study (1=videod lesson, 2=interview, 3=description of recordings).

Table 1. Examples of timbre descriptors used in teaching.

<i>German term</i>	<i>English translation</i>	<i>Participant</i>
angenehm	pleasant	P1, P2
Anker	anchor	P2
aufmachen	open	P3, P5
ausweichen	avoiding	P6
beweglich	flexible	P5
Biss, reinbeißen	bite	P1, P6
brav	good, well behaved	P6
breit	wide	P5, P6
cool	cool	P6
dezent	discreet	P2

Table 2. Examples of timbre descriptors used in teaching and interviews.

<i>German term</i>	<i>Our translation</i>	<i>Definition based on interviews</i>	<i>Synonyms</i>	<i>Antonyms</i>	<i>Participants</i>
frei	free	if the vocal tract is open, it sounds free	round, easy, without cracking, effortless	tense, uptight, pressed, cramped	1: P2, P5 2: P1, P2, P5 3: P1
hauchig	breathy	light vocalization, larynx rises, vocal cords separate, the sound becomes airy and somehow pressed.	airy, smoky		1: P3 2: P1, P3, P6 3: P2, P3, P6
natürlich	natural	from the speaking voice		classical, forced	1: P1, P2 2: P1, P4, P6 3: P5

Finally, we documented words used to describe the vocal qualities of commercial jazz recordings. Table 3 shows some of the words which were used to describe one of the 15-second excerpts.

During lessons, timbre descriptors tended to be less important than points of style, breathing technique, and interpretation. The teachers used their timbral vocabulary intuitively and were often surprised when confronted with it in an interview. They sometimes doubted that they had used those specific words. It was evidently unusual for most of them to analyze their own timbral vocabulary.

Table 3. Words used to describe the timbre of Lisa Bassenger singing “I just can’t get you out of my head” (Lisa Bessenger Trio, *A Sigh a Song*, Minor Records, 2002).

<i>Term in German</i>	<i>Our Translation</i>	<i>Participant</i>
anrürlich	seedy	P1
breit	wide	P6
freundlich	friendly	P1
gesprochen	spoken	P6
hauchig	breathy	P6
hell	bright	P1, P6
jugendlich	youthful	P1
jung	young	P1
Knacken	crack	P1
laid back	laid back	P2
leiernd	droning	P2

When describing the vocal quality of the recordings, the teachers used a large timbral vocabulary. Different teachers did not always use the same words for describing a sound, but they often described the sound in a similar way. For example, the term “girlish” could be understood as an umbrella term for: sexy, fidgety, friendly, dingy, youthful, airy, natural, shy, etc.

It was not always possible to clearly separate physiologically from perceptually oriented descriptors. For instance, “open” refers both to vocal tract position and articulation (open vowels) and the sound itself (open sound).

DISCUSSION

Female jazz singers seem to have a fairly small common vocabulary of timbre descriptors that indexes their practically oriented timbral knowledge. Teachers were always able to define or explain the timbral terms used by other teachers, even if they had not used those terms themselves, and the different definitions were consistent with each other. Every second word in our list was used by at least two participants. The words “open,” “bright,” “classical,” “airy,” and “vibrato” were used by all teachers and hence are the most often named timbre descriptors. Thirty-four words in our list were used by at least four of the six teachers and in this sense may be regarded as the common vocabulary.

We believe that this research has interesting implications for vocal pedagogy. It may help teachers to become more aware of their timbral

vocabulary and use terms more precisely and consistently. The results also highlight musically important aspects of vocal timbre that are worthy of detailed gestural and acoustical investigation.

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