

Belmont University

Belmont Digital Repository

Recital Papers

School of Music

Spring 5-1-2023

French Nasal Vowels in the Mezzo-Soprano Voice

Jada G. Duff

Belmont University, jada.duff@bruins.belmont.edu

Follow this and additional works at: https://repository.belmont.edu/music_recitals



Part of the [Music Performance Commons](#)

Recommended Citation

Duff, Jada G., "French Nasal Vowels in the Mezzo-Soprano Voice" (2023). *Recital Papers*. 39.
https://repository.belmont.edu/music_recitals/39

This Thesis is brought to you for free and open access by the School of Music at Belmont Digital Repository. It has been accepted for inclusion in Recital Papers by an authorized administrator of Belmont Digital Repository. For more information, please contact repository@belmont.edu.

FRENCH NASAL VOWELS IN THE MEZZO-SOPRANO VOICE

By
JADA GABRIELLE DUFF

A RESEARCH PAPER

Submitted in partial fulfillment of the requirements for the degree of
Master of Music in Vocal Pedagogy
in the School of Music
of the College of Music and Performing Arts
Belmont University

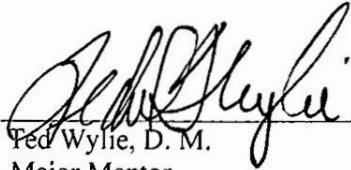
NASHVILLE, TENNESSEE

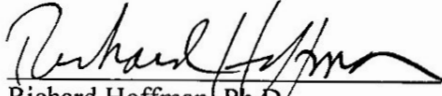
May 2023

Submitted by Jada Duff in partial fulfillment of the requirements for the degree of Master of Music in Vocal Pedagogy.

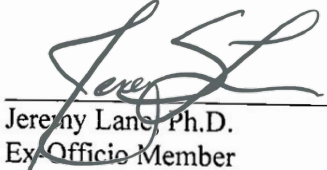
Accepted on behalf of the Graduate Faculty of the School of Music by the Mentoring Committee:

31 March 2023
Date


Ted Wylie, D. M.
Major Mentor


Richard Hoffman, Ph.D.
Second Mentor

April 28, 2023
Date


Jeremy Lane, Ph.D.
Ex-Officio Member

Contents

Figures.....	iv
Examples.....	v
Presentation of Material	
Introduction.....	1
Chapter 1.....	4
Chapter 2.....	8
Chapter 3.....	18
Conclusion.....	23
References.....	24

Figures

1.1. Range of registers in mezzo-soprano voice	5
1.2. Vowel Chart	6
2.1. Low register /a/ vowel (left) and /ã/ vowel (right)	9
2.2. Middle register /a/ vowel (left) and /ã/ vowel (right)	10
2.3. High register /a/ vowel (left) and /ã/ vowel (right)	10
2.4. Low register /ε/ vowel (left) and /ẽ/ vowel (right)	11
2.5. Middle register /ε/ vowel (left) and /ẽ/ vowel (right)	12
2.6. High register /ε/ vowel (left) and /ẽ/ vowel (right)	12
2.7. Low register /o/ vowel (left) and /õ/ vowel (right)	13
2.8. Middle register /o/ vowel (left) and /õ/ vowel (right)	14
2.9. High register /o/ vowel (left) and /õ/ vowel (right)	14
2.10. Low register /œ/ vowel (left) and /œ̃/ vowel (right)	15
2.11. Middle register /œ/ vowel (left) and /œ̃/ vowel (right)	16
2.12. High register /œ/ vowel (left) and /œ̃/ vowel (right)	16

Examples

3.1. Jules Massenet, “Werther! Qui m’aurait dit... Ces lettres!” from <i>Werther</i> , mm. 65-68	18
3.2. Claude Debussy, “Green” from <i>Ariettes oubliées</i> , mm. 28-30	19
3.3. Claude Debussy, “Spleen” from <i>Ariettes oubliées</i> , mm. 18-21	19
3.4. Maurice Ravel, “Le Martin-Pêcheur” from <i>Histoires naturelles</i> , mm. 15-16	20
3.5. Isaac Albéniz, “Le Paradis retrouvé” from <i>Quatre Mélodies</i> , mm. 33-35	20
3.6. Francis Poulenc, “Hôtel” from <i>Banalités</i> , mm. 2-6	21
3.7. Francis Poulenc, “La Dame d’André” from <i>Fiançailles pour Rire</i> , mm. 4-7	21
3.8. Erik Satie, “La Diva de l’Empire,” mm. 9-12.....	21

Introduction

This study focuses on the four French nasal vowels and when modification is needed throughout the mezzo-soprano range. Proper articulation of these nasal vowels is crucial because mispronunciation can lead to a change of word, ultimately changing the meaning of the text. While accurate pronunciation is essential in conveying the text, correct singing technique is also important. Modification of vowels might be necessary to reduce tension and promote healthy singing. There must be a balance between these two demands.

This paper is made up of an introduction and chapters. The first chapter breaks down each of the French nasal vowels. It first discusses the mezzo-soprano voice and the ranges of each register. It also provides instruction regarding how to correctly pronounce these vowels—both nasal and non-nasal—by describing tongue placement and airflow. In chapter two, spectrograms display of each vowel in the lower, middle, and upper range. Each vowel was sung with and without nasality. I compared the graphs side-by-side. These spectrographs show which overtones are present on each note and which ones need to be modified for optimal resonance. The third chapter discuss application of the results to my French repertoire. The final chapter deals with the conclusions and the findings of the study.

This study utilizes my voice and my experience. I am using my voice because this is something I have personally struggled with as a singer and have gotten a better idea of

with time and practice. I also only focus on the mezzo-soprano voice as that is my voice type, rather than focusing on the female voice in general due to registration differences. I used the latest version of Voce Vista (5.6.1.6330) to get my spectrographs.

From experience, French nasal vowels need to be slightly modified in the upper range. This allows a singer to have proper vocal technique. However, this change cannot be overdone so that the word can still be understood. Modification of the nasal vowels is not necessary in the middle and lower range because it is in a more accessible part of the singer's voice.

Books utilized in this research included David Adams' *A Handbook of Diction for Singers*, *The Interpretation of French Song* by Pierre Bernac, Richard Miller's *The Structure of Singing: System and Art in Vocal Technique*, and many others. The second edition of Adams book is split in three parts focusing on the Italian, German, and French language. I used his French diction section and specifically his chapter on pronunciation of the French nasal vowels where he individually explains each vowel and what incorrect pronunciation sounds like. *Singing in French: A Manual of French Diction and French Vocal Repertoire* by Thomas Grubbs and *French Diction: A Guide for Singers* by John Glenn Paton were used in tandem with the previously mentioned books. These books described how to form the vowels with and without nasality. Richard Miller's *The Structure of Singing* aided in providing information about the mezzo-soprano. The book has specific chapters over registration for the male and female voice. Within it, the ranges of each register are defined. Miller also has a chapter over vowel modification which gave me more insight to my research. Pierre Bernac's *The Interpretation of French Song*

is useful when looking at the meaning of the text and performance practice for the repertoire being used in the study.

The results of this study could guide singers on precisely when and how much to modify their vowel so that they still have clarity of the word, proper technique, and optimal resonance.

Chapter 1

The mezzo-soprano, mezzo meaning “middle,” is a voice classification between soprano and contralto. The recognition of this voice type dates back to the middle of the eighteenth century. The formation of a repertoire that catered to its strengths and weaknesses is a nineteenth-century invention. Mezzo-sopranos’ vocal range commonly extends from F3 to B5 (Miller 1986, 135). They have a darker tone color than sopranos, and their voices resonate in a higher range than a contralto. Within the voice, there are different registers. There has been much debate about the meaning or the science behind registers. James McKinney begins his chapter about registration within the following:

No other area of vocal instruction is as shrouded with mystery, semantic confusion, and controversy as the subject of registers and registration. The chief reason for the confusion is that the word *register* is used to describe so many different things. All of the following meanings are in current use: (1) a particular part of the vocal range (upper, middle, or lower register), (2) a resonance area (chest or head), (3) a phonatory process, (4) a certain timbre, and (5) a region of the voice which is defined or delimited by vocal breaks. (1994, 93)

McKinney later comes to a simple definition describing it as “a particular series of tones, produced in the same manner (by the same vibratory pattern of the vocal folds), and having the same basic quality” (1994, 93). Acknowledging the registrations in a voice can help the singer to narrow down what repertoire will best fit their voice.

Richard Miller defines the ranges of each register for the different voice types in his book *The Structure of Singing*. In Figure 1.1, Miller categorizes the registers as chest, lower middle, upper middle, upper, and flageolet (Miller 1986, 135).

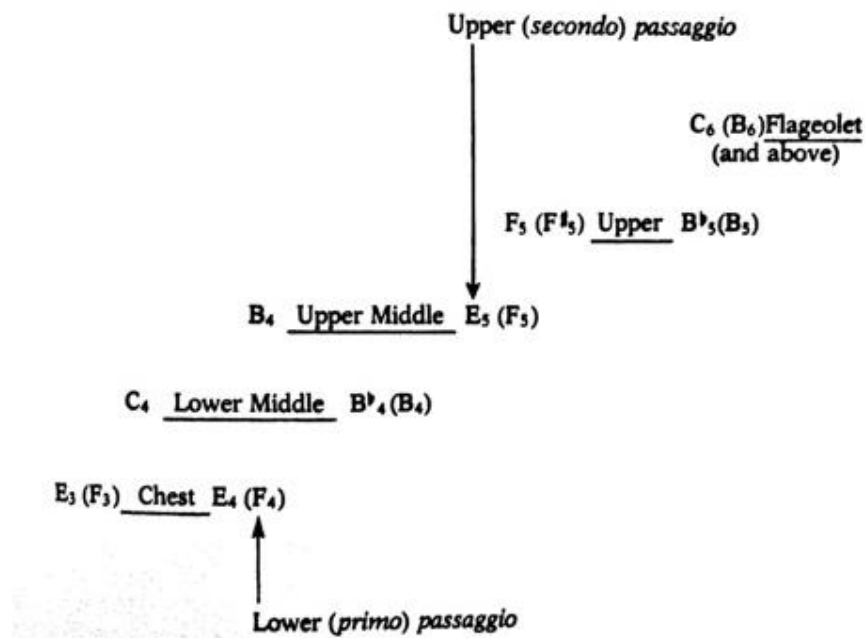


Figure 1.1. Range of registers in mezzo-soprano voice

It is important to understand that each voice is unique, and registers can differ between singers of the same voice classification. This study will combine the lower middle and upper middle registers defined by Miller and refer to the combined range as the middle register. The range for the middle register will be F4 to E5.

The French language has four nasal vowels: /ã/, /ɛ̃/, /ɔ̃/ and /œ̃/. Nasality is added to the vowel if it is followed by an "m" or "n" in the same syllable. When pronouncing these vowels, it is important to keep them light and unaccented. Nasality is described as a "color added to the basic vowel"; too much is unwelcome (Paton 2012, 52). Nasal vowels do not exist in the English language so when learning to pronounce them one must learn to pronounce the vowel correctly without nasality and then add it to the vowel. Vowels are formed by coordinated movement of one's essential articulators, which are made up of the jaw, lips, teeth, tongue, hard palate, and soft palate. Figure 2.2 is a chart created to show what position the tongue should be in for each vowel. When singing these non-

nasal vowels, the soft palate should be lifted and the tongue should touch the top of the bottom teeth (LaBouff 2008, 35).

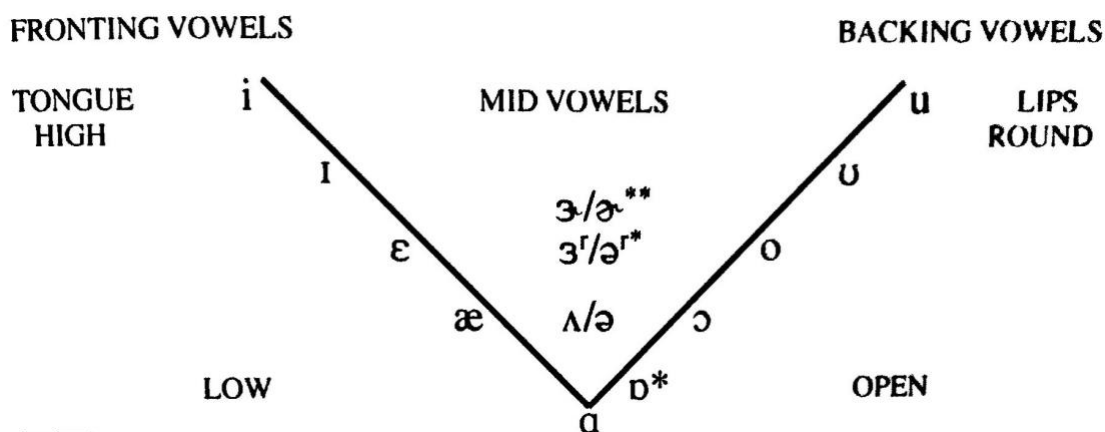


Figure 1.2. Vowel Chart

The /ɑ/ in French is considered a "dark" vowel. It requires the tongue to be in a low position while still having a slight arch to avoid over depressing. The singer must keep the tongue relaxed and the jaw dropped. The lips are a bit rounded but not protruded. In English, this sound is similar to the one made in the word "fawn."

The French /ε/ is an "open" vowel or some call it a "fronting vowel" (LaBouff 2008, 35). The jaw is in the same position as it was in for /ɑ/ but the lips are now relaxed. The back of the tongue is raised to "lightly or not at all" touch the molars (Paton 2012, 34). This vowel is close to the sound in the English word "red."

The tongue is back in its low position for /o/. This vowel can be considered "dark" or "closed." The lips are rounded to match the shape of the vowel but not protruding so far that they make an "oo" sound. Unlike the vowels before, the jaw is now "relaxed in a half-closed position" (Paton 2012, 39).

The /œ/ sound is a mixed vowel. It requires specific essential articulators to form the shape of two vowels. The tongue will need to be in the same position as in /ɛ/—it must be raised in the back while the tip is touching the bottom teeth. The lips are shaped the same way they are when pronouncing an “open o” vowel or /ɔ/. The lips are rounded but away from the teeth.

Again, when singing these vowels without the nasal accent or tilde /~/ over it, the soft palate must be lifted to avoid air escaping through the nasal passage. When the soft palate or velum is lifted, it creates a larger resonance space. The *levator veli palatini* muscle is responsible for lifting the velum. The muscle “originates from the temporal bone (skull) and the auditory tube to form a sling-like structure drawing the palate upward and backward at an oblique angle” (McCoy 2019, 255). Nasality is added by slightly lowering the soft palate. Voluntarily lowering the velum can be learned through different vocal exercises or by using a hand mirror to see the movement.

Chapter 2

A spectrogram is a visual representation of sound—or in this case, the voice—that is shown on a graph. Time is on the x-axis while frequency is on the y-axis. Frequency is "the number of periods (complete cycle of vibration, including both compression and rarefaction) that occur each second within a sound wave" (McCoy 2019, 36). Frequency is measured in Hertz (Hz). The strength of the color shows the strength of the harmonic. When using the voice during a spectrogram, multiple waves will appear because the folds vibrate at different frequencies. The lowest wave on the spectrogram is the fundamental frequency (F0) or the pitch being sung. All the other waves above F0 are called overtones. The waves that fall in the range 2,400-3,200 Hz are often called the "singer's formant (Fs)." A formant is a resonance of the vocal tract. A singer can practice creating the sound so that it can reach the singers formant frequency range. Scott McCoy explains the practice in this way:

To create the desired sound, the epilarynx, sometimes called the collar of the larynx, must be in a six to one relationship with the surrounding space in the throat. This ratio is achieved by maintaining a relaxed, neutral larynx position, with little or no tension in the constrictor muscles that run through the pharyngeal walls. In some cases, the epiglottis actually tilts forward while singing, narrowing the laryngeal outlet to enhance the resonance potential in frequency range of Fs. (2019, 28)

When the voice has strong overtones in the singer's formant range, the sound is able to be heard over an orchestra. This is important for opera singers because they are not amplified by a microphone—they must project their voices.

The nasal and non-nasal vowels were sung on D4 for the low register, B4 for the middle register, and F5 for the upper register. Each vowel was sung for five seconds and recorded using Voce Vista software.

The /a/ vowel was formed as described earlier in the essay. When looking at the two sides of the image for the low register in Fig. 2.1, there is not much of a difference between the two. The color of the F0 in the left image, which is the non-nasal vowel, seems to be a bit brighter with its blues and yellows than the nasal. The vibratos have a similar shape in both graphs. The brighter colors of the overtones indicate that there is just a little more power in the non-nasal vowel.

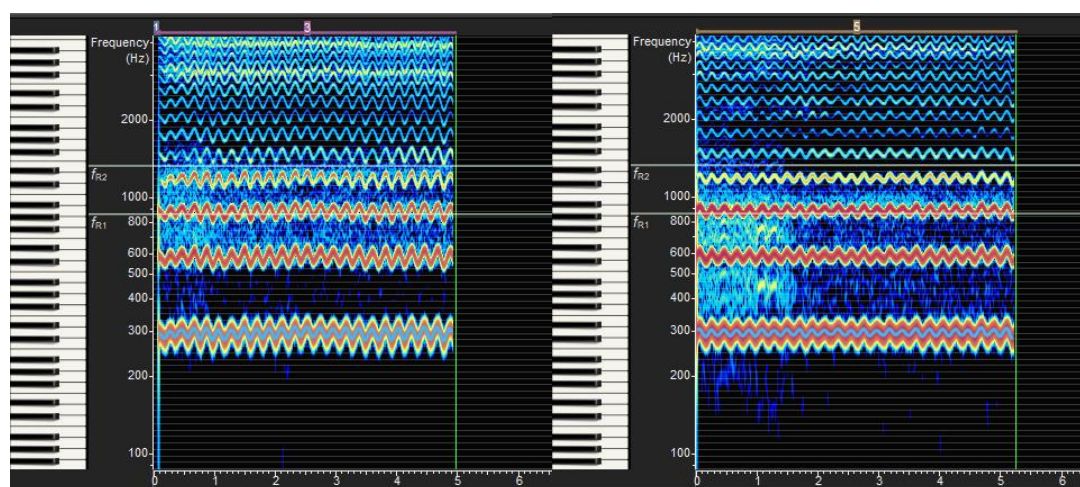


Figure 2.1. Low register /a/ vowel (left) and /ã/ vowel (right)

The middle register in Figure 2.2 and high register shown in Figure 2.3 show a few more differences between the two vowels than the low register did. While both F0 are strong in the middle register, there are more colorful overtones in the singer's formant range on the non-nasalized vowel. When looking at Figure 2.5, the left side has very dark overtones compared to the right side of the image. The vibrato on the nasalized vowel in the high range is very inconsistent and unstable.

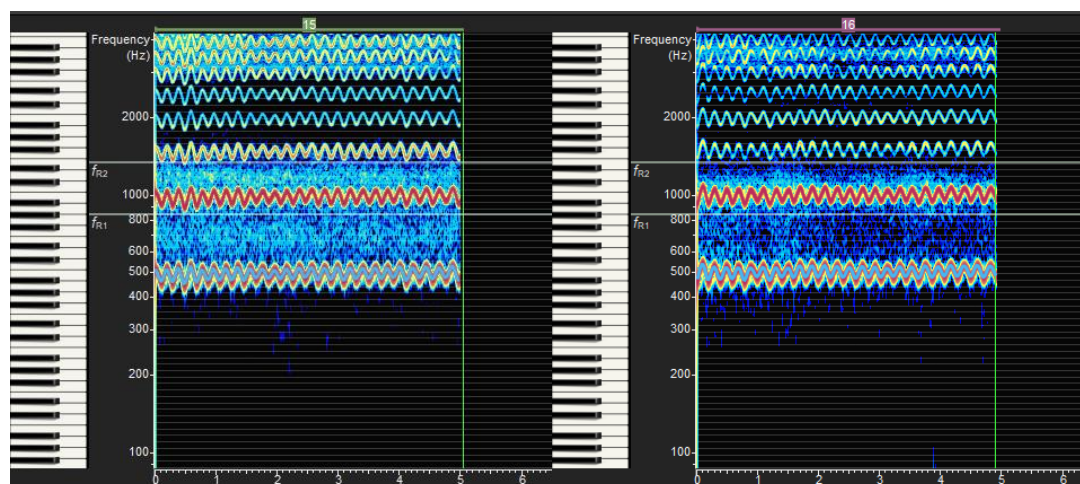


Figure 2.2. Middle register /a/ vowel (left) and /ã/ vowel (right)

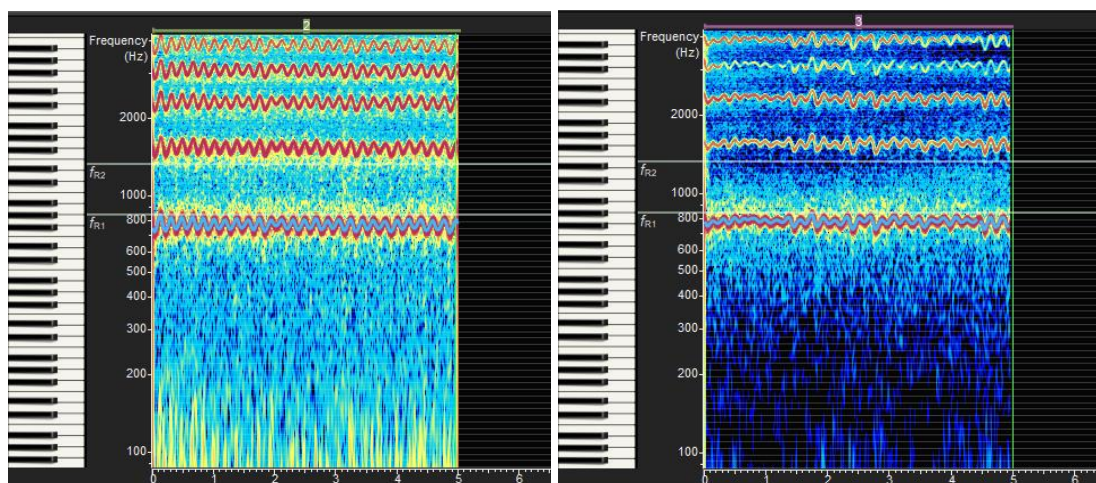


Figure 2.3. High register /a/ vowel (left) and /ã/ vowel (right)

In the upper register, I struggled to control how much nasal I was using which led to poor technique and unstable vibrato. Therefore, nasal vowels should be left out and modified to the /a/ or even to an /ɔ/ vowel in the upper register. Modification should start to occur as the voice is approaching the high register. The middle register images showed that the non-nasal vowel had stronger overtones in the singer's formant range while the full nasal vowel did not. Clarity of the word still has importance in the middle register so

the singer should practice slightly lowering the soft palate to achieve a slight nasal sound. This will allow some of the overtones to still be strong and allow the voice to project. The nasal vowel should be utilized in the lower register because the images did not show a significant enough difference to justify singing without nasality.

The / ϵ / vowel has a few brighter overtones in the nasal vowel versus the non-nasal vowel in the low register (Fig. 2.4.). However, the non-nasal / ϵ / has more overtones throughout while the nasal vowel loses them at the higher frequency. The middle register non-nasal image shows strong overtones in the singer's formant range similar to the / α / vowel in Figure 2.2. Overall, the waves are brighter in the left side of the image than the right image in Figure 2.5.

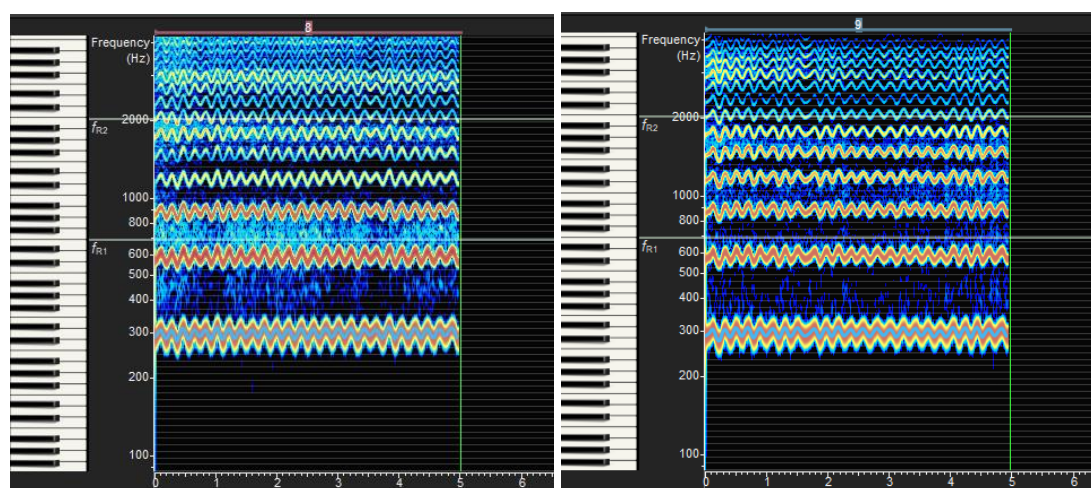


Figure 2.4. Low register / ϵ / vowel (left) and / $\tilde{\epsilon}$ / vowel (right)

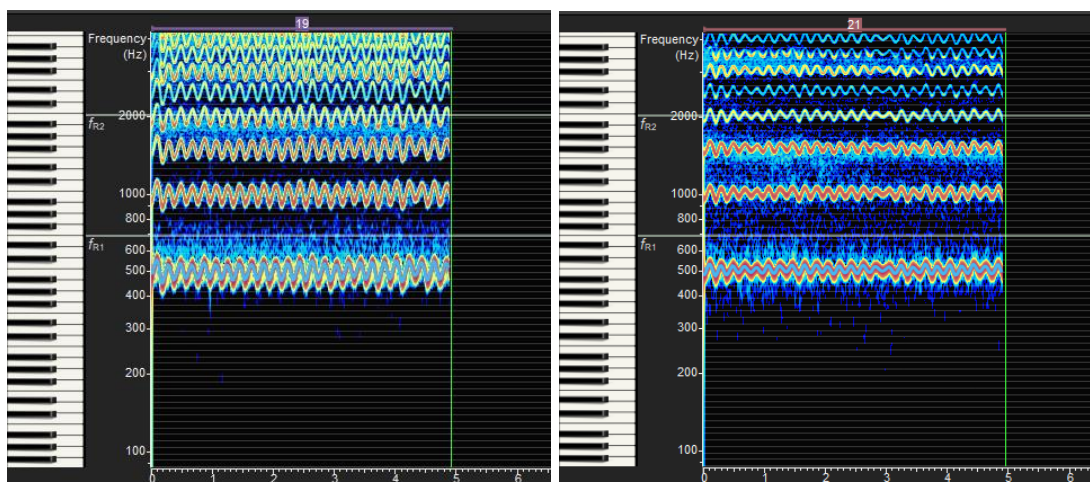


Figure 2.5. Middle register $/\epsilon/$ vowel (left) and $/\tilde{\epsilon}/$ vowel (right)

The vowels in the high register have comparable results as the $/\alpha/$ vowel. The left side of the image in Figure 2.6 has a big stable wave for F0 while the right side has a more minor inconsistent wave. The reds in the overtones on the non-nasal vowel are very dark while the color is not as prominent in the $/\tilde{\epsilon}/$ vowel. Some of the overtones at the higher frequency disappear in the right side of the image.

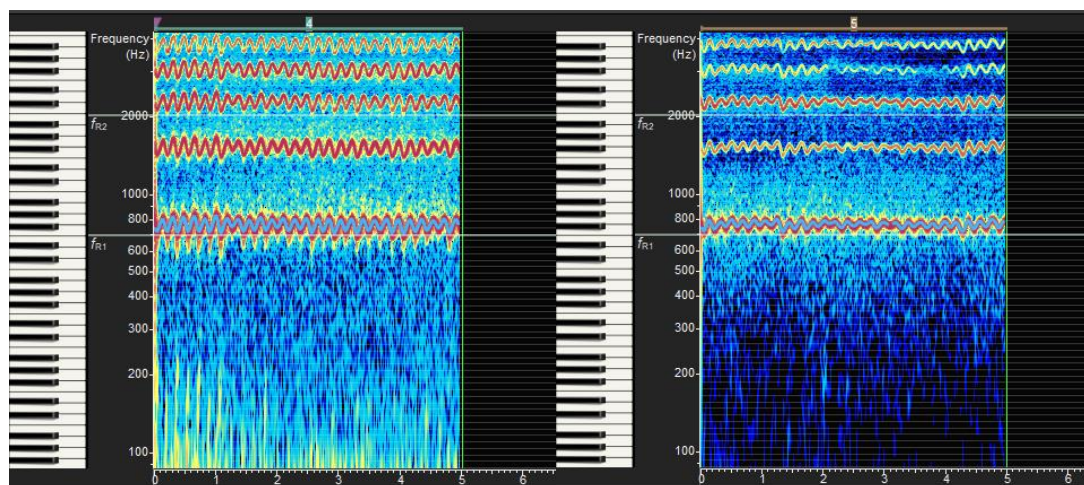


Figure 2.6. High register $/\epsilon/$ vowel (left) and $/\tilde{\epsilon}/$ vowel (right)

In the low register, I would keep the vowel nasalized for correct text pronunciation. The / ϵ / vowel in my middle register had stronger overtones than the / $\tilde{\epsilon}$ /, therefore I might open the vowel up more since it rings better in my voice. In the high register, I would completely modify the nasal vowel to just sing / ϵ /. The voice will have much more consistent vibrato and be heard over an orchestra in a performance.

With the / o / and / \tilde{o} / vowel, both sides of the spectrogram image look very similar. They each have a strong fundamental pitch and colorful overtones. However, the non-nasal vowel loses resonance of overtones as it gets closer to 2000 Hz but then regains the resonance around 2300 Hz. When looking closely at the right image, there seem to be fewer overtone waves than the left image. The nasal vowel does not lose as many overtones as the regular vowel and still has some resonance in the 2500 Hz but also doesn't have as many overtones as the left side of the image.

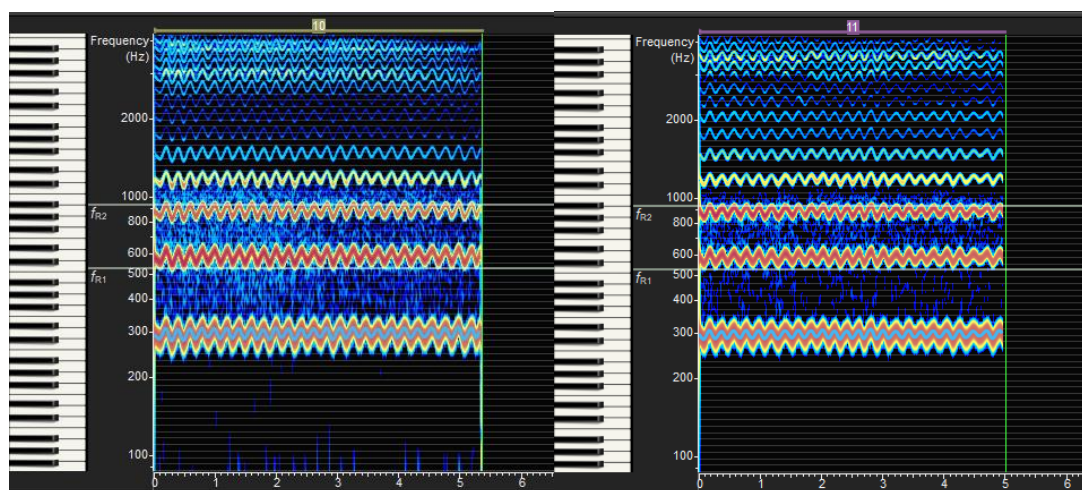


Figure 2.7. Low register / o / vowel (left) and / \tilde{o} / vowel (right)

With the low register, the images in Figure 2.8 are almost comparable when it comes to color and quantity of overtones. The one distinguishable difference is the vibrato in the nasal vowel. The vibrato is not consistent just like the right side of the

image in Figure 2.3, Figure 2.6, Figure and 2.9. The high register $/\delta/$ shown in Figure 2.9 displays a very inconsistent F0 and it was also technically challenging to keep the airflow steady and stabilize the pitch while the soft palate was lowered on this note.

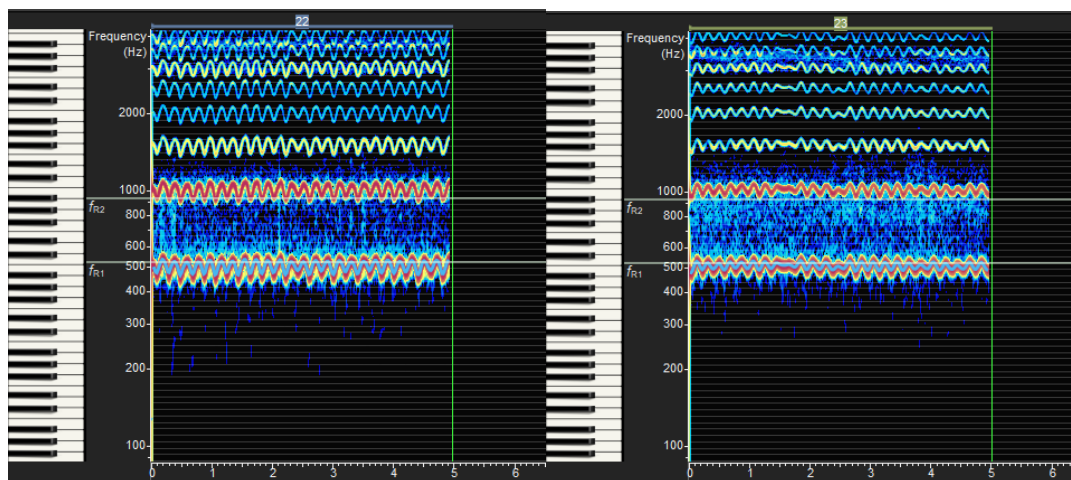


Figure 2.8. Middle register $/o/$ vowel (left) and $/\delta/$ vowel (right)

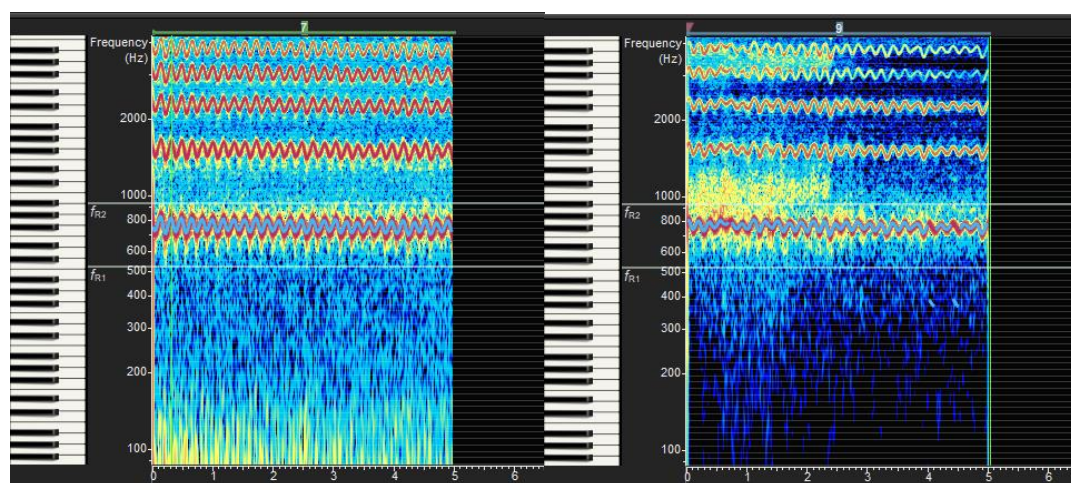


Figure 2.9. High register $/o/$ vowel (left) and $/\delta/$ vowel (right)

The low register images for the $/o/$ and $/\delta/$ vowel show little difference in the overtones. For that reason, nasal vowels should be acknowledged in the text when singing. The middle register shows an inconsistent wave on the nasal vowel; however,

the colors of the overtones are similar. The singer should practice control of the soft palate to avoid over nasalization. Overdoing the / δ / vowel in the middle register could lead to technique issues. The singer should modify in the high register to the / o / vowel in place of a nasal.

The / æ / vowel presented the most challenges for consistent pronunciation because it is made up of two sounds. Like the other low register vowels, Figure 2.10 shows very similar images. With the low register, it seems that resonance is not drastically affected by the nasal vowel. The middle register shown in Figure 2.11 is where a change in color of overtones is seen on the spectrogram. The non-nasal vowel overtones are more potent. There is also a loss of overtones at the top of the image in the nasalized vowel.

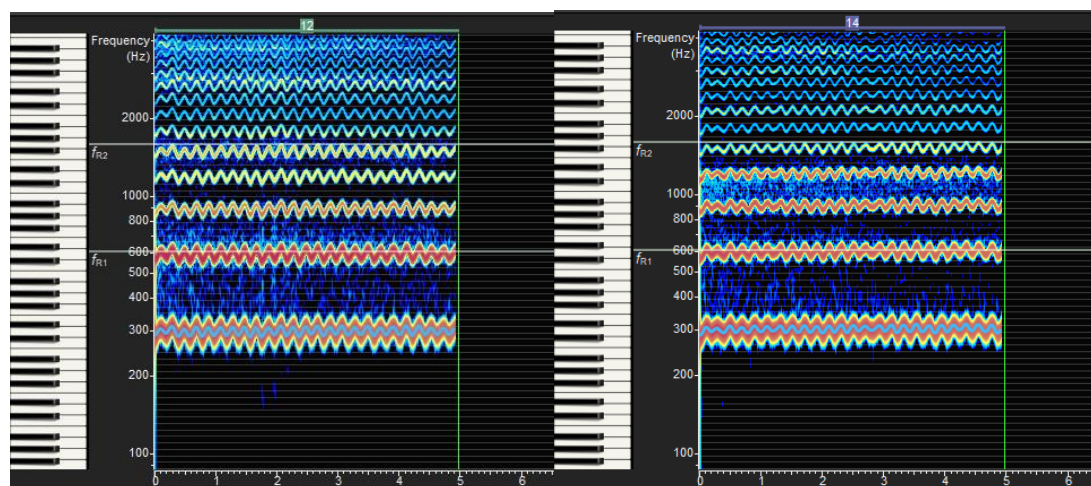


Figure 2.10. Low register / æ / vowel (left) and / æ̃ / vowel (right)

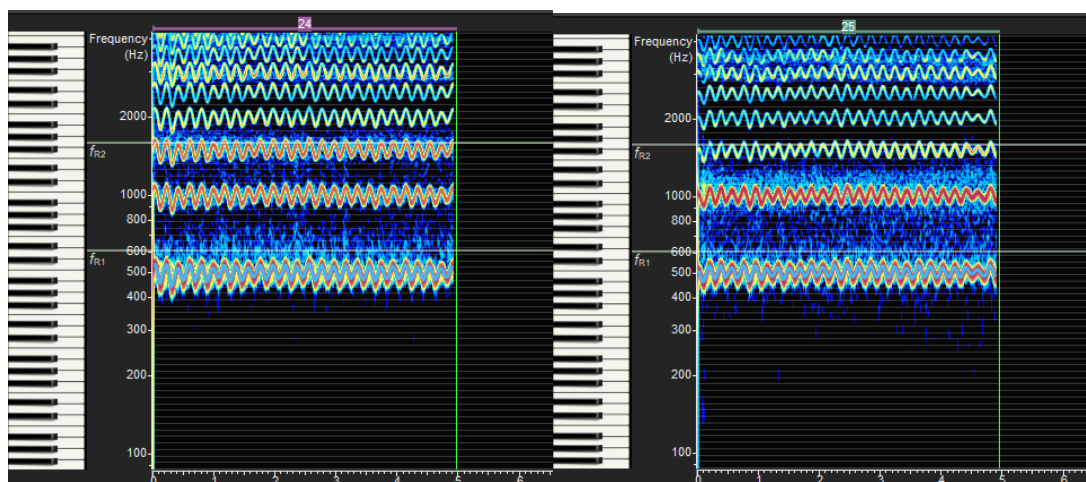


Figure 2.11. Middle register /œ/ vowel (left) and /œ̃/ vowel (right)

The /œ/ vowel was not only difficult to correctly pronounce but vocally uncomfortable to sing and maintain vowel shape in the high register. The right side of the image in Figure 2.12 exemplifies the challenge of the nasal vowel. The jagged wave shows breaks in pitch and inconsistent vibrato. In the high register, there was also a struggle to control the soft palate. The nasality was not a subtle color to the note—it was fully nasal. The regular vowel is not as bright as the past high register vowel graphs. Overall, this vowel does not resonate well in the upper range.

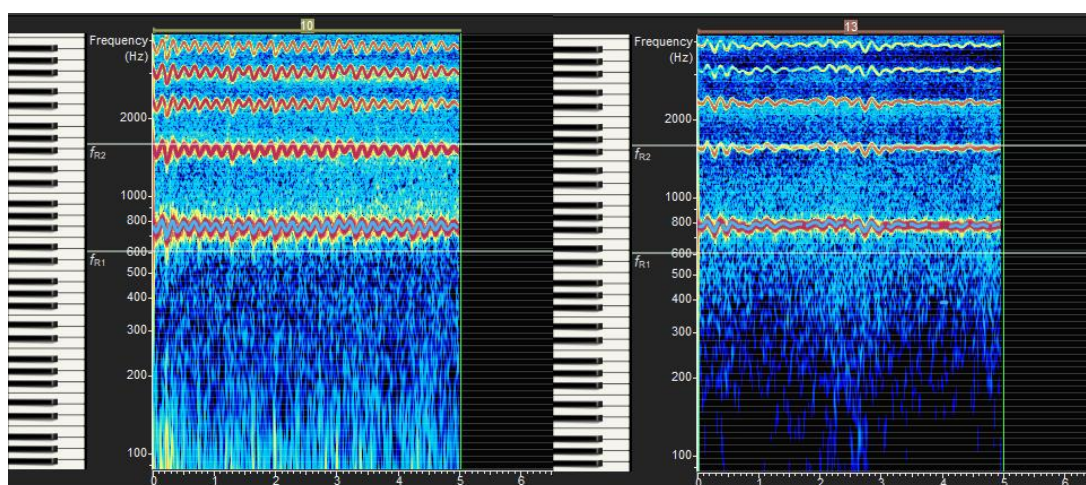


Figure 2.12. High register /œ/ vowel (left) and /œ̃/ vowel (right)

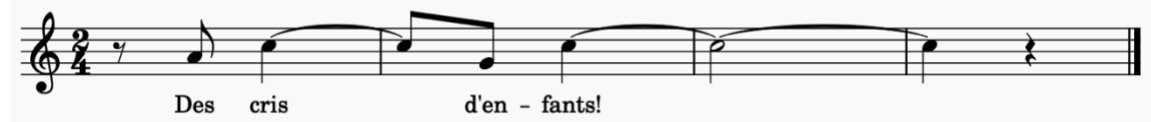
Similar to the other vowels, the nasal / $\tilde{\text{œ}}$ / should be used in the lower register when needed. The middle register image showed stronger overtones in the non-nasal vowel. However, if the note is on the lower half of the middle register, the nasal should be used. If the note is approaching the upper register, the nasal vowels should be modified. In the high register, the nasal vowels should be completely left out. This will allow the singer to have a consistent vibrato and strong overtones.

Chapter 3

Taking the information and results from the spectrograms, I can now apply this to my repertoire. Again, nasality acts as a color to the vowel. Similar to the English language, singers in their high range might leave off certain consonants. The same should be done with the French nasal vowels.

There are many nasal vowels in “Werther! Qui m’aurait dit . . . Ces lettres!,” the lengthy letter aria sung by Charlotte in Massenet’s *Werther*. This aria is commonly done by a mezzo-soprano voice. Example 3.2 shows a phrase where a singer might struggle to decide whether or not to sing the nasal vowels. The /ã/ occurs twice in the word “d’enfants.” The first vowel is in the lower part of the middle register and on an eighth note. The singer should sing /ã/. The next vowel is on C5, approaching the upper register, and is sung for a long value. To allow the note to be held for its full value with ease, it should be sung as an /a/ without the nasal.

Example 3.1. Jules Massenet, “Werther! Qui ’aurait dit . . . Ces lettres!” from *Werther*, mm.65-68



Claude Debussy’s “Green” and “Spleen” is a part of his song cycle *Ariettes oubliées*. These French *mélodies* are given to advanced singers due their complicated

vocal lines and dense meaning. Example 3.2 and Example 3.3 show phrases from both pieces set in the lower register. The nasal vowels should be sung in both phrases to allow for correct pronunciation.

Example 3.2. Claude Debussy, “Green” from *Ariettes oubliées*, mm. 28-30

Que le vent du ma - tin vient gla - cier à mon front

Example 3.3. Claude Debussy, “Spleen” from *Ariettes oubliées*, mm. 18-21

Je crains tou-jours ce qu'est d'a-tten - dre Quel-que fuite a-tro-ce de vous

“Le Martin-Pêcheur” by Maurice Ravel tells the story of a blue kingfisher perching itself on the end of a fishing pole. Example 3.4 contains two /œ̃/ vowels on the “un” and one /ɛ̃/ on the last syllable of “martin.” The first “un” is neighbored by “pour un arbe.” In this situation, the ending letter connects onto to the next word. To prepare for the C5 on the word “arbe,” the singer should modify to open on the “un” and sing it without the nasal vowel. The remaining nasal vowels in the phrase should be sung because they are closer to the lower register.

Example 3.4. Maurice Ravel, “Le Martin-Pêcheur” from *Histoires naturelles*, mm. 15-16

Je ne res - pi - rais plus, tout

fier d'etre pris pour un arbe par un mar - tin pê - cheur

Isaac Albeniz’s “Le Paradis retrouvé” is filled with enchanting musical lines from both the piano and the voice. Example 3.5 is taken from the final few lines of the poem. The first nasal vowel happens on the word “bien.” With this word being on an E5, the singer should keep the soft palate lifted to sing an /ɛ/ vowel. The other nasal vowels in this phrase occur in “sans fin” and should be sung with correct pronunciation.

Example 3.5. Isaac Albéniz, “Le Paradis retrouvé” from *Quatre Mélodies*, mm. 33-35

trer, Ou bien de - vrai, je er - rer sans fin, Ma

“Hôtel” is the second *mélodie* in Francis Poulenc’s set, *Banalités*. It is often referred to as Poulenc’s laziest song due to the nonchalant mood created by the piano, the voice, and the poetry. The opening line is displayed in Example 3.6. The French word “chambre” meaning room should be sung with the /ɑ̃/ nasal vowel because it is a part of the lower register. The other nasal vowel in this example would occur on the word “son.” If possible, the singer should use the correct pronunciation. While this is on the higher

side of the middle register, it is just an eighth note and should be sung with the nasal vowel.

Example 3.6. Francis Poulenc, “Hôtel” from *Banalités*, mm. 2-6

Ma chambre a la form-me d'u-ne ca - ge Le so-leil pas - se son bras

Francis Poulenc’s “La Dame d’André” is the first piece in the song cycle, *Fiançailles pour Rire*. Example 3.7 is the opening line in the piece. The first word, “André,” could cause some issues for the singer if the nasal vowel is being sung. Therefore, the nasal vowel should be left out. In terms of notes, the opening line is set higher in the middle register and falls into the upper register. To allow freedom of the voice, all nasal vowels should be modified in this vocal line.

Example 3.7. Francis Poulenc, “La Dame d’André” from *Fiançailles pour Rire*, mm. 4-7

An-dré ne con - nait pas la da - me Qu'il prend au - jour - d'hui par la main

“La Diva de l’Empire” or “The Diva of the Empire” is composed by Erik Satie. Example 3.8 is the opening line of this piece and it repeats two other times. The nasal vowel on the word “grand” should be modified. This is because of what pitch it is on and at what dynamic it should be sung.

Example 3.8. Erik Satie, “La Diva de l’Empire,” mm. 9-12

Sous le grand cha - peau Green-a-way, Met - tant l'eclat d'un sou - ri - re

Producing a nasal vowel closer to the upper register might create some challenges for the singer as well as having to sing it *piano*. The rest of the line can be sung with correct pronunciation due to it being in a lower part of the voice.

Conclusion

Looking at the spectrograms for the lower register, there was not a significant enough difference between the non-nasal and the nasal vowels to justify modification. For the low register, all nasal vowels should be pronounced. The middle register becomes more of a gray area for modification. If the pitch resides on the lower end of the middle register, it should not be modified. As the note approaches the upper register, the vowel should be modified. The same should be applied to notes that have long values. In the high register, the nasal vowel should be completely left out. This will allow the singer to have less tension and more space in the oral cavity to have correct technique and consistent vibrato.

References

- Adams, David. 2008. *A Handbook of Diction for Singers: Italian, German, French*. 2nd ed. New York: Oxford University Press.
- Bernac, Pierre. 1970. *The Interpretation of French Song*. New York: Praeger.
- Grubb, Thomas. 1979. *Singing in French: A Manual of French Diction and French Vocal Repertoire*. New York: Schirmer Books.
- LaBouff, Kathryn. 2008. *Singing and Communicating in English: A Singer's Guide to English Diction*. New York: Oxford University Press.
- McCoy, Scott. 2019. *Your Voice: An Inside View 3*. Gahanna, Ohio: Inside View Press.
- McKinney, James C. 2005. *The Diagnosis and Correction of Vocal Faults: a manual for teachers of singing & for choir directors*. Long Grove, IL: Waveland Press.
- Miller, Richard. 1986. *The Structure of Singing: System and Art in Vocal Technique*. New York: Schirmer Books.
- Paton, John Glenn. 2012. *French Diction: A Guide for Singers*. Van Nuys, CA: Alfred Music.