PURE VOWEL SOUNDS AND TONE PRODUCTION pdf

1: PURE VOWEL - Definition and synonyms of pure vowel in the English dictionary

*Pure Vowel Sounds And Tone Production [Leo Kofler] on www.enganchecubano.com *FREE* shipping on qualifying offers. This scarce antiquarian book is a facsimile reprint of the original.*

It is a conscious equalizing of the ascending scale. Some singers make these vowel modifications naturally and correctly, without even being aware them. It then becomes necessary for them to learn the subtleties of singing vowels in the upper extension. In a futile attempt to promote better blending of voices and clarity of diction within their groups, some ill-informed choir directors and teachers will instruct their choir members or students to use only speech vowels - vowels that are pronounced in the exact same way that they would be during speech, regardless of pitch. However, singing the exact vowels that are written by the composer is illogical and unnatural to the vocal instrument, as I will explain further in the following sections. Insistence upon singing the vowel written on the page will inhibit or prevent the natural ability of the singer to find the modification that serves the needs of the music and the voice. By avoiding vowel modification as part of their technical training, voice teachers and singers ignore a means of producing a more resonant, carrying tone, and a more healthy, efficient way of achieving it, not to mention more control over dynamics and more ease in upper range singing. All of these technical problems create a faltering and inept performance, since singers who are experiencing register problems find it difficult, if not impossible, to handle the musical and vocal problems that occur at the passaggi, and since imbalance of tone and an inability to sing at different dynamic levels limits the singer. To avoid these artistic limitations, the proper muscular activities need to become almost reflexive. These two parts of the vocal instrument should augment, rather than fight, each other. Singers should sing vowels that free up the voice. When vowels are correctly modified, the singer experiences more comfort, the tone is more beautiful, and the air supply lasts longer. With the aid of vowel modification, singers will have fewer intonation problems, better resonance across their ranges, more carrying power, easier production of forte loud and piano soft , clearer diction, and a much better blend. In my view, vowel modification is linked to two major aspects of singing: In singing, one must learn to coordinate the acoustic and physiologic events of vowel definition while at the same time taking into account the relationships and adaptations of speaking to the singing voice. Only when these factors are coordinated can balanced resonance, with the upper partials that give the professional voice its characteristic chiaroscuro balanced timbre, be fully realized. Below, I have attempted to discuss the concept of vowel modification from these two perspectives. It is impossible to completely separate these two aspects of vowel modification, since one affects the other. Acoustics The vocal instrument, like all other instruments, is responsive to the laws of acoustics. When the vocal tone is correctly formed by acoustical phonetics, the singer creates a more pleasing, carrying tone, and avoids many muscular problems. Vowel modification is an extended method of bringing the frequencies of the vocal folds and the vocal tract into accord with the various pitches and vowels. Although it is possible for a vocalist to sing any vowel on any note within his or her range, some vowel forms will have better acoustical interactions with the vocal folds, aiding and amplifying their air pressures more effectively, while other vowel forms will have diminishing acoustical interactions with the vocal folds. Modifications, which are achieved by making small adjustments to the size and shape of the vocal tract, persuade the resonator vocal tract to work efficiently, which creates optimal resonance and balance of tone. When the resonator adjusts so as to amplify the sung pitch, the vowels are, in that instant, automatically modified. This kind of modification has positive effects on tone as well as vocal health, as it brings sung pitch and the resonance of vowels into their best relationship. Some misguided teachers and choir directors instruct their students and choir members to sing all vowels using the same mouth shape throughout the range. However, it is impossible to maintain one vowel position at all pitches. If vowel positions are kept in a fixed state rather than modified, the voice will run into and out of resonance points, resulting in a sound that is out of tune, harsh, unfocused, and unsteady in vibrato rate. Although singing the vowel precisely as it would be pronounced during speech and exactly as the composer wrote it would be logical, it is not natural to the vocal instrument. Our ability to produce speech vowels absolute language values throughout the vocal range is a misconception because the vocal instrument

simply does not work that way. In fact, the more that the sounds of speech vowels are approximated during singing, the more inharmonic the voice will become. For example, some students vainly attempt to maintain the same spread mouth position of [i] that is used during speech above the upper passaggio, refusing to allow for the rounding that is necessary in order to facilitate a smooth transition into the head register. Experienced composers understand this and write accordingly. On high pitches, the emphasis is on vocal skill - the beauty and impressive sound of the voice - rather than on diction skills. Adherance to speech vowels produces tonal interferance because of the incompatibility of the vowels and pitches, which, in turn, destroys rather than promotes clear diction. Not only does avoiding natural acoustical adjustments create tonal imbalance, but it also risks numerous technical and health problems. Singers who utilize many non-harmonic sounds speech vowels that conflict with the written pitches do not sing as long because this practice is physically unhealthy. When asked to sing speech vowels in the higher parts of their ranges, singers will experience vocal unease and difficulty - including discomfort, a tone that is lacking in beauty, a serious diminution of the air supply, a reduction in carrying power, uncontrollable pitch inexactness either flat or sharp, but most oftentimes flat that are not controllable even when a singer is acutely aware of them, and deteriorating vocal health over time. I will discuss this practice from a health perspective in the following section on vocal protection. This fact means that neither diction nor resonance will be aided by singing speech vowels. Whereas spoken vowel values vary according to languages and dialects, in singing, vowels must always be compatible with vowel pitch and the harmonic of the sung pitch. This is one of the reasons why people can sing in a foreign language without an accent but cannot speak it without an accent. Regarding intelligibility of diction as it relates to vowel modification, research has shown that, once a voice reaches the pitches of its high passaggio, the human ear can no longer perceive the difference between that same voice singing one front vowel or another, one back vowel or another. Furthermore there are acoustic regions where more than one vowel intersect. This means that one vowel adjustment will sound like two or even three different vowels depending on context surrounding consonants, etc. Vocal Tract Shaping, also posted on this website. Intelligibility, therefore, does not mean that someone is singing the spoken form of a vowel. Since the listener cannot perceive the difference between certain vowels that have similar qualities at high pitches, it makes no sense to attempt to sing a vowel that is incompatible with the sung pitch and that is more difficult and possibly uncomfortable to execute. Besides, at these high pitches, intelligible diction is still possible because it is the consonants and their positions in relation to the vowels that play a larger role in distinguishing words. This is true throughout the range because every note has a different resonance necessity, and therefore a different formant balance due to its unique vocal tract configuration. A singer whose vocal resonance is even and consistently good from note to note - high or low, soft or loud - is changing the vowels semitone by semitone, and the vocal tract is constantly changing form. Good singers, whether consiously or not, depend on finding an easy adjustment, or modification, for the pitch. These modifications may not be easily perceived by the listener, and the singer may not even take note of them, but they do happen throughout the range, even within speech inflection range. In fact, vowels are naturally and effortlessly modified during speaking tasks, as inflection rises or lowers and as volume changes, although we are not aware of these subtle adjustments because they occur so commonly and instinctively. The fact of the matter is that bad sound is far more noticeable than slight modifications of language values. It therefore makes sense to allow for natural resonance adjustments created by vowel modification. Those experts who really understand the acoustics of the voice - acousticians - consider a pure vowel to be one that delivers ease, beauty, and resonance on that particular pitch. True vowel purity, then, is the optimum acoustical response for a given vowel. When the most resonant vowel on a particular sung note is found, it is invariably different from the one used in speech patterns. Adopting acoustical modified vowels instead of speech vowels will benefit the singer in the areas of the tonal balance and vocal health. Both vowels and sung tone have pitch. When the vowel is incompatible with the sung pitch, the singer may experience anything from slight discomfort all the way to actual pain, the tone will be anywhere from slightly less than beautiful all the way to actually ugly and unpleasant, and the air supply will be diminished radically because it takes more air to sustain an inappropriate vowel. Inflexible language treatment - that is, insisting that all vowels be sung exactly as they would be spoken - tends to impair the musicality, expressiveness, and survival

of voices. This is why an unknowledgeable teacher who insists on treating diction inflexibly can do a great deal of harm to his or students by ignoring the laws of vibration and resonance. With acoustical vowels, the harmonic values of the pitch coincide with the pitch of the vowel itself. Singing with the best relationship of the larynx vibrator and the vocal tract resonator is healthier e. The core of the vowel, which itself is achieved by specific articulatory definitions e. Each vowel has a quality that is unique to that particular vowel, a quality that names the vowel or makes it what it is. The vowel core, then, is the identifying quality. It is also an acoustical phenomenon. For example, when the vowel is identified precisely, the resonance chambers of the vocal instrument are immediately re-shaped so that optimum amplification of the basic sound is achieved. The singer then has greater volume and potential for dynamic variation, as well as improved intonation and greater ease of production. Also, the use of acoustical vowels aids, rather than detracts from, diction. Speech recognition, which all teachers and singers desire, is dependent upon the changing shapes of the filtering resonator tracts above the larynx. A knowledgeable teacher understands this delicate and ideal interaction, and can help his or her students accomplish a great deal by obeying the laws of harmonic pronunciation. Vowel modification must be mastered in order to facilitate smooth transitions throughout the range - from low to high and from soft to loud. As a basic rule, the louder or higher, softer or lower a vowel is sung, the more it will migrate from its original version. Although modification is necessary for all voice types, the problem affects sopranos and tenors especially because they must reconcile with the higher frequencies and intensities of higher and louder tones, and a large resonating cavity is needed to avoid placing strain on the larynx. Vowel modification the use of acoustical vowels is also important in the technique of formant tuning , since modifying vowels is done through making slight adjustments of the vocal tract the resonator , which in turn changes the acoustical qualities and values of the sung vowels. Resonance adjustments acoustic shifts should occur around D for all singers, although depending on the vowel modification involved, they may happen sometimes on C. Good acoustic shifts are especially important for the skill of seamlessly bridging the registers, as well as for accessing pitches above speech-inflection range i. This shifting is subtle, and takes place gradually throughout the scale. If it is left to occur only at the pivotal registration points passaggi where the muscular shifts occur, there will be a noticeable difference in the tone quality and in the vowel quality, and the shift will be made more noticeable by a register break. As I emphasized in the Blending the Registers section of Good Tone Production for Singing, anticipating the registration points and making subtle adjustments to the vocal tract a few notes ahead of time will enable the singer to safely and comfortably execute register changes. It happens a little earlier slightly lower in pitch in dramatic voices and a little later higher in pitch in lighter or leggiero voices. Second formant tuning is more appropriate from F4 on, however, a lighter tenor will feel less stress singing a first formant dominant F4 than a heavier voice will. Regardless, the larynx will rise for an F4 sung in first formant dominance. The leggiero who keeps f1 first formant dominance up until A4b, like some do, will experience a more difficult shift when he finally does go to f2 tuning. Voice pedagogues and acousticians have come up with practical systems for helping singers achieve correct vowel modification. One available tool for helping singers find the right tone balance while singing a vowel is a vowel modification chart. Vowel modification charts have been designed to provide practical details of a system that allows singers to choose the vowel form that would give a compatible frequency with the pitch. Some teachers employ vowel charts to allow their students to aim for a specific modified version of the original vowel that will ultimately enable them to sing the notes with ease, comfort and greater tonal balance. This particular chart is said to be extremely efficient and easily comprehended. A simplified version of a vowel modification chart for the head register can be viewed in Vowel Modification In the Upper Range , below. Such a detailed system for achieving ideal acoustic resonances for every vowel at every pitch may seem overly mechanistic in quality and tedious to some teachers and students, and they may attempt to avoid vowel modification as a result. Some students who are not naturally good with languages may struggle with distinguishing between the subtleties of certain similar vowel sounds and with pronouncing certain vowel sounds that have been adopted from other languages e. They may also fail to accurately imitate these sounds when sung or spoken by their vocal instructors. Nevertheless, using vowel modification charts can be effective for many vocal students. In the best-case scenario, a resonant vowel adjustment will yield sensations that the

singer will come to recognize and reproduce easily as long as the instrument is healthy.

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2: Vowels in the English Language â€“ Language Bits

This scarce antiquarian book is a facsimile reprint of the original. Due to its age, it may contain imperfections such as marks, notations, marginalia and flawed pages.

A vocal register in the human voice is a particular series of tones, produced in the same vibratory pattern of the vocal folds, and possessing the same quality. Registers originate in laryngeal function - the larynx, where the vocal folds are housed. They occur because the vocal folds produce several different vibratory patterns. Each of these vibratory patterns appears within a particular range of pitches and produces certain characteristic sounds or qualities. The term register can be somewhat confusing, as it encompasses several aspects of the human voice, and can be used to refer to any of the following: In order to move smoothly up or down in pitch between the chest, middle and head voice registers or between any two adjacent registers , the registers must blend. When a register break occurs, the tone of the voice will often suddenly become weak, thin and lacking in intensity and volume, and pitch changes will sound abrupt. Sometimes the voice will crack, or there may even be a momentary cessation of sound. These changes to the folds and the laryngeal muscles need to happen gradually rather than suddenly, and need to be accompanied by an adjustment of breath energy. When a singer is moving from one register to another, the goal is to have an evenness of tone so that there is no perceptible "break" or shifting between the registers. Achieving smoothness and a consistency of tone throughout the scale demands a knowledgeable teacher who can instruct the student in how to effectively adjust the mechanism of registration. The good singer knows how to coordinate the registers in such a way that there is a smooth, imperceptible transition from one register to another. To blend these registers, a singer needs to slightly close the two last notes of the lower register when ascending in pitch and slightly open them when descending in pitch. If too much power or volume is put into singing the highest notes of the lower register, it will become more difficult to develop the power, volume and warmth or fullness of tone in the lower notes in the next higher register. Essentially, singers must rein in their voices a little just before attempting to shift into the next register. Many vocal registration problems are really problems of resonance adjustment. The treatment of vowels has a strong effect on the transitions from register to register. It should be noted that the darkening of the vowels should only be done by increasing the acoustical space, not by pulling down the soft palate or the back of the tongue, as these latter techniques lead to inconsistency and diminish the upper overtones. Achieving mastery of the head register involves opening the closed vowels and closing the open ones. Some instructors make use of vowel modification charts to help their students understand how each vowel should change within the head register. Letting go of their previous notions about how their voices should sound in head voice and hearing their instructor demonstrate the gradual modification process is usually enough to help them access head voice. When a singer fails to modify the vowel, a register break is likely to occur, and clear, free tone in head voice becomes impossible. Whenever my students have difficulties transitioning into full head voice, it is most often a problem with failure to allow the vowel to modify. The students often attempt in vain to maintain the same distinctive vowel sound and feel in head register as they do in their speech-inflection range. The vowel then spreads and breathiness occurs, or the larynx begins to rise in an unhealthy manner and phonation becomes tight or squeezed in both sound and feel. Pitch inevitably begins to go flat, and the singer begins to feel tension at the laryngeal level. One approach to helping singers access the head voice range when attempts at modifying the vowel are not successful is the use of healthy nasality, usually the [NG] sound. With the sound placed just slightly in the nose, a pleasant tone can be produced because it is less likely for the vowel to spread. Once the singer can successfully and consistently bridge into the head register, the tone will even out and become balanced. With my students, I emphasize the importance of anticipating these pivotal registration points so that they can begin making the necessary muscular, breath energy and vowel adjustments a couple notes before the voice would naturally shift into the next register. These registration activity points may differ slightly from singer to singer, depending on their ranges and voice types, and with different vowels for the same singers. Anticipating the register changes allows the necessary modifications to take place in advance of the break point, which in turn produces a blended or

mixed voice that is, both functionally and tonally, a cross between the laryngeal mechanisms and tonal qualities of the two abutting registers. The end result of anticipating the register changes is seamless, healthy transitions between registers, created by an evenness of tone throughout the range. It sometimes helps to think of the voice as one continuous or linear mechanism or tone rather than a series of separate registers that must be linked together. Accessing the head register poses particular problems for many untrained singers, and a great deal of those problems occur because of a failure to anticipate and allow adjustments to occur naturally and gradually. Head voice, within the changed voice , occurs at a specific pitch within a scale as a result of the thickness and length of the vocal folds. Minor acoustical changes must be allowed to occur each half step within the head register to prevent the voice from sounding squeezed. For example, a tenor might need to switch into head voice by the C4 or B4, whereas a bass might need to make the switch around the A4. A soprano might make the change to head voice around the F 5, whereas an alto might make it around the E5. Changing into head voice timbre a little earlier or lower in the scale, rather than waiting until the voice absolutely must switch, however, may free up the upper register, improving tone and ease of transition. I find that, even as a mezzo-soprano, I naturally start incorporating head voice timbre into my voice around the C 5 or D5 depending on the vowel and the day, even though my voice could probably hold onto the middle voice timbre and not need to modify the vowels for yet another couple steps. However, if I were to maintain the timbre of the lower register until my voice absolutely must switch, the transition to head voice would be abrupt and highly perceptible, and my voice would start to sound and feel a little pinched or squeezed. Beginning the transition into head voice early enough in the scale allows the singer to find freedom and release in the head register so that a perfect blending of the registers is created. One of the most noticeable consequences of failing to glide smoothly upward into the next register is a flattening of pitch. When a student begins to sing flat on certain notes, it is a telltale sign that he or she has likely reached the end of a certain register and has not made the necessary adjustments to continue singing on pitch. It is possible to extend the natural or chest voice upward by a few more notes past the first passaggio. In a male singer, this extra range of the lower register would represent his zona di passaggio, and would end at his second passaggio. In a female singer, the chest voice would merely be carried up into the lower part of the middle register. Doing so, however, invites registration problems, as well as the potential for strain or injury. Over-extension of the chest register is a very common occurrence with young, pre-adolescent female singers because of the over development of this range. Untrained males will often switch into falsetto tone, rather than full, legitimate head voice, because the decreased involvement of the vocal folds creates a release of the tension that has been mounting since the first passaggio was reached. It is always ideal to learn to blend the registers rather than push the vocal instrument in such an unhealthy, unnatural manner. In my studio, I have noticed that singers of different voice types and vocal weights experience difficulties with negotiating different register transition points. Lower-voiced men tend to have more difficulty moving smoothly into head voice than do women in general, although altos seem to frequently struggle with the register changes between their natural chest voice and middle register. Throaty or hollow sounding voices tend to have a great deal of difficulty smoothening out the registers. Of course, all of the above challenges are remedied, though not often easily or quickly, with vocal study that focuses on the adjustment of breath control and vowel modification, referred to as aggiustamento in the international or Italian school , that will retrain the singer to navigate register shifts correctly. Proper execution of register shifts - ones that are smooth and comfortable - requires the simultaneity of correct muscular balance of the voice, efficient phonation, appropriate laryngeal depth and balanced tuning of the vocal tract formant tracking. Many techniques are used to blend the registers. These techniques must address coordination of the muscles of the larynx to prevent voice breaks, and maintenance of the acoustic pressures in the airways to avoid undesirable quality changes. One exercise that I find to be helpful with my students who are struggling with register breaks in the lower passaggio is a series of five-note chromatic scales beginning a few notes below the register break point, then moving up to a few notes above it. I have the students sing these scales in both ascending and descending patterns because the adjustments that need to be made in terms of breath energy and vowel modification are different when going up and when going down in pitch. Often, the students and I will slow down the exercise and insert a glide between notes so that they can

feel the subtle adjustments being made at the level of the larynx with every note change. This exercise helps to retrain the muscles of the larynx over time. While it may be appropriate at times during a lesson to isolate the different registers during certain exercises e. Smoothness of registration can be obtained in no other way than by practicing the skill. Repairing a register break requires time and patience. Some students find it to be the most challenging and frustrating aspect of vocal technique study. Once it is repaired, though, the singer can refine it further and practice to maintain a seamless voice throughout his or her entire range. For blending the registers and allowing the laryngeal muscles to learn to gradually make the necessary changes, slides or portamentos through the passaggios are sometimes helpful, as are five-note chromatic or diatonic scales that begin a couple notes below the passaggio and end a couple notes on the other side of it. For some practical tips and exercises for encouraging a more unified blended vocal scale, read Blending the Registers in Tips For Practicing Singing: It may take years to master. However, once they understand how the voice works, blending becomes easier and nearly automatic, and the singer is able to sing with more emotion and passion. Still others find it most successful and relaxing to simply focus on making the voice sound beautiful and free on every note rather than focusing too much attention on the complicated physical mechanism involved in blending. Regardless of the imagery that singers adopts to make blending the different voice qualities make more sense to them, the goal should always be to achieve balanced tone with every note sung in the range. Chest Voice When singers refer to chest resonance, they are actually talking about vocal tone that is characterized by darker vowel qualities or mellowness, sometimes accompanied by a distinct sensation of vibration in the chest, especially in the sternum and breastbone area. This register mode occurs in the lower to middle range of speaking pitch. The term itself, however, is a misnomer since an effective resonating chamber is a hollow place surrounded by hard surfaces, such as bone , and the chest is too full of organs to be suitable for amplifying the singing tone. Since resonance occurs where there is plenty of empty space for amplification of the lower vibrations created by the vocal folds, what singers may associate with chest resonance is actually sympathetic vibration ; that is, vibrations being conducted through the bones of the chest cavity. Not all singers experience sympathetic vibrations in the chest when singing in this register. Some only feel it when their hands are placed on their chests. I prefer to use the term natural voice when referring to this register in the singing voice because it denotes the natural disposition or mode of the vocal folds. It removes from the description of the vocal register all subjectivity or mislabeling. Head Voice Head resonance, when properly supported, has a brilliant ringing tone quality as compared to the chest resonance singing tone. Since the head voice is seldom used during everyday speech - in women, the head register begins on the notes at the top of the staff - the muscles and the tone tend to be underdeveloped. Most classical technique instructors tend to spend more time developing the tone, intensity and volume of this high register because it needs more work than the chest natural and medium voices do, as they are more commonly used in speech and in contemporary styles of singing. When singing in head voice, a singer must maintain a forward "placement" so that the vibratory sensations - the resonance of the voice - can be felt in the bones of the face. If the tone is allowed to slip back into the throat or spread, it will be impossible to produce a good tone with effective resonance and volume. In this register, the jaw must also relax and slightly lower to create more space and to promote equilibrium among the overtones, which will reduce shrillness in these high pitches. I explain more about why this is the case in Formant Tuning In the Female High Range in my article on vocal tract shaping and in the section on vowel modification in Vowels, Vowel Formants and Vowel Modification. Head voice occurs as a result of the laryngeal tilt or cricothyroid adjustment , in which the larynx rocks forward and elevates slightly as pitch rises. Without this laryngeal adjustment, the singer will find singing in the higher register extremely difficult. Falsetto The term falsetto designates a timbre in the male upper range that is imitative of the female timbre. Science shows that women are capable of producing a falsetto voice. However, this phonation mode or tone quality is not typically recognized in the singing world because an incomplete vocal fold closure in females merely produces a breathy tone that sounds very different than the falsetto tone that males produce. It will not sound as though the woman has switched to another register. Many singers incorrectly think that falsetto and head voice are two names for the same technique. This, however, is not the case. In other words, falsetto is recognized in historic voice pedagogy as being distinct from full head voice. The main differences

between the sounds of falsetto and head voice production lie in the amount of laryngeal involvement.

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3: Pure Vowel Sounds and Tone Production - Leo Kofler - Google Books

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The diphthong in English The diphthongs are vowels in the production of which the tongue moves from one position in the mouth towards another position. In order to indicate this glide movement from one position towards another, the phonetic symbols for each diphthong is a combination of the two vowels- one in which the tongue is in position initially and the towards which the tongue moves. The two symbols represent a single sound and not two sounds. The lips are spread. Along with the glide the lower jaw moves from an open position to an appreciably closer position. The vowel occurs in both accented and unaccented positions. Generally, the vowel occurs in accented syllables. Its occurrence syllables are rare. The movement of the jaw is very slight. The lips are neutral at the beginning of the glide and become rounded towards the end. The lips are neutrally open throughout the production of the glide. We shall first plot the pure vowels. Since all vowels are voiced in English and there is no nasalized vowels we assume that during the production of English vowels the vocal cords are vibrating and the soft palate is raised to shut off the nasal passage. We describe vowels in terms of the parts of the tongue raised and the relative height to which it is raised in the mouth. The front of the tongue raised can be fairly high mouth than for the vowel in the bead or it can be slightly lower in the mouth for the production of the vowel in bead for example, in bid and lower for the vowel in bed and still lower for the vowel in bed. Similarly, the back of the tongue is high in the mouth for the production of the vowel in cool; it is slightly lower in the mouth low in the mouth for the vowel in calm. Another important feature used to describe vowels in the position of the lips during their production. Sometimes the position of the lips is the only distinguishing features-between two vowels. For example, the two vowels. We have referred to long and shorts vowels. In identical environments long vowels are longer than short vowels. These words differ in respect of the vowel alone. Apart from this, each vowel has different degrees of length depending upon the phonetic environments in which it occurs. A vowel in the final position in words is longer than it is before voiced consonants. Thus vowel length is a variant which depends upon the position that it occupies in a word.

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4: The difference between consonants and vowels | Spelfabet

These are vowels that combine vowel sounds to create a double sound. Dipthong consonants fit the same definition, a doubling of consonant sounds, and are more familiar to most people.

A vowel chart for southern California English , showing how its vowels lie within the IPA vowel trapezium. A vowel diagram or vowel chart is a schematic arrangement of the vowels. Depending on the particular language being discussed, it can take the form of a triangle or a quadrilateral. Vertical position on the diagram denotes the vowel closeness , with close vowels at the top of the diagram, and horizontal position denotes the vowel backness , with front vowels at the left of the diagram. Vowels differ only in the position of the tongue when voiced. The tongue moves vertically and horizontally within the oral cavity. Vowels are produced with at least a part of their vocal tract obstructed. The position of the highest point of the arch of the tongue is considered to be the point of articulation of the vowel. The vertical dimension of the vowel diagram is known as vowel high, which includes high, central mid , or low vowels. The horizontal dimension of the vowel diagram includes tongue advancement and identifies how far forward the tongue is located in the oral cavity during production. Vowels are also categorized by the tenseness or laxness of the tongue. Here, the vocal tract is in its neutral state and creates a near perfect tube. In other words, all vowels but schwas. Tense vowels are [i] and [o]. The next dimension of vowels is rounding. Rounding is important because it continues to help differentiate the vowels of English. For example, for [u], the lips are rounded, but for [i], the lips are spread. Vowels can be categorized as rounded or unrounded. Usually, there is a pattern of even distribution of marks on the chart, a phenomenon that is known as vowel dispersion. For most languages, the vowel system is triangular. Such a diagram is called a vowel quadrilateral or a vowel trapezium. For example, high vowels, such as [i] and [u], tend to have a higher fundamental frequency than low vowels, such as [a]. Vowels are distinct from one another by their acoustic form or spectral properties. Each vowel in the vowel diagram has a unique first and second formant, or F1 and F2. The frequency of the first formant refers to the width of the pharyngeal cavity and the position of the tongue on a vertical axis and ranges from open to close. The frequency of the second formant refers to the length of the oral cavity and the position of the tongue on a horizontal axis. The F2 frequency is higher for [i] because the oral cavity is short and the tongue is at the front of the mouth. The F2 frequency is low in the production of [u] because the mouth is elongated and the lips are rounded while the pharynx is lowered. By definition, no vowel sound can be plotted outside of the IPA trapezium because its four corners represent the extreme points of articulation. The vowel diagrams of most real languages are not so extreme. In English, for example, high vowels are not as high as the corners of the IPA trapezium, and front vowels are not as front.

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5: What is the difference between pure vowels and diphthongs? | eNotes

A monophthong is a pure vowel sound, one whose articulation at both beginning and end is relatively fixed, and which does not glide up or down towards a new position of articulation.

Indeed, vowel errors have been mentioned as a potential diagnostic marker for the disorder. Vowel errors are also significant because they have a direct impact on intelligibility and can have serious consequences for consonant production. For these reasons, it is important that speech-language pathologists recognise and address any vowel difficulties that occur in a childs speech. Despite their importance, assessment and treatment of vowel errors in CAS are particularly challenging activities. Although SLPs are often skilled at detecting vowel errors, they can nevertheless be difficult to hear and transcribe reliably. One reason for this is the fact that normal dialectal differences in vowel systems make listeners more tolerant of abnormal variations in vowel productions. Therapy that focuses on vowels can also be problematic. Any therapy approach that requires a child to focus on his or her own articulatory activity is more difficult with vowels than it is with consonants. The high degree of vocal tract constriction involved in consonant production generally results in a high level of tactile feedback, which enhances speakers awareness of articulatory placement. Vowels may be affected in a variety of ways in CAS. A difficulty in positioning and sequencing of articulators, particularly the tongue and lips, is a well-documented spatial feature of CAS. Incorrect positioning of the lips and tongue will affect vowel quality and accuracy. Timing difficulties can also affect vowels, so that in some cases they may be excessively long. Vowels may also be produced as distortions. For example, they may be only partially voiced due to difficulties controlling vocal fold vibration or have excessive nasality due to difficulties controlling velopharyngeal closure. These spatial, temporal and co-ordination difficulties are core features of CAS and can often cause difficulties that affect vowels in these children. Clinical assessment of vowels in CAS is usually based on phonetically transcribed speech samples, which the SLP will analyse and interpret alongside other routine clinical examinations. Analysis of speech samples may involve identifying a childs vowel inventory. This is a list of the different vowel sounds that a child can make, regardless of whether they are correct or errors. The vowel inventory in CAS may be restricted, with certain difficult to produce vowels, such as diphthongs and r-coloured vowels, absent. Assessment may also include identifying error patterns of vowel substitutions, distortions and phonological processes. Another aspect to be assessed is the nature and degree of variability in vowel production. There is often a high degree of variability, with more errors in longer words, phrases and in unstressed syllables. A final area to assess is the effect of surrounding consonants on vowel accuracy. Vowels may be produced correctly in some words, but not others because they are conditioned by the surrounding consonants. These analyses will allow the SLP to make a diagnostic statement about a childs vowel production, and to formulate goals of therapy in relation to any vowel difficulties. At the moment there is a lack of research evidence to guide the SLP about the most efficacious therapy approach for vowel errors in CAS. To take an example, we do not know whether maximum benefits are gained from targeting vowels directly, or whether therapy that focuses on improving the consonant system has an indirect, but equally beneficial, effect of improving the vowel system. At present our evidence is based on speculation and rather limited observations of single children or small groups of children, and we need to improve this evidence by conducting systematic studies of larger populations using rigorous experimental methods. As we await further research, SLPs can be creative in adapting the many therapy approaches that have been designed and proved to be efficacious for consonant errors see Gibbon and Mackenzie Beck, Clinicians can select therapy techniques based on the most complementary matching between a childs specific speech difficulties and the strategies employed in a particular approach. In many cases, different approaches are not mutually exclusive, and the SLP will often select a combination of multisensory techniques that will meet each childs specific needs. For additional information please visit our Speech and Language Sciences web site at http: Her areas of teaching and research interests include the clinical applications of speech science, childhood apraxia of speech, specific language impairment, phonological disorders, cleft palate and autism. She has presented over conference papers at local, national, and international levels and has published more than 70 scientific

papers and book chapters. In she edited in collaboration with Professor Martin Ball the first book to be published on vowel disorders. Gibbon was an invited presenter at the Childhood Apraxia of Speech Symposium cosponsored by The Hendrix Foundation and CASANA, and her work has recently been included in a prestigious national award, the Queens Anniversary Prize, for excellence and innovation in research and teaching.

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6: Describing Speech Sounds

Vowels, Vowel Formants and Vowel Modification (Page 3 of 3) Vowel Modification ('Copertura') Vowel modification is an intentional, slight adjustment made to the sound (acoustics) of a vowel, by altering the basic way in which a vowel is articulated, with the goal of attaining more comfortable and pleasing tone production, especially in the higher part of the singer's range.

Rhotic vowels are the "R-colored vowels" of American English and a few other languages. Tenseness Tenseness is used to describe the opposition of tense vowels as in leap, suit vs. This opposition has traditionally been thought to be a result of greater muscular tension, though phonetic experiments have repeatedly failed to show this. Unlike the other features of vowel quality, tenseness is only applicable to the few languages that have this opposition mainly Germanic languages , e. English , whereas the vowels of the other languages e. Spanish cannot be described with respect to tenseness in any meaningful way. In discourse about the English language, "tense and lax" are often used interchangeably with "long and short", respectively, because the features are concomitant in the common varieties of English. This cannot be applied to all English dialects or other languages. In most Germanic languages , lax vowels can only occur in closed syllables. Therefore, they are also known as checked vowels , whereas the tense vowels are called free vowels since they can occur in any kind of syllable. An idealized schematic of vowel space, based on the formants of Daniel Jones and John Wells pronouncing the cardinal vowels of the IPA. The scale is logarithmic. The grey range is where F2 would be less than F1, which by definition is impossible. Phonemically it may be front or back, depending on the language. Rounded vowels that are front in tongue position are front-central in formant space, while unrounded vowels that are back in articulation are back-central in formant space. The same chart, with a few intermediate vowels. The acoustics of vowels are fairly well understood. The different vowel qualities are realized in acoustic analyses of vowels by the relative values of the formants , acoustic resonances of the vocal tract which show up as dark bands on a spectrogram. The vocal tract acts as a resonant cavity , and the position of the jaw, lips, and tongue affect the parameters of the resonant cavity, resulting in different formant values. The acoustics of vowels can be visualized using spectrograms, which display the acoustic energy at each frequency, and how this changes with time. The first formant, abbreviated "F1", corresponds to vowel openness vowel height. Open vowels have high F1 frequencies, while close vowels have low F1 frequencies, as can be seen in the accompanying spectrogram: The second formant, F2, corresponds to vowel frontness. Back vowels have low F2 frequencies, while front vowels have high F2 frequencies. This is very clear in the spectrogram, where the front vowel [i] has a much higher F2 frequency than the other two vowels. However, in open vowels, the high F1 frequency forces a rise in the F2 frequency as well, so an alternative measure of frontness is the difference between the first and second formants. For this reason, some people prefer to plot as F1 vs. Rounding is generally realized by a decrease of F2 that tends to reinforce vowel backness. One effect of this is that back vowels are most commonly rounded while front vowels are most commonly unrounded; another is that rounded vowels tend to plot to the right of unrounded vowels in vowel charts. That is, there is a reason for plotting vowel pairs the way they are. Prosody and intonation[edit] Main articles: Prosody , Intonation , and Vowel length In addition to variation in vowel quality as described above, vowels vary as a result of differences in prosody. The most important prosodic variables are pitch fundamental frequency , loudness intensity and length duration However, the features of prosody are usually considered to apply not to the vowel itself, but to the syllable in which the vowel occurs. In other words, the domain of prosody is the syllable, not the segment vowel or consonant. This may relate to the syllable in which it occurs, or to a larger stretch of speech to which an intonation contour belongs. Lehiste ibid argues that stress, or loudness, could not be associated with a single segment in a syllable independently of the rest of the syllable p. This means that vowel loudness is a concomitant of the loudness of the syllable in which it occurs. One is the phonological difference in length exhibited by some languages. Japanese , Finnish , Hungarian , Arabic and Latin have a two-way phonemic contrast between short and long vowels. The Mixe language has a three-way contrast among short, half-long, and long vowels. Monophthongs, diphthongs, triphthongs[edit]

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Main articles: Monophthong , Diphthong , Triphthong , and Semivowel A vowel sound whose quality does not change over the duration of the vowel is called a monophthong. Monophthongs are sometimes called "pure" or "stable" vowels. A vowel sound that glides from one quality to another is called a diphthong , and a vowel sound that glides successively through three qualities is a triphthong. All languages have monophthongs and many languages have diphthongs, but triphthongs or vowel sounds with even more target qualities are relatively rare cross-linguistically. English has all three types: In phonology , diphthongs and triphthongs are distinguished from sequences of monophthongs by whether the vowel sound may be analyzed into different phonemes or not. Some linguists use the terms diphthong and triphthong only in this phonemic sense. However, not all of these letters represent vowels in all languages, or even consistently within one language some of them, especially W and Y, are also used to represent approximants. Moreover, a vowel might be represented by a letter usually reserved for consonants, or a combination of letters, particularly where one letter represents several sounds at once, or vice versa; examples from English include igh in "thigh" and x in "x-ray". The phonetic values vary considerably by language, and some languages use I and Y for the consonant [j], e. In Modern Welsh , the letter aW represents these same sounds. There is not necessarily a direct one-to-one correspondence between the vowel sounds of a language and the vowel letters. Many languages that use a form of the Latin alphabet have more vowel sounds than can be represented by the standard set of five vowel letters. In English spelling, the five letters A E I O and U can represent a variety of vowel sounds, while the letter Y frequently represents vowels as in e. Other languages cope with the limitation in the number of Latin vowel letters in similar ways. Many languages make extensive use of combinations of letters to represent various sounds. The International Phonetic Alphabet has a set of 28 symbols to represent the range of basic vowel qualities, and a further set of diacritics to denote variations from the basic vowel. The writing systems used for some languages, such as the Hebrew alphabet and the Arabic alphabet , do not ordinarily mark all the vowels, since they are frequently unnecessary in identifying a word[citation needed]. Technically, these are called abjads rather than alphabets. Although it is possible to construct simple English sentences that can be understood without written vowels cn y rd ths? But note that abjads generally express some word-internal vowels and all word-initial and word-final vowels, whereby the ambiguity will be much reduced. The Masoretes devised a vowel notation system for Hebrew Jewish scripture that is still widely used, as well as the trope symbols used for its cantillation ; both are part of oral tradition and still the basis for many bible translationsâ€”Jewish and Christian. Shifts[edit] The differences in pronunciation of vowel letters between English and its related languages can be accounted for by the Great Vowel Shift. After printing was introduced to England, and therefore after spelling was more or less standardized, a series of dramatic changes in the pronunciation of the vowel phonemes did occur, and continued into recent centuries, but were not reflected in the spelling system. This has led to numerous inconsistencies in the spelling of English vowel sounds and the pronunciation of English vowel letters and to the mispronunciation of foreign words and names by speakers of English. The existence of vowel shifts should serve as a caution flag to anyone who is trying to pronounce an ancient language or, indeed, any poetry in any language from two centuries ago or earlier.

7: Vowel - Wikipedia

A vowel is one of the two principal classes of speech sound, the other being a www.enganchecubano.com vary in quality, in loudness and also in quantity (length).They are usually voiced, and are closely involved in prosodic variation such as tone, intonation and stress.

8: Useful English: English Vowel Sounds

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Vowels are speech sounds pronounced so there are no "obstacles" to airstream (unlike the way consonants are pronounced, for example). This post lists English vowels (21 in this case, although some sources list 22), both monophthongs and diphthongs.

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