Transcription Vol.1.5: Connecting Non-primary Sounds to Emotion

[Slide: 1] "Holistic Emotive Practices Vol. 1 Part 5: Connecting Non-primary Sounds to Emotions"

Hello, and welcome to Volume 1, Part 5 of Holistic Emotive Practices. This is Brian McPherson. In this talk I will extend the previous discussion of the emotional impact of speech sounds. The last time we examined three pairs of phonemes and the evidence that connected each pair to one of the three physiological dimensions of emotion. We saw that the vowel of each pair connected to the empty extreme of the emotion dimension and the consonant connected to the full extreme of the emotion dimension. Now we are ready to take a look at more phonemes.

[Slide: 2] "Non-Primary Vowel"

Vowel	Sample word	Primary Vowels	Emotional Valence
/a/	hut	/â/ & /û/	Austere relaxation
/e/	hey	/î/ & /â/	Relaxed letting go
/i/	hit	/î/ & /û/	Reluctant letting go
/ae/	hat	/â/ & /î/	Uncontrolled relaxation
/o/	hoe	/û/ & /â/	Relaxed austerity
/u/	put	/û/ & /î/	Uncontrolled austerity

The next phonemes to consider are the non-primary vowels. If you recall from Part 3 in this series non-primary vowels fit inside vowel space anchored by the three primary vowels. We can think of a non-primary vowel as consisting of characteristics of primary vowels. In the chart you can see six non-primary vowels. A pair of primary vowels contributes to each of these non-primary vowels. The order of the two contributing primary vowel shown signifies the relative influence of each primary vowel on that particular non-primary vowel. For example, both the /e/, as in hey, and the /ae/, as in hat, have /î/ & /â/ as components. For the /e/ the /î/ is listed first, but with the /ae/ the /â/ is first. Since you hold the jaw slightly lower for the /ae/ than the /e/, the /ae/ is closer to the /â/ in vowel space.

A non-primary vowel derives its emotional valence from the primary vowels closest to it in vowel space. The /a/, as in hut, conveys a feeling of austere relaxation. Here I am using the second primary vowel, the /û/, to modify the first, more prominent primary vowel, the /â/. The word I choose to describe the /û/'s effect on the /â/ is austere, rather than unpleasant. It indicates a milder degree of unpleasantness. If you take all pleasure out of life you would have an austere life, not necessarily unpleasant. The /a/

sound doesn't qualify as unpleasant as the /û/ because it doesn't hold the extreme of the pleasure dimension, only the /û/ does.

One thing to note about non-primary vowels is that they do not command a strong emotional flavor like the primary vowels do. The primary vowels are considered "long" vowels. They typically have a longer duration and a more pronounced emotional impact than non-primary vowels. The non-primary vowels usually have little emotional significance, but rather simply act as bridges to between two consonants of much greater emotional import. The one instance that non-primary vowels matter is when they are paired with guttural consonants, as you shall find out later in this video when I discuss the emotional impact of guttural consonants.

[Slide: 3] "Parameters of Consonants"

Manner of Articulation	**Place of Articulation**		**Voicing**
Stop/Plosive Affricative Fricative Approximant Nasal	(Front to Back)	Lips Teeth Alveolar Palatal Velar Glottis Pharynx	Voiced Unvoiced

To grasp the emotional impact of consonants it is most useful to look at the parameters associated with consonants. The five manners of articulation, the seven places of articulation, and the two types of voicing all have specific physiological characteristics that translate into emotional impact.

I mentioned all of values of these three parameters in Part 3 of this series, except one. I skipped the affricative manner of articulation.

[Slide: 4] "Emotional Significance of Manner of Articulation; Stops/Plosives –Correspond to a focused emotional feeling; Fricatives, Approximants, Nasals – Correspond to a diffuse mood; Affricatives – Have sustained focus (only two, /ch/ & /j/)"

I previously included the two English affricatives, the /ch/ and /j/, the sounds for the "j" and "ch", with stops consonants. Affricatives do momentarily stop the airflow, so that classification is correct. However, linguists often distinguish the /j/ and /ch/ as affricatives because whenever the air is released from the stop there is a sound due to the placement of the tongue that resembles a fricative /sh/ or /sh/. I make the distinction between these two affricative consonants and the other stops consonants at this time because the emotional significance of these two manners of articulation differs slightly.

In order to understand the emotional significance of an affricative we need to look at the emotional impact of stop consonants and fricatives first. A stop consonant corresponds to a focused emotion or feeling. The stopping of the airflow brings our attention to the feeling expressed by the sound. In contrast, a fricative consonant has a more diffuse emotional impact that results from the continuous nature of the fricative. The affricatives, the /j/ and the /ch/, share characteristics of both the focused stop and the diffuse fricative. They have a less focused feeling than stops but one that is not so much in the background as fricatives.

Approximants, also called glides, and nasal consonants share the continuous nature seen in fricatives and thus also carry a diffuse emotional feeling.

[Slide: 5] "Emotional Significance of Place of Articulation;

Lips – connected to pleasure dimension
Teeth – connected to arousal dimension
Alveolar – connected to control dimension
Palatal – balanced connection to both arousal and control dimension
Velar – connected to both arousal & control dimension, with emphasis on arousal
Glottal & Pharyngeal – attenuate feeling of co-articulated sound"

The place of articulation determines the basic nature of the feeling associated with a particular phoneme. In a previous talk I discussed how using the lips to articulate a sound connects the sound to the pleasure dimension of emotions. The teeth, because they are connected to the jaw, have an impact on the arousal dimension. We have already noted that the tongue works along the control dimension. However, we can make a distinction between the different points of articulation made with the tongue. When the tip of the tongue articulates the sound at the alveolar ridge, just above the upper teeth the arousal dimension doesn't play a role in the emotional value of the sound. These sounds involve mental control. However, when the middle and back portions of the tongue play a role in producing the sound the arousal dimension gets involved. The closer to the base of the tongue, the more arousal comes into play. For sounds articulated with the back, or base of the tongue touching the vellum there is an emphasis on the arousal dimension. However, those sounds , the /k/, /q/ and /g/ still entail control. This type of control involves a physical aspect of the environment due to the arousal factor. When the middle of the tongue uses the palate as the point of articulation the feelings generated strike a balance that includes both mental and physical control.

The final two points of articulation, the glottis and the pharynx, do not take place in the mouth cavity. These are the points of articulation for guttural sounds. Most, but not all guttural sounds do not involve any of the three physiological components of interest, the jaw, lips, or tongue, although for a pair of guttural sounds do get formed by the back of the tongue pushing against the pharynx, as we shall see later in this presentation. The guttural sounds articulated without the tongue, lips, or jaw they do not directly affect any emotion dimension. These sounds still do have an emotional impact. They accomplish their effect through their co-articulated sounds or the sounds that occur before or after it. Each time we speak a guttural sound a vowel attaches before or after the sound. When the vowel follows the guttural sound it makes it seem like the feeling associated with the vowel is difficult to attain. For example, in words beginning with an "h" and followed by an /a/ sound, the /h/ has the effect of making it seem like you cannot get to a somewhat relaxed, austere /a/. In other words the feeling equates to wanting to relax but not being able to. It is a tired, stressed out, or strung out feeling, /ha/, maybe a little like a pant.

If the "h" occurs at the end of a word or syllable, for example the sound /rah/, a /ra/ followed by an "h," then the arousal associated with the /ra/ gets attenuated, like you are trying to get rid of an agitated state.

[Slide: 6] "Emotional Significance of Voicing

For Plosives:

Voiced – Holding onto/ needing a feeling

Unvoiced – Expressing or releasing a feeling without wanting or needing it

For Fricatives:

Unvoiced adds emphasis compared to voiced. Since unvoiced takes place without the vocal chords vibrating, the unvoiced sound stands distinct from the neighbor vowels. The voiced counterparts blend into the surrounding vowels, making it less distinct

A consonant is either voiced or unvoiced. All nasals and glides are voiced, but fricatives, stops, and affricatives can be either voiced or unvoiced. A stop or affricative that is voiced adds to the feeling of the sound a desire or need to hold onto the feeling. This occurs because of the hesitation in releasing the airflow compared to an unvoiced stop or fricative. The hesitation indicates that you want to keep the feeling. An unvoiced stop conveys the feeling of the sound without the desire to hold onto it, it lets go of the articulator before the vocal chords vibrate and thus lets the feeling go in a more secure or even nonchalant manner. It projects the feeling rather than internalizing it.

A voiced fricative requires less air than an unvoiced fricative, in order to achieve the same level of sound. This occurs because the vibrations of the vocal chords add to the sound of a voiced fricative. The increase in air for an unvoiced fricative gives that sound a more intense feeling than its voiced counterpart.

[Slide: 7] "**Consonants Modulating the Pleasure Dimension"**

/m/	Most pleasant, satiated
/b/	Holding to pleasant or full feeling
/p/	Letting go of a pleasant or full feeling
/w/	Controlling an unpleasant feeling

Now that we have examined the emotional implication of the various values of the parameters of consonants, it is time to look at the emotional impact of individual consonants. First consider the sounds that affect the pleasure dimension, in other words those articulated with the lips. The /m/ sound of the letter "m" is the most pleasant sound. It corresponds to a pleasant or satiated feeling.

As a voiced stop consonant the sound for the letter "b," the /b/ sound, carries a desire to hold onto the pleasant feeling it possesses. In contrast there is no desire to hold the pleasant feeling associated with unvoiced /p/. The pleasure there is freely released.

The impact of the /w/ sound is to release an unpleasant feeling provided the co-articulated vowel is not an /û/. Coarticulated vowels can have an impact on the acoustic parameters of a consonant, and thus affect the emotional content of the consonant, in this case the "w." The shape the lips assumes for saying a /w/ corresponds to that needed for the /û/, whenever a vowel other than /û/ comes after the /w/ the effect is a feeling of releasing the unpleasant /û/ feeling as the lips move toward the shape needed for the coarticulated vowel.

There is also a slight element of control associated with the /w/ contributed by the tongue. Linguists note that the back of the tongue rises toward the vellum when making a /w/ sound. This rise is almost imperceptible and occurs as a result of the curling of the front of the tongue. With the tongue engaged an element of control becomes part of the sound's emotional makeup.

[Slide: 8] "**Consonants Modulating the Control Dimension**

/n/	Firm, steady control
/s/, /z/	Stream of consciousness control
/d/	Wanting/holding on to focused control
/t/	Ambivalent about or relinquishing control
/l/	Letting things flow with minimum control or letting go of control

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Six consonants impart feelings denoting some kind of mental control. Four of these contribute a diffuse type of control. The /n/, as noted before, is the prototypical sound for control, the strongest expression of internal control that we can articulate. The /s/ is associated with everyday stream of consciousness type of control that we experience. As we go about our daily tasks we must stay alert and aware. During much of this time when we are not focused on a specific undertaking requiring concentration, we experience a stream of consciousness. The /s/ corresponds to this mood. It doesn't focus on any particular aspect of control in the mental sphere, but has a pervasive background feeling to it. Its voiced counterpart, the /z/ sound, also yields a feeling of mental control, but somewhat less intense.

An even more laid back sound of control comes from the /l/. With the /l/ there is minimal control. When the /l/ is the first sound of a syllable, as in the word "like" the tongue lightly touches the alveolar ridge as air easily passes around laterally, on both sides. When the /l/ falls in the middle or end of a syllable, as in "rail," the tongue simply flattens. In either case the control exercised for the sound is light and easy going. It feels like letting go of control or letting things flow.

The /n/ stands at the opposite extreme of control compared to the /l/. Its grip on control is maximal. The tongue firmly holds to the palate and no air passes. This provides a feeling of confident control.

Two sounds the /t/ and /d/ represent focused mental control. The /d/ combines this feeling of control with a strong feeling of personal identity or internalization due to its propensity to hold to the control. This stems from its voiced nature. The unvoiced /t/ carries the feeling of mental control outward without hoarding or clinging to it, but instead releasing it.

[Slide: 9] "**Consonants Modulating both Arousal & Control Dimensions**

/sh/ /<u>sh</u>/	Thinking about controlling physical
/j/	Holding sustained mental/physical focus
/ch/	Ambivalent to mental/physical focus
/g/	Wanting to hold on to physical control
/k/	Ambivalent about physical control
/q/	Reluctant physical control
/y/	Seeking better physical control
/ng/	Firm control of physical

"

The largest group of consonants sharing basic emotional dimensions is the one that effects both the arousal and control dimensions. One of those sounds, the "q," or /q/, is also influenced by the pleasure dimension, since the lips need to round slightly to make this sound.

With a palatal point of articulation the /j/, /ch/, /sh/, and /<u>sh</u>/ strike a balance in their control and arousal connections. The affricatives /j/ and /ch/ are more focused, with the /j/ holding onto the somewhat focused feeling of mental/physical control and the /ch/ not caring as much about that feeling.

The fricatives /sh/ and /<u>sh</u>/ catch a mood similar to the /s/ and /z/. They resemble a stream of consciousness mood. The /sh/ and /<u>sh</u>/ differ from the alveolar pair in that the stream of consciousness for the /sh/ and /<u>sh</u>/ includes elements from the physical environment, whereas the /s/ and /z/ stream is simply mental.

The velar voiced stop /g/ gives a focused feeling of wanting to hold onto control of something physical. In contrast the unvoiced velar stop /k/ expresses focused physical control that is not hoarded, but instead more carefree. The /q/ strikes a contrast to the carefree focused physical control of the /k/. Because of its unpleasant element the /q/ communicates some reluctance in this control.

There is no reluctance in the sound expressed by the letters “n” and “g.” The /ng/ sound yields a feeling of confident control of a physical element, a kind of stubborn feeling.

The “y” sound, /y/, evokes a diffuse feeling of wanting or trying for more or better physical control.

[Slide: 10] “**Emotional Valence of Dental Consonants**

/f/	Contentedness (pleasant energy)
/v/	Tender affection
/th/	Laid back physical control
/<u>th</u>/	Even more laid back physical control

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The two pairs of dental fricatives share an arousal component in their emotional expression, due to the involvement of the teeth. The teeth attach to the jaw, our arousal modulator. The primary purpose of the teeth is biting or chewing. This gives the teeth an association with aggression, evolutionarily speaking. However, in articulating speech with the teeth we place either the tongue or lips between the upper and lower teeth. This placement inhibits biting and thus reduces aggression and arousal.

For the sounds of “f” and “v”, the use of the lips brings an element of pleasure into their emotional significance. The unvoiced “f” invokes a somewhat stronger pleasant unaggressive energy, than the tenderer “v” sound.

The role of the tongue in the “th” sounds adds an element of control to the easy going feeling connected to the teeth. The voiced “th,” /<u>th</u>/, plays out even more laid back than its unvoiced counterpart, /th/.

[Slide: 11] "**Emotional Valence of Guttural Consonants"**

/gh/	Obsessed with frustrated physical control
/kh/	Letting go of frustrated physical control
/h/	Impediment to feeling co-articulated vowel
/<u>h</u>/	Strong impediment to co-articulated vowel
/'/	Focused on reducing the feeling of the co-articulated vowel

The tongue plays a role in two guttural stop consonants, the /kh/ and /gh/. To make these sounds the back of the tongue pushes against the pharynx to stop the airflow. This adds a feeling of physical control to the emotional valence of these two sounds. Because the stoppage occurs in the airway before the mouth cavity a feeling of air being choked off influences these sounds. The net effect is a feeling of frustrated physical control. With the voiced /gh/ you hold onto the feeling, like you are holding a grudge against whatever frustrates your control. The unvoiced /kh/ lets go of this frustration, like you are trying to get past something that frustrates you.

Because the sounds of the remaining guttural consonants require none of the emotion articulators their emotional influence depends upon the context in which the sound occurs, in other words the surrounding sounds. The two "h" sounds act in a similar manner by constricting the airflow. The constriction in the pharynx feels stronger. It feels more like choking and thus it acts as a greater inhibitor to the neighbor vowel than the English "h" does. In later presentations the different emotional aspects of the /h/ will become clearer.

The ayin, the final sound in our discussion, may be the hardest to fathom because we have nothing in English to compare it to. It gets articulated at the glottis, as does the English "h," but its stop nature makes it clearly distinct from our "h." The emotional impact of the ayin has a cathartic effect that occurs because the constriction takes place at the vocal chords. By creating the constriction at this point you impede the flow of air for all sounds, both voiced and unvoiced. The vocal chords cannot vibrate for a voiced sound and no air can get through for an unvoiced sound. When you release this blockage you get that cathartic feeling of release from a place where all feelings were dark or unexpressed. The subtle differences of this cathartic feeling that occur due to context will be addressed in later presentations.

[Slide: 12] "Photos by Brian McPherson"

That's the end of the discussion on the emotional impact of individual speech sounds. We have covered all English phonemes and some non-English ones. In the next presentation we will look at what happens to the emotional values of these sounds when we combine them.

Thanks for listening.