Examining Phoneme Bias and Mediation through Constructed Language

This paper aims to denaturalize phonemes and discuss them as critical mediators of information and meaning. I will examine biases (both cultural and linguistic) within the human phonetic portfolio to distinguish the meanings and connotations associated with particular phonemes. In this manner, I seek to make conspicuous the way in which the voice, even at its most basic level, functions as a medium. My vehicle for this examination will be fictional constructed language. In constructed languages lexical signifiers are composed in a conspicuously non-arbitrary manner due to the privileging of phonemic sets. I will examine this conspicuous mediation in constructed language as a bridge towards denaturalizing phonemes in natural language. I will focus on samples taken from Sindarin (The Lord of the Rings), Klingon (Star Trek), and Dothraki (Game of Thrones). Each of these constructed languages has a unique history of conspicuous construction and each has an oral performance history in television and/or film. Taken together, these three examples provide a more complete image of the scope of phonemic mediation in spoken language and the connotations bound up in that mediation.

I'd like to begin with a few short definitions of terms critical to this paper. A phoneme is a unit of sound in a language that cannot be analyzed into smaller linear units and that can distinguish one word from another (OED). Examples of phonemes include sounds like: /p/, /b/, /i/, /s/, /k/, /ae/ or /tch/. Bias is an often confused term. To clarify its meaning, I will use two separate terms: cultural bias and linguistic bias. A cultural bias here refers to a dominant group's supposition of their sound sets/construction as normative. A linguistic bias is defined as asymmetries in sound change reflected through asymmetries in phonetic pattern (Garret, 4). To

put it more simply, a linguistic bias is a typological preference for one phonetic/phonemic pattern over another; if a sound or sets of sounds occurs more often than others then there is a linguistic bias towards that sound. The final key definition is the distinction between constructed language and natural language. A constructed language is any language deliberately composed, whose linguistic bias is mandated, and whose standard phonemic set is selected for. In contrast, a natural language is arbitrarily composed, and develops a linguistic bias and standard phoneme set without premeditation over time. Esperanto is perhaps the most famous example of a constructed language. English, Arabic, and German are all examples of natural language.

The final major distinction I must draw is between communication and medium. Communication is "the transmission or exchange of information [. . .] by means of speech, writing, mechanical or electronic media, etc." (OED) Within this definition there is a gray area. *Information* is a slippery term, particularly in the wake of the explosions in the field of information technology. Yet, Gleick offers a sound means of negotiating the ambiguity within the term. Following Wilkins, he offers a definition of information as difference. "Any difference meant a binary choice. Any binary choice began the expression of cogitations." (161) Information, that which is communicated, is differentiation. Good communication, then, is the clear and precise expression of a differentiated and discrete message.

Medium is the means by which the communication exchange takes place. Medium, as McLuhan is swift to attest, is the principle architect of the message. A medium not only delivers the message, but it inexorably alters the message by is means of delivery. In the case of spoken language, word-choice, tone, inflection, volume, accent, rate, pitch, and grammar are all functions of spoken mediation that interrupt and alter the binary differentiation set forth as the

message. Good communication is therefore more dependent upon a well-negotiated medium than any other single factor.

Phonemes are the smallest unit of differentiation in language. They are therefore both the most fundamental part of information and the foundational element of the spoken medium. In this paper I will use the term *phonemic mediation* in an attempt to isolate the phonemic element of the spoken language and its capacity to transform meaning. Understanding how to manipulate these small units of sound is critical in negotiating the medium of speech as a whole. Phonemes, as with any medium, can serve either to obscure or elucidate communication.

The first major topic of this paper is phonemes themselves and how to approach them as a medium. Oral communication is mediated through the vocal apparatus. Understanding how that apparatus produces phonemes illuminates their applications and is critical to understanding their agency in communication. Theatrical voice and speech study centers on phoneme production and articulation as core to clear communication, yet seldom emphasizes phonemes' capacity to mediate meaning. In the discipline of theatrical voice and speech study the authority on speech and phonetics is Edith Skinner. Skinner breaks down phonemic production into four essential elements. The respiratory muscles, particularly the diaphragm and intercostal muscles, trigger the production of sound through breath. The vocal folds produce sound waves as that breath passes through them. Resonators are cavities such as the chest, throat, or nose that amplify those sound waves. And finally articulators such as the lips, tongue, teeth, and palate shape the sound into distinguishable phonemes. To the voice and speech trainer, the discrete and precise formation of these phonemes is the first step in the process of verbal communication. Voice and speech trainers Patsy Rodenburg and Kristin Linklater both emphasize that omitted or unclear phoneme formation mitigates reception. But neither explores the idea that present and

clear phoneme formation mitigates reception in much the same way. If an error in production destroys meaning, then flawless production sustains meaning. Yet, the meaning sustained is sustained through mediation. The accurate production of a phoneme only upholds the distortions that the particular phoneme brings to the message. However, as phonemes lack denotation individually (with the exception of /^/, meaning "one") they are rendered transparent during the speech process and the distortions they entail when produced clearly and accurately remain invisible to analysis.

For the disciplines of theatre, rhetoric, and public speaking the emphasis rests on vocal production as a means to clarity. However, by denaturalizing the phonemic medium, I aim to enable a close reading of phoneme selection as a tool for specifying the messages those disciplines seek to delivery clearly. The importance of precise formation and clear articulation of sound is in no way diminished through this analysis. If anything, the necessity for close phonetic transcription and rigorous production is enhanced through the denaturalization of phonemes as sounds whose composition influences meaning. In this manner, this paper strives to bring the application of the voice and speech trainer's skills into an interdisciplinary partnership with linguistics.

In the business of constructed language for film and television it is linguists, not voice and speech trainers, who dominate. However, in the realm of natural language for film and television the roles are reversed. It follows that linguists design new and fantastical languages, as notions such as bias, asymmetry, patterning, and selection of sound are categories of their field. But it is the narrow focus of voice and speech trainers on the accurate production and release of sound (forsaking a broader analysis of the implications of the sounds produced) that forestalls fluid cooperation between the fields in the application of language. Performers trained

in voice and speech production may employ those techniques in the production of constructed language as readily as they do with natural language, but doing so without a strong analytical footing that linguistics can provide is to allow the medium to run away with the message. Likewise, a linguist's labors of careful construction can be lost if the sounds performers render are produced imprecisely or without care to mediation. In short, the denaturalization of phonemes and acknowledgement of their role as mediators is a subject that requires the attention of both voice and speech trainers and linguists to navigate. The capacity to analyze and manipulate both content and meaning phonemically is, likewise, a methodology of interest to both fields and to which both can come into cooperation.

The first step in denaturalizing phoneme content is developing an understanding of how different sounds affect reception. The importance of phoneme articulation and selection can be easily seen by observing dialects and regionalisms. In his book Bad Language, Edwin Battistella discusses some of the ways in which these sound changes are received:

> [R]egional and ethnic accents are often treated as deviating from a desired national standard. People characterize dialects in negative ways: as harsh, flat, nasal, heavy, thick, slow, fact, or ignorant, and as having a twang, drawl, brogue, or lilt. Dialects are also labeled in relation to cultural symbols, as the speech of rednecks, surfers, Yankees, Valley girls, immigrants, yuppies, or "the street." And, of course, the labeling of dialects is related to region and ethnicity: we talk about Southern, New England, New York, Midwestern, or Texas accents, and we talk about Black English, Cajun, Spanglish, and Pennsylvania Dutch, to cite just a few examples. (126)

It is largely through identification of differentiation from culturally and linguistically biased sounds that reception is negatively impacted. Less conspicuously, conforming to those biases impacts reception in a positive manner. In directing any close analysis to phoneme reception, the dominant cultural and linguistic norms must be clearly defined. A spoken text of the same phonetic content directed at an audience of British English speakers and American English speakers will be received differently by each group. The analysis in this paper is directed largely from an American English perspective.

The capacity for variations on production and phoneme selection to obscure meaning was a driving factor behind the creation of Standard American Speech for use in broadcasting and television. The most common national linguistic biases were assembled to create a synthetic dialect whose purpose was promoting ease of understanding. The sounds selected for use in Standard American Speech avoid many of the adjectives Battistella puts forth by favoring sounds with the *open*, *medial*, *alveolar*, and *unvoiced* qualities. Strong *nasal*, *fricative*, and *plosive* sounds are mitigated through the open and lateralized posture of the speaker's mouth. This means of production softens the sometimes extreme differentiation of these sounds, bringing them closer to the accepted dialectical norms of formation and sound.

Isolating differentiation and its degree of separation from established biases in terms of both selection and production is then the key to understanding how phonemes in particular mediate reception and how they can be chosen, formed, and arranged and alter meaning. This is where constructed languages, particularly those designed for the purposes of entertainment and characterization, are of greatest use. Constructed languages deliberately select what sounds to incorporate based on the desired affect the language is to create. These phonemes are already denaturalized to a degree, in that the linguists who selected them are aware of the English

language biases towards or away from these sounds and are able to use this prejudice in producing characterization. Examining further how constructed language manipulates the phonemic medium to produce affectation will give better insights into how natural language can be manipulated in the same manner. The three constructed languages I've selected (Sindarin, Klingon, and Dothraki) were each formed differently. Sindarin was conceived in written form, and later given the function of voice. Klingon was originally a functional set of nonsense sounds that were later given form. Dothraki was created in totality of practical speech and linguistic form. These three approaches to generating a constructed language (form to function, function to form, and function with form) each provide different insights into how certain phonemes mediate meaning. Sindarin will demonstrate the role of cultural bias in phoneme selection. Klingon will demonstrate how linguistic bias affects reception of sound. And finally Dothraki will emphasize the performative nature of speech and how these phonemic biases reflect and affect that performance.

Sindarin and its sister language Quenya are the languages of the elves in J.R.R. Tolkien's Middle Earth. David Salo, Elvish language coordinator for Peter Jackson's film adaptation of The Lord of the Rings, notes that Sindarin was conceived as an exercise in historical and cultural linguistics:

> Tolkien constructed for Quenya and Sindarin a lengthy sequence of changes from an ancestral "protolanguage." This history is, as Tolkien intended, comparable to the historical development of natural languages and, like them, can be usefully analyzed with the tools and techniques of historical linguistics. Within the invented historical

framework Quenya and Sindarin are “related”; both are descendants of the protolanguage *Common Eldarin*. (Salo, xiii)

Sindarin was designed to adhere to a strict linguistic form. As such, its phonemic sounds were selected to reflect both its derivation from Common Eldarin and its differentiation from Quenya. However, of the 38 distinct vowel phonemes in human language and the 81 distinct consonant phonemes (excluding tonal allophones), Tolkien selected only a subset of the 21 English language vowels and 26 English language consonants. Of the unique non-English sounds, only the /x/ phoneme as in “loch” is not a phoneme or a blended phoneme of Standard British English. (Salo, 19). Phonologically speaking, Tolkien’s Sindarin is a subset of British English. This curious phonetic composition is a prime example of cultural bias impacting the application of sound. Tolkien’s elves stood as the greatest of heroes, the pinnacle of culture and art, and the most pure of the races. Sindarin is the privileged tongue of Middle Earth. To construct that tongue as phonemically subordinate to Standard British English communicates extreme culture bias toward English-language sound.

The particular sounds of Sindarin communicate that bias in two ways. First, Sindarin privileges English sounds with the *affricate, round, glide, unaspirated,* and *unvoiced* qualities. The phonemes /w/, /hw/, /l/, />/, and /y/ predominate. These phonemes are produced through medial, open, rounded articulation. Not only does Sindarin bias English, it biases English sounds with these qualities to emphasize the beauty and poetic quality of both languages. Second, and most problematically, Sindarin omits all usage of the phoneme /r/ excepting the silent and light-trill pronunciations: /(r)/, /r/. Standard English itself makes wide use of allophones of /r/, however the silent and light-trilled pronunciations predominate on the British isles and in

northern Europe. The French and Germanic /r/s, though common in British English, are omitted entirely from Sindarin. In terms of cultural bias, Tolkien has positioned Sindarin as uniquely more-British/northern-European than other languages, even British itself. Through Sindarin, Tolkien asserts the privilege of English-language sounds as belonging to the heroic and poetic traditions typified by his elves.

Through Sindarin, we can arrive at analysis focused on the hegemony of phonemic selection, and the cultural other-ing necessarily imposed by phoneme choice. Just as feminists often find that *woman* is defined as *not man*, so too do dominant cultures define external cultural phenomena (such as phoneme selection) as *other than* as a means of asserting dominance. Or, as Agamben might contest, the State defines that which is outside of the State, thus giving the State authority over that which is outside of itself. Following Phillipson, the term *linguistic imperialism* can be employed here to better illuminate how language separates subaltern and minority groups from the dominant culture and likewise subordinates those groups to dominant cultural norms:

> Linguistic imperialism is a subtype of *linguicism*, a term which Tove Skutnabb-Kangas coined (1988) to draw parallels between hierarchisation on the basis of 'race' or ethnicity (racism, ethnicism), gender (sexism) and language (linguicism). Just as racism studies were revitalised in the 1970s by Black scholars speaking from a Black perspective, linguicism studies attempt to put the sociology of language and education into a form which furthers scrutiny of how language contributes to unequal access to societal power and how linguistic hierarchies operate and are legitimated. Drawing on the perspective of minorities, of speakers of dominated languages, is important, since somehow speakers of

dominant languages such as English and French tend to see the expanded use of their languages as unproblematical.

Cultural bias such as we find in Sindarin is as a form of linguistic imperialism. Sindarin's English-subordinate phoneme composition serves to further deproblematize the expansion of English-language phonemes cross-culturally. It normalizes English phonemes as a standard for protagonists and heroes. In terms of manipulating the spoken medium, this deproblematization is a boon. By selecting phonemes that correspond to dominant cultural expectations Tolkien has constructed a language that English speakers will be eager to accept as belonging to them. Sindarin's extreme phonemic cultural bias thus has a normalizing effect. A message communicated through the medium of Sindarin is unobstructed by phonetic other-ness. Rather, Sindarin's privileging of *round*, *unvoiced*, and *unaspirated* sounds highlights the softest and least aggressive elements of the dominant cultural sound-set (English). In this manner, the phonemes of Sindarin serve as a medium that accentuates the positive characteristics of the English language, prevailing upon the listener's willingness to comply with the normalizing standards of linguistic imperialism. Thus, preying upon cultural bias enhances reception.

Klingon is a constructed language rife with its own cultural problems. In the world of Gene Rodenberry's *Star Trek* the Klingons were originally depicted as a race of "dark-skinned Russians" and later as a monstrous race whose culture was "based on the values of medieval Japan" (Rodgers, 109). While the Klingons first appeared (and Klingon was first spoken) in 1966, it wasn't until 1984 that Klingon became a constructed language. Before the 1984 film *Star Trek III: The Search for Spock*, Klingon was only spoken in snippets of gibberish. For Klingon, the effects of cultural bias were in full effect before a language could be developed.

The Klingons were necessarily other-than the humans on *Star Trek* (be it because they were dark-skinned space-Russians, or dark-skinned space-Samurai) and, based out of the perfunctory gibberish they had spoken for nearly twenty years, they were expected to speak other-than.

It is due to this necessity that Klingon serves as an excellent example of linguistic bias at work. Linguist Marc Okrand was hired to develop the Klingon language. His task was to create a language as other-than as the Klingons themselves. To do so he made great use of linguistic bias. Okrand inverted several common English biases to create phoneme pairings and combinations that rarely or never occur in English. Klingon has 21 consonants (to English's 26) but only 5 vowels (to English's 21). Syllables in Klingon always begin and almost always end with a consonant phoneme. English has a linguistic bias toward balance of consonants and vowels. Klingon inverts this bias, creating a language with a wildly disproportionate number of consonant phonemes. The choice the employ more consonant phonemes is a deliberate manipulation of the phonological medium, here used to create an extremely plosive and forceful affect. The motto of the Klingon Language Institute is "Speak Forcefully" (www.kli.org), yet speakers of Klingon have no other choice. The preponderance of consonant phonemes requires plosive-release formation of sound (as in: /b>/ versus /b/, /t>/ versus /t/) to insinuate space between consonant phonemes. In a famous example, *qupla'* [kax.pla-x-.] meaning "success", the only means of producing the /x/, /p/ and /l/ phonemes in succession is through plosive aspiration of each consonant. In Klingon, the meaning is changed, as the phonemic medium forces affectation to facilitate speech production.

Further, Klingon selects its phonemes in direct contrast to the linguistic bias of spoken English. Of its 26 phonemes, 11 Klingon phonemes are never used in Standard British or American English. These sounds are all *plosive, glottal,* or *velar*. Most are *affricate* or *fricative*

as well. Examples include: /?/, /x/, /hx/, /Y/. In contrast to Sindarin, which selected English sounds to culturally mandate the most pleasing phonemes, Klingon selects non-English sounds to demonstrate the most linguistically diverse phonemes possible.

Klingon is an extreme example of playing against linguistic bias to arrive at a desired reception. In the case of phoneme density, and phoneme selection, Klingon demonstrates that contrasting or conforming to linguistic bias allows for manipulation of the medium.

This manipulation can be applied in the same manner to natural language phoneme composition. While a passage in English will generally be comprised entirely of English-language phonemes, the phonemes selected mediate the meaning of the passage by contrasting or conforming to linguistic bias. In the same manner as Klingon, English text comprised of sounds that are linguistically biased-against will suffer from dense mediation and hinder communication. The opposite holds that English text can manipulate the medium of phonemes to reflect biased-toward sounds in order to enhance reception. Shakespeare's Richard III uses manipulates phonemes to his advantage in wooing Lady Anne:

> Your beauty was the cause of that effect;
> Your beauty: which did haunt me in my sleep
> To undertake the death of all the world,
> So I might live one hour in your sweet bosom.
>
> *Richard III, Act I, Scene ii*

Shakespeare employs a preponderance of *medial, centered* vowels, *glides* such as /w/, /^^/ and /j/, *alveolar* /l/ and /s/ sounds, and the distinctly northern European silent/light-trilled /r/

formations. As we saw with Sindarin, these soft and open phonemes are culturally designated as belonging to English and reflecting positive characteristics of the language. In terms of linguistic bias, the sounds Shakespeare is using belong overwhelmingly to the *alveolar* and *bilabial* categories of phoneme production. These modes of production create an internal bias toward a raised, open palate and pursed, kissing lips, and reflect the larger linguistic bias toward medial sound. The passage avoids extreme modes of phoneme production such as *glottal* sound or even precision-oriented *dental* sounds in favor of the ease of centered, open speech. The phonemes used reflect both culturally desirable sound and linguistically common sound that is easy to produce with the added feature of necessitating a mechanical posture of sexual availability in the form of forward, rounded lips and an open mouth.

In this manner the selection of phonemes helps dictate the reception of the text just as any medium; this selection is read as wooing, as it is comprised of phonemes that promote ease, openness, and positivity that facilitate wooing. More importantly, it avoids the incorporation of phonemes that interrupt the internal linguistic coherence of the text. The medium is manipulated to work in concert with the desired communication.

The final constructed language I'll discuss is Dothraki, taken from George R. R. Martin's A Song of Ice and Fire and constructed for HBO's Original Series Game of Thrones. When the series was slated for remediation to television, HBO hired linguist David J. Peterson to construct the language based on Martin's work and the aesthetics of HBO's Dothraki (Wolf). According to series producer/writer David Benioff, the show's producers felt that a fully formed constructed language would be "more believable than heavily accented English." ("Creating the Dothraki Language") It is in this third example that form and function achieve union, and we can begin to see the effects of both cultural and linguistic bias on performative speech-acts. Peterson based

Dothraki largely on Russian, Turkish, Estonian, and Swahili (Rodgers, 54). Culturally speaking, its sounds and construction are biased-against by English language audiences. Linguistically speaking, Dothraki is similar to Klingon in that its use of only 4 vowel phonemes goes against conventional English-language linguistic bias. These deliberate manipulations of the phonemic medium were executed as part of a collaborative artistic aesthetic used to bring to life the language, culture, costume, and tradition of a group of tribal nomads. Peterson deliberately considered the values, world-view, and cultural hierarchy of the Dothraki people in the creation of vocabulary and phoneme sounds for the Dothraki language. There is no word for "thank-you" in Dothraki as they are a people driven to take what they see as theirs. Likewise, each of the 4 vowel phonemes are pure front vowels, reflecting the Dothraki people's need to communicate clearly across open plains through calling—a process that would be hindered by extensive diphthong or medial vowel use. The standard for the Dothraki's clothes, hair, and make-up was taken from the same pool of real-world cultural resources as the phonemes that comprised their language. The remediation of the Dothraki people from text to screen was, in this manner, conspicuously aware of the mediating effects of each element: including the phonemes which comprised the language. The result is a successful depiction of a fictional race that exists in continuity with itself across aesthetic bounds and whose language helps define their social role relative to the audience's linguistic and social norms.

The example of the Dothraki's construction is one of successful synthesis of the spoken medium into a larger mediation. Peterson and HBO treated the sounds of Dothraki as part of their remediation, not as transparent elements of communication. However, the implementation of Dothraki again loses sight of the means by which phonemic mediation shapes meaning.

Dothraki was implemented in a three step process. First, the script was written in English. Peterson would then translate the appropriate lines into Dothraki. Voice/Dialogue coach Brendan Gunn would then help actors learn the lines phonetically, using the original English-language text as the source of intention, motivation, and content. ("Creating") This method is problematic in that while it denaturalizes phonemes, it does so to the point of abstraction. In doing so, it treats Dothraki as if it were not a language.

By learning the text phonetically, the Dothraki performers not only ascribe no denotation to phonemes, they ascribe no denotation to words. The sounds they speak are arbitrary place-holders for a previously interpreted English-language text. At a glance this seems a perfect foray into allowing the phonemic medium to shape meaning. However, any meaning communicated via phonetic recitation is doubled: there is both Dothraki denotation and English subtext being communicated through the same phoneme set. The phonemes do shape both meanings, however this double meaning renders their mediation arbitrary. The sounds spoken are only selected to enhance the denotative Dothraki meanings as Peterson designed them. Those same phonemes therefore arbitrarily impact the sub-textual English-language communication which contains the principle message the performers desire to communicate. The Dothraki sounds belong to a language linguistically discrete from the meaning the performers wish to express and therefore are left the mediate meaning much as a naturalized, unselected phoneme would.

This process is contrary to Dothraki's function as a language. Phonemes in language are discrete in that they present difference and that difference carries meaning. Combining phonemes into words further clarifies and differentiates that meaning. However, a phonetically memorized text ascribes no semiotic signification to any word or sound. It is a text full of partial signs, differentiation without signification. Peterson or another speaker of Dothraki might assign

signification upon hearing the text, but no signification is intended as part of the communication as the speaker is incapable of identifying the distinctions his own speech is making. As Gunn puts it, the Dothraki performers attempt to "map" emotional and intellectual content onto a set of phonemes. This a-significant mapping is contrary to the idea of language and undermines Peterson's effort at crafting a constructed language that grows and behaves like a natural language and whose sounds reflect the character and context of a people.

Peterson and Gunn, while working together to bring Dothraki to the screen, are working within discrete disciplines and using the spoken medium, and subsequently the phonemic medium, very differently from one another. Peterson, the linguist, in his collaborative and real-world inspired selection of sounds has taken an important first step toward denaturalization of phonemes. The sounds in Dothraki reflect the internal cultural bias of the Dothraki people and their internal linguistic biases reflect the social function of their language. Gunn, the voice/dialogue coach, in his phonetic-centered approach to dialogue preparation has ensured that the phonemes called for will be accurately presented and negotiated by performers who are unable to identify the words and phrases they are uttering. The articulation and production of Dothraki's sounds are accurate and the phonemic medium's potential to shape meaning in an intentional manner is maximized. However, these two steps in isolation fail to successfully capitalize on the phonemic medium's potential to enhance communication. It is an error of semiotics and of naturalization. Peterson, who speaks Dothraki, is able to ascribe meaning and significance to the words the performers speak. The language mediates his understanding, but the performers are unable to capitalize on the phonemes or lexemes' discrete differentiation to enhance or direct that mediation. Gunn is able to facilitate the projection of subtext onto a set of prescribed and well-produced sounds. In doing so, the phonemes and lexemes are naturalized by

both speaker and non-Dothraki-fluent receiver as subordinate to and discrete from the meaning of the text. This fact is aggravated by the subtitling provided on screen. The receiver can, ultimately, read the English-language text, listen to the mapped subtext, and lose much of the carefully wrought linguistic mediation in the process. The medium cannot remain conspicuous in either case, nor can it be used to great effect.

While Dothraki is an excellent example of both conspicuous mediation of phonemes and attentive production and application of those phonemes, it is the disciplinary breakdown between linguist and voice/dialogue coach that dampens the impact of the Dothraki language. The language in practice is very successful in emulating a natural language and, according to Benioff, "changed the sound of the show." ("Creating") However, it fails to manipulate the phonemic medium as a means of enhancing communication despite being constructed in such a manner to promote such manipulation. It is through this example I will direct the final focus of this paper: the application and manipulation of the phonemic medium in theatre arts, rhetoric, and public speaking via linguistic analysis.

In Speaking Shakespeare voice and speech trainer Patsy Rodenburg attests that intellectual significance depends on clear articulation of consonants and that emotional significance depends on attention to vowel sound. As Dothraki demonstrates, there is more to phonemic medium than the clear articulation of phonemes, consonant or vowel. Phonemes themselves do not carry denotation or meaning, rather they shape and direct the meaning articulated through them. Dothraki's shortcoming as a constructed language is that its speakers lack denotations. This reduces every carefully selected phoneme to a form of onomatopoetic "woof" or "bang." The phonemes enhance the clarity of the word's meaning, but do nothing to enhance the clarity of the composed communication. This is a pitfall that natural language has

no difficulty avoiding. English language in particular has a broad and synonym-riddled vocabulary capable of addressing both specificity of word denotation and specificity of meaning with an eye to mediation. "Jump" and "leap" are words of similar denotation, comprised of radically different phonemes. If I wish to connote an abrupt, forceful action the *voiced affricate* /dz/ and *back-rounded* /^/ sound of "jump," followed by a *closed-nasal* /m/ are each formed in a contained and individuated manner which reflects of abrupt force. The *lateral* /l/ and *open-front* /i/ are better suited to a long, flowing action characteristic of the fluid and mobile characteristics of the sound's production. The same attention that the linguist pays to the composition of a language such as Dothraki can be paid by the voice and speech professional to the selection and composition of natural language text. Likewise, the subtleties of formation and variation of formation that the voice and speech professional is versed in manipulating in performance can be prevailed upon by linguistics both in the varying of constructed forms and the analysis of existing natural language. Sound selection, frequency, position, and balance and the relation of these elements to cultural and linguistic biases all effect reception and distort the text's message. Attention must be paid, then, both in composing and analyzing spoken text (linguistics) and in producing and articulating text (voice/speech) to the phonemic structure and composition of natural language in order to understand the impact of phonemic mediation on communication.

As Sindarin demonstrates, cultural bias and the other-ing of the non-normative helps to determine which sounds will be given the broadest open reception. Appealing to receivers with sounds that are recognized as belonging to the receivers' normalized set of sounds with positive association normalizes the content of the communication. A speaker who uses culturally biased sounds is more likely to communicate his desired message. A speaker can manipulate those sounds to alter the message. Likewise, Klingon demonstrates that the linguistic bias of sound is

a critical element of mediation. Just as cultural bias dictates which sounds have positive in-cultural connotation, linguistic bias determines the patterns and frequency of sound and their degree of differentiation from the receiver's norm. The farther those patterns deviate from what the receiver expects, the less naturalized the text becomes. Klingon's extreme variation from English-language linguistic bias renders it alien, forceful, and difficult to receive. Shakespeare's linguistic bias, as we saw in Richard III, creates a visible pattern of language that the receiver can interpret to better understand the text's meaning. And finally, Dothraki demonstrates that even careful attention to these facets of phonemic mediation is not enough to comprise a total understanding of the medium. The phonetic production and articulation of sound must be coupled with the notions of bias to produce an accurate picture of the effects the phonemic medium will produce on a text.

Using this interdisciplinary and comprehensive approach to phonemes as a medium, I hope to facilitate a better understanding of the composition of spoken text and how delivery of that text can be altered in a fundamental manner to affect reception. Reconceiving of phonemes as a medium goes far afield of Plato and Skinner, too, both of whom presume that clear speech communication is a matter only of rhetoric and precise production. In doing so it opens up new avenues of analysis and manipulation of speech both in producing clearer more precise meaning and in producing a wider variety of artistic and unconventional meanings through phonemes. Simple variations on this theme such as rhyme, alliteration, and onomatopoeia are already standards of speech which serve as signs for a wide range of intertextual meanings. However, isolating the most fundamental units of differentiation, the phonemes themselves, for analysis presses past the established rhetorical devices into a deeper understanding of why those devices developed and how they can be manipulated. When coupled with the existing understanding of

the role of grammar, rhythm, tone, and composition of spoken language and applied willfully as a means of mediating and remediating speech towards a desired communication outcome, exploration of phonemes as medium will serve to expand speakers' capacity to impact listeners.

If it is important to choose your words carefully, it is at least as important to choose the sounds which compose your words just as carefully. So, too, it is important to place those sounds in a cultural and linguistic context that suits their desired usage. Phonemic sound is a medium of tremendous potential to clarify, obscure, or irreparably alter meaning. Only when we move toward this kind of thinking as both linguists and voice and speech trainers can the application of performative speech extend from the realm of a practice aimed at clarity to that of analysis aimed at expansion of meaning.

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