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Vowel Category and Meanings of Size in Tolkien's Early Lexicons

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Cover Page Footnote

My thanks to Nelson Goering for his comments and suggestions on an earlier draft of this essay.

1. Introduction: Tolkien and phonetic symbolism

The grounds for studying phonetic symbolism[1] in Tolkien's invented languages are at this point well established in the field of Tolkien studies. The recent stand-alone edition of "A Secret Vice" (Higgins & Fimi, 2016, hereafter *SV*), along with perennial interest and commentary on the appeal and effect of Tolkien's languages on the reader are evidence of this. Tolkien himself commented that he was "personally most interested perhaps in word-form in itself, and in word-form in relation to meaning (so-called phonetic fitness) than in any other department" (*SV*, 24). So while the question of *why* we should discuss phonetic symbolism is relatively easily answered, the question of *how* we go about making connections vis-à-vis phonetic symbolism, and what there is to say about possible connections, poses a more difficult problem. This essay reviews the place that phonetic symbolism has in Tolkien studies, discusses its origin in spoken language, and provides a case study illustrating a methodology for linking sound and sense, yielding a reliable example of one such correlation – the relation of vowel quality with meanings of size.

Speaking more generally than phonetic symbolism *per se*, Tolkien mentions linguistic aesthetics, phonoaesthetics, and the appeal of certain sounds often and in important letters. He says of his linguistic tastes with regard to Quenya and Sindarin that, "They are intended…to be specially pleasant," and that Qenya ('Elven-latin') "might be said to be composed on a Latin basis with two other (main) ingredients that happen to give me 'phonoaesthetic' pleasure…" (*Letters*, 175-176). Similar sentiments abound in Tolkien's letters (143, 213-214, 219-220, 264, 380), though perhaps the most important of them comes from a 1955 letter to W.H. Auden where he famously says that his stories "are and were so to speak an attempt to give a background or a world in which my expressions of linguistic taste could have a function" (214). This is echoed in 1958 letter to Christopher Tolkien when he says that, "Nobody believes me when I say that my long book is an attempt to create a world in which a form of language agreeable to my personal aesthetic might seem real. But it is true" (264).

Within the *legendarium* itself we find that the form of language agreeable to Tolkien's taste is one in which two related – but distinct – criteria are satisfied. The first is that the sounds that form words be aesthetically appealing – a criterion that appeals to the notion of *linguistic aesthetics*. This aspect of Tolkien's personal taste is clear from the *Lhammas* when he comments on the primary force of language change in Middle-earth:

[1] I use the term "phonetic symbolism," following Tolkien's convention in the recently-published "Essay on Phonetic Symbolism" (in Fimi & Higgins, 2016).

> The speech of the Valar changes little, for the Valar do not die; and before the Sun and the Moon it altered not from age to age in Valinor. But when the Elves learned it, they changed it from the first in the learning, and softened its sounds, and they added many words to it of their own liking and devices even from the beginning. For the Elves love the making of words, and this has ever been the chief cause of the change and variety of their tongues (*Lost Road*, 168).

In later drafts constituting the *Grey Annals*, it is noted that, "the tongue of the Noldor had changed for the most part in the making of new words… and in the *willful* altering of the ancient tongue of Quendi to forms and patterns that seemed to the Eldar more beautiful" (*The War of the Jewels*, 28, my emphasis).

The second of the two criteria – and the focus of this paper – is that the sounds and shape (i.e., phonotactics) of a word fit the meaning of the word. This second criterion appeals to the notion of *phonetic symbolism*, and is evident from the Quenta Silmarillion of the 1930s where it is said of the Noldor that, "[t]hey were changeful in speech, for they had great love of words, and sought ever to find names *more fit* for all things that they knew or imagined" (*The Lost Road*, 223, my emphasis). In fact, this characterization of the Noldor remained unchanged in Tolkien's later revisions of the *Quenta* in the 1950s (*Morgoth's Ring*, 176).

Early commentary on Tolkien's languages tended to focus on the aesthetics of Tolkien's names and invented languages. Shippey (1979), for instance, discussed the language and names of cultural groups within *The Hobbit* and *The Lord of the Rings* and the effect that these names and languages have on both the characters in the story and the reader. Similarly, Flieger (1983) observed aesthetic differences between the speech of different races in Middle-earth, writing that, "Elven speech is liquid, musical; elven diction is formal and archaic. Orc speech is harsh and gutteral; orc diction is street slang" (7).

Gymnich (2005) follows a similar path, but goes into a bit more depth while focusing on Tolkien's languages, their effect on the reader, and how language indicates culture as well as morality in the books and the films. She highlights the contrast in aesthetics by saying, "In the Elvish languages there are, for example, many mid and front vowels as well as nasal consonants, whereas in the language of the Orcs back vowels, bilabial and velar plosives ([p], [b], [k], [g]),[2] and the palatal fricative (represented by <sh>) are particularly prominent" (14). This is not to say that the Elvish languages lack bilabial or velar plosives and

[2] Note that brackets are used when discussing the physical production of a sound (e.g., [i]), and forward slashes around a sound (e.g., /i/) indicate phonological category, which is often conveyed through the spelling of a word. I generally use forward slashes throughout, as discussion focuses on vowels specifically within the context of Tolkien's languages.

back vowels,[3] nor that the languages of the Orcs lack nasals or front vowels![4] Gymnich wisely uses the word "prominence," and it is perhaps appropriate to consider not only a ratio of different consonants and vowels used, but also the semantic content of the phrases and sentences in each language. Regardless, Gymnich associates the front vowels and nasal consonants of the elves with a better aesthetic and superior morality, while the many back vowels and bilabial and velar plosives (or stops/obstruents) of the orcs would be considered aesthetically unappealing and even associated with evil.

Smith (2006; 2007) discusses Tolkien's theory of linguistic aesthetics and phonosemantics, how the sounds of a word indicate what the word itself means (i.e., phonetic symbolism). He notes that Tolkien's views clearly contrast with Saussure and most contemporary linguists who argue that the relationship between a word's phonemes and its meaning is purely symbolic, and necessarily arbitrary (Saussure, 67).[5] Smith argues that phonetic symbolism abounds in Tolkien's writings, and although he only hints at what that symbolism might be, he notes that the presence of many "higher-sounding front vowels" (/i/, /e/, etc.) in the poem "The Last Ark" has an effect of "a flowing language" (7).[6] Although Smith does clearly establish that Tolkien believed sense and sound go together, he doesn't go any further in making any explicit connections between sound and meaning, instead focusing on the effect these sounds have on the reader. Smith's essay raises the question; if sound and sense do go together, what is the *meaning* of the high vowels that give Tolkien's language a flowing feel?

Fimi (2008) has an extensive discussion of the nature of Tolkien's invented languages (and goes notably against the grain in arguing that his invented languages in fact did *not* come first), perhaps most significantly making note of the fact that Tolkien was not uninfluenced by his linguistic exposure when it came to language creation. That is, what Tolkien considered "beautiful" was closely connected to what he had been exposed to (87).[7] Fimi also goes one step further than Smith in connecting sound and sense by suggesting that front vowels are associated with small things and that back vowels are associated with large

[3] The names Gil-Galad and Celeborn illustrate this well enough.

[4] Although front vowels are rare in the extant Orkish corpus *per se*, the Black Speech of the ring inscription demonstrates usage of front vowels and nasal consonants.

[5] Generally excepting onomatopoeia.

[6] However, the high vowels, [i,u] are usually ranked as lower on sonority scales (how sonorous a sound is) because they often alternate with the glides [j,w] and are articulated with a more close vocal tract, whereas [a] is articulated with a more open oral tract (Clements, 2009; Johannesson, 2007). Because of this, I would not expect the effect of "a flowing language" as a result of a greater frequency of high, front vowels, but from the presence of lower vowels, probably combined with open syllables (as is often the case with Entish, e.g. *TT*, III, iv).

[7] We know fairly well what Tolkien was influenced by: Finnish, Greek, and Latin were major sources of inspiration for Qenya, as was Welsh for Sindarin (*Letters*, 176).

things. The example she cites to support this claim is the contrast between the Qenya words *kilinke*, "a small bell," and *kalon*, "a large bell" (91). These connections are a good starting point for establishing some sort of "phonosemantics" within Tolkienian linguistics – or what Fimi (2018, citing Hinton, 1994) refers to as "synesthetic sound symbolism" – with clear contrast between the vowels as well the meaning. However, these examples are as far as Professor Fimi goes in suggesting relationships between sound and sense.

More recently, Rausch (2013) explored sound symbolism in roots (*not* derivatives thereof) from Goldogrin, Noldorin, Sindarin, Qenya, and Quenya by qualitatively observing how vowels in these roots pattern into various semantic categories. The categories investigated included: size, distance, closed-set words (e.g., pronouns), clustering or abstraction, luminosity and color, and temperature. After reviewing roots that were classified into these various categories, Rausch concludes the vowel /i/ is associated with "small size, frailness..., feminine gender, closeness to speaker, white, grey, colours mixed with white, gleaming point-like light sources, coldness, winter" (116). Conversely, /a/ is associated with "large size, distance from speaker, pure colours, brightness, warmth, sun, summer" (*ibid*). The vowel /e/, he concludes, is somewhere in between /i/ and /a/.

In all of these studies, the discussion of /i/ (and to a lesser extent, /a/) comes to the forefront. For Gymnich the vowel is associated with the elves and a higher cultural and moral aesthetic. For Smith, the front vowels in the poem "The Last Ark" give the feel of a rolling language. Fimi makes connections between Tolkien's invented languages and previous research (e.g., Sapir, 1929) on the meanings associated with certain vowels, and gives examples from Qenya of /i/ and /a/ being associated with smallness and largeness, respectively. Rausch went as far as to list all roots associated with various concepts and notions, and connected /i/, /a/, and /e/ to a broad range of notions, beyond size. Though actual associations vary, /i/ is variously interpreted as giving associations of a higher, more pleasing aesthetic than other vowels.

As the new edition of *A Secret Vice* demonstrates quite clearly, Tolkien was not at all the only scholar of his day to discuss the relation of sound and sense. Fimi relates /i/ to Sapir's (1929) paper which outlines the results of an experiment conducted to identify the correlation between certain phonemes and meanings associated with them. Sapir's study, which seeks to identify "tangible results," focuses on the meanings of "large" and "small." His conclusion is that "…English speaking society does, for some reason or other, feel that of these two vowels, *a*, by and large, is possessed of a greater potential magnitude symbolism than the contrasted vowel *i*" (231). Nor is Sapir the only one to identify these relations. Jespersen (1964, 402) does so as well: "The vowel [i], especially in its narrow or thin variety, is particularly appropriate to express what is small, weak, insignificant, or, on the other hand, refined or dainty."

While Sapir limits his discussion on the reason for the connection of /i/ and /a/ with meanings of size to "for some reason or other," Ohala (1994) suggests a physiological/evolutionary source for this phonetic symbolism in nature. Ohala argues that lower frequencies (i.e., voice pitches) are associated with larger specimens due to larynx and vocal tract size (generally, as mass increases, fundamental frequency decreases) – thus the lower the frequency, the greater the association with largeness. With respect to vowels, Ohala suggests that their association with largeness or smallness relates to facial gestures associated with submission and aggression. Lip retraction – pulling the lips back in, for example, a smile – is often associated with signs of submission and has the effect of shortening the resonating cavity and raising fundamental frequency. In spoken human language, lip retraction often co-occurs with front vowels – like the vowel [i] (see Figure 1 for visual representation of front and back vowels). Conversely, the resonating cavity is often extended via lip rounding/protrusion in gestures of aggression, which lowers fundamental frequency. In human language, lip rounding often co-occurs with back vowels like [u].

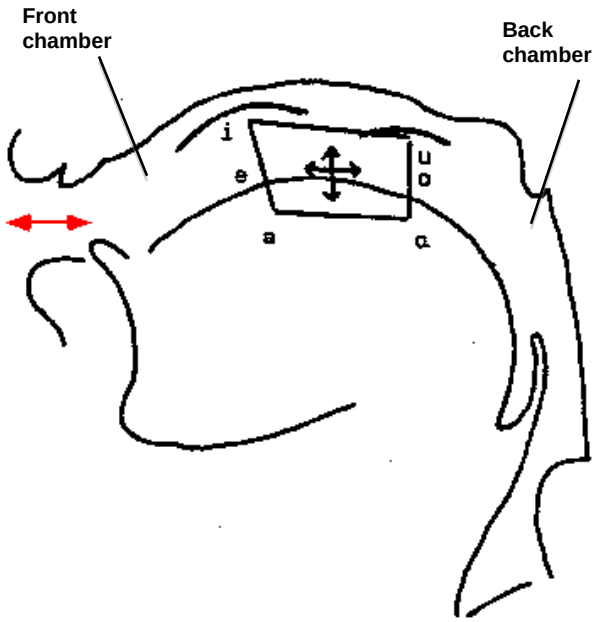

Figure 1 – **The vowel space in relation to the oral cavity** – Front vowels are articulated forward in the mouth, while back vowels are articulated further back (adapted from Goldstein, 2011).

So what does this mean for Tolkien studies? Although Fimi (2018) classifies the association of vowels and meanings of size into the category of "synesthetic sound symbolism," Ohala's explication of the association of vowels with meanings of size suggests that it may be appropriate to place the association between vowels and meanings of size in the realm of onomatopoeia. Indeed, in the until recently unpublished essay "On Phonetic Symbolism," Tolkien suggests that, "[i]f a 'symbolic' feeling really exists it must largely owe its origin to the refinement of onomatopoiea" (*SV*, 64). This categorization of vowel association with meanings of size may be appropriate in the sense that larger objects will generally have a lower resonant frequency and smaller objects will have a higher resonant frequency (think of blowing across the top of a large bottle, versus a smaller bottle). Thus [i] "imitates" the resonant/fundamental frequency of smaller objects by reducing vocal tract size, whereas [u] imitates the frequency of larger objects by increasing vocal tract size.

This discussion still has not brought us to the acoustic properties of /a/, the vowel which is more often discussed in relation to size and sound symbolism – and unfortunately Ohala does not include this vowel in his discussion. However, one hypothesis may be that tongue positioning, in addition to lip retraction and protrusion, also plays a role with respect to the perception of size and vowel quality. While lip retraction and protrusion may be part of production of [i] and [u], respectively, articulation of each vowel is also determined by tongue positioning relative to the geometry of the rest of the vocal tract (i.e., the space between the lips and the vocal folds/glottis). This is especially true of [a], in which lip protrusion/retraction plays at most a minimal role. While an in-depth discussion of articulatory and acoustic phonetics is not within the scope of this paper, it is helpful to understand that vowels such as [u], [e], and [i] are produced by positioning the tongue close to the roof of the mouth, not quite creating a constriction. It is this positioning that divides the vocal tract into two "chambers" (See Figure 1 above. See also Stevens, 1989; Johnson, 2003). Of these two chambers, the front chamber is largely responsible for the second resonant frequency of the vocal tract, or F2,[8] and it is this frequency (F2) that provides information to the listener about vowel frontness or backness.[9] As the tongue moves forward and the front chamber gets smaller for [u] > [e] > [i] – respectively – F2 increases in pitch, and it may be the case that it is not only fundamental frequency, but also frequency of F2 that contributes to perceived association with size when it comes to vowels. For the vowel [a], the lack of a near constriction means a large and open vocal tract, and also results in a relatively low F2 (Johnson, 2003). Perhaps this relatively open vocal tract is what contributes to the perception of largeness.

[8] Also called the second formant.

[9] For a more detailed discussion, see Stevens (1989) and Johnson (2003).

All of this research suggests that not only do we tend to have certain (although far from hard-and-fast) associations with various vowel sounds, but that these associations are grounded in the anatomy and physiology of speech production (tongue positioning and chamber size), as well as anatomy in general (i.e., mass and body size). Although previous research has suggested connections between sounds and meanings within Tolkien's invented languages, none have used quantitative methodologies to do so.

What follows is a case-study investigating the frequency of vowel occurrence within a defined semantic range for two of Tolkien's early invented languages: Qenya and Gnomish (Goldogrin/Noldorin). Discussion of the study's results and conclusions occupies section 3.

2. Case Study: Sound and Sense in Qenya and Gnomish

Sapir (1929) said that for future research,

> [i]t would be an important check to amass a large number of randomly distributed meaningful words to classify into the groups of 'large' and 'small' those which could be so classified without serious difficulty and to see if in sets in which equal numbers of phonetically contrasted words are found the meaning classes were or were not correlated with the sound classes… (235).

What Sapir describes is essentially the methodology I am using here. I have, however, been spared the task of amassing "a large number of randomly distributed meaningful words," since Tolkien has already done that with the Qenya and Gnomish lexicons.[10] Tolkien has also simplified the second task as well, since classifying the sounds into groups of *large* and *small* is a matter of noting whether or not "large," "small," or other words indicating size are in the definition. Because Tolkien provided the words as well as the definitions himself, the amount of subjectivity on the researcher's part is reduced dramatically, simplifying the methodology and increasing the significance of any generalizations that can be made.

The methodology used here differs from that of Rausch (2013) who used only roots in his analysis. Rausch argued that later sound changes would have obscured initially intended associations between sound and sense. However, numerous sources throughout the *legendarium* (cited above) indicate that one of the primary motivations for sound change in the elvish languages was linguistic

[10] These lexicons were originally hand-written on small notebooks around the years 1915-1917 (GL, 4), and are the earliest dictionaries of Tolkien's elvish languages. These lexicons have been made available in Parma Eldalamberon issues XI and XII.

aesthetic and phonetic fitness. Thus it seems clear that phonetic fitness and sound symbolism continued to play a significant role in the later development of each respective language. For this reason I include data listed as either Gnomish or Qenya in the respective lexicons, and exclude roots.

Data for the present purpose were obtained by collecting all words in the *Qenya Lexicon* (*QL*) and the *Gnomish Lexicon* (*GL*) with overt meanings of "large" or "small" ("little," "thin," "fine," "big," "broad," "wide," etc.) in the definition. In many cases entries were for a smaller or larger version of other entries. For example in the *GL* the word for "a big shoe" is *habach*, which is derived from *habin*. When a word has been explicitly derived from, or is stated to derive from a word via a diminutive or augmentative suffix, these words have also been included, whether or not words for "small" or "large" are included in the definition. For example *ulumpingwe*, "caterpillar," derives from *ulumpe*, "camel," with the implied though not stated meaning, "little camel."[11] Individually-listed augmentative or diminutive suffixes have also been included.

For each language, words were categorized first by size, then by stressed vowel quality, allowing observation of the number of times each vowel occurred for both meanings of largeness and smallness. The relevant vowel for each word – which I refer to as the "crucial" vowel – is the vowel that receives primary lexical stress (as can best be determined). In the case of *habach*/*habin* the crucial vowel is /a/. Note, however, that this is not the vowel that changes between the two forms. The initial, stressed /a/ remains the same, and it is the vowel in the second syllable that changes to indicate size. Despite this fact, it is always the crucial vowel that is counted in order to maintain consistent methodology. Determining the crucial vowel was usually very straightforward, given that most of the words in question were mono or disyllabic. For words with more than two syllables, stress was decided using the criteria given by Tolkien in the *QL* and *GL* for words in those respective languages. These criteria are discussed in the appendices.

Because the variables/data are categorical (size and vowel type are categories, rather than units), a Chi-square goodness-of-fit test was used for each dataset (*Gnomish Lexicon*, *Qenya Lexicon*) in order to make statistical statements about what the expected probability distribution would be vs. how the vowels were actually distributed within size categories. In other words, this statistical test was used to compare how the vowels are actually distributed by size within each lexicon, vs. how they would be distributed based on how frequently each vowel occurs. For instance, if vowels do not have any associations between largeness and smallness, we would expect the different vowels (i.e., /i, e, o, u, a/) to occur more-or-less equally in words of largeness and smallness.

[11] Thanks to Carl Hostetter for pointing out here the natural association with "lump," as well as other associations /u/ can have in the Elvish languages, including "dark," "slow," "heavy," "lugubrious," "low", "deep", etc.

The Saussurean (or null) hypothesis in this case (see Smith, 2006), is that there will be no clear relationship between a given sound and a given meaning, and that the distribution of vowels across different size categories will be roughly proportional to how frequently each vowel occurs. However, given the previous research cited above (e.g., Fimi, 2008; Rausch, 2013), the present hypothesis for each of the lexicons is that there will be a relationship between certain vowels, especially /i/ and /a/, and meanings of size.

2.1 GNOMISH LEXICON

Following Sapir and Jespersen, the predictions are that if a correlation is found between meanings of smallness, then front vowels – such as /i/ – are likely to be the most frequent. Figure 2 shows the frequency with which each vowel occurs in meanings of largeness or smallness within the *Gnomish Lexicon*. What can immediately be seen from Figure 2 is that – smallness or largeness aside – the vowel /i/ is by far the most frequent vowel that occurs in the words selected here.

A Chi-Square test for goodness-of-fit was used to test the sample data against the null hypothesis, and showed a significant interaction between vowel and size category, X^2 (5, N = 67) = 30.2, $p < .01$. This test supports what is apparent when looking at figure 2, that vowels in the *Gnomish Lexicon* are not randomly distributed within words having meanings of size. Rather, the distribution of vowels amongst size words shows a distribution that is unlikely to have occurred by chance (less than 1% probability).

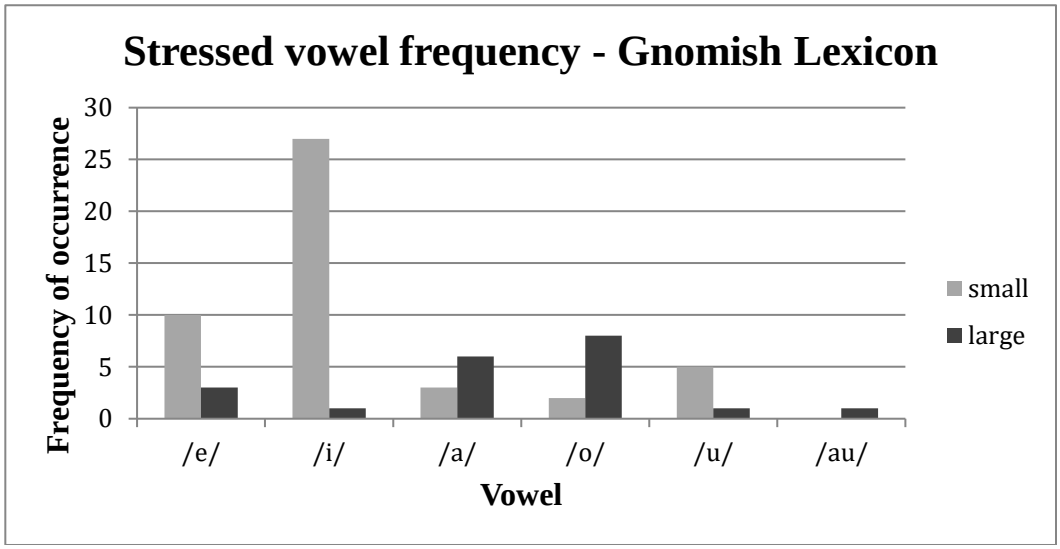

Figure 2 – *Gnomish Lexicon* data broken down by vowel

As can be seen, there is a strong correspondence between front vowels, especially /i/, and meanings of "small," "little," "fine," and "thin" in the *GL*. This correspondence is emphasized when diminutive suffixes are taken into account. For the 10 words with crucial back vowels found in smallness words, 7 of them have /i/ in some sort of diminutive suffix (e.g., *salfinc*, "spoon" from *salf*, "basin," literally "little basin"). Despite the fact that these suffixes are not taken into account in the statistics, the data nonetheless follow the expected pattern.

Table 1 – Vowels in Gnomish Smallness words – /i/ and /e/ are the most common vowels in Gnomish smallness words.

Vowel	Instances	Percent
/e/	10	21.3%
/i/	27	57.4%
/a/	3	6.4%
/o/	2	4.2%
/u/	5	10.6%

Turning to Gnomish largeness words, Sapir's prediction does hold out in a way. While /a/ is more strongly associated with meanings of largeness than smallness in the *GL*, it was /o/ that was the most commonly found vowel in stressed syllables with meanings of largeness. It is perhaps significant to note that – though we may not know why – there are far fewer entries in the *GL* with meanings related to largeness (20 entries) than there are entries related to smallness (47 entries). While the *GL* seems to favor /i/ as the crucial vowel in smallness words, the picture is not so clear for /a/ in largeness words, in part due to the smaller number of entries relating to largeness.

Table 2 – Vowels in Gnomish largeness words – /a/ and /o/ are the most common stressed vowels for largeness words.

Vowel	Instances	Percent
/e/	3	15%
/i/	1	5%
/a/	6	30%
/o/	8	40%
/u/	1	5%
/au/	1	5%

2.2 QENYA LEXICON

The *QL* yields similar yet slightly stronger results than does the *GL*. Again, for smallness words the prediction is that /i/ will be the most common vowel found, and /a/ for largeness words. Figure 3 shows the use of all vowels and their frequency of occurrence in words of largeness and smallness.

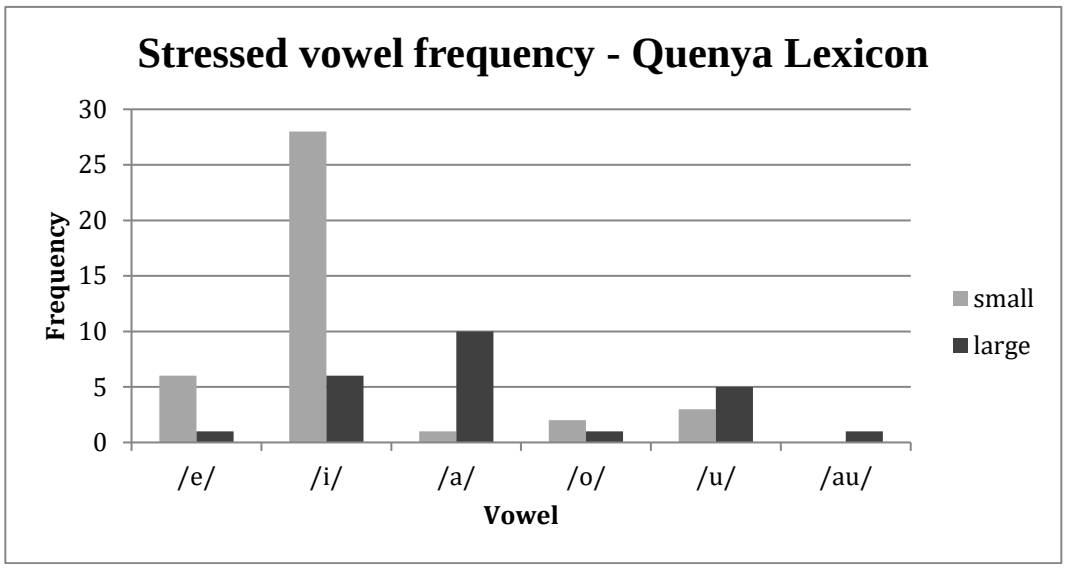

Figure 3 – *Qenya Lexicon* data broken down by vowel

Table 3 – Vowels in Qenya smallness words – The *QL* shows that front vowels, especially /i/, are most frequent in words for smallness.

Vowel	Instances	Percent
/e/	6	15.0%
/i/	28	70.0%
/a/	1	2.5%
/o/	2	5.0%
/u/	3	7.5%

The prominence of the vowel /i/ in words of smallness is immediately apparent. The *QL* shows a strong association between meanings related to smallness and the vowel /i/. This observation is supported by a Chi-Square goodness-of-fit test, which indicates a significant interaction between vowel and size category that is unlikely to have occurred by chance, X^2 (5, N = 64) = 24.53,

$p < .01$. Table 3 shows the frequency with which each vowel category occurs in smallness words, with /i/ as the crucial vowel in more than two-thirds of smallness words in the *QL*.

With respect to largeness words, Figure 3 and Table 4 show that not only is /a/ used more frequently than any other vowel (front or back) for largeness words in the *QL*, but that when /a/ is used in words relating to size, it is used almost exclusively for words of largeness (with only one occurrence in smallness words). Again, as with the *GL*, the number of entries for smallness words in the *QL* is greater than largeness words (40 entries vs. 24 entries). Still, the *QL* shows the correspondence in smallness and largeness words with the vowels that Sapir's study would predict. The most common crucial vowel in *QL* smallness words is /i/, occurring in 70% of the entries (see Table 3). Likewise, /a/ is the most common vowel in largeness words, occurring in 42% of the entries (Table 4). Nonetheless, front and back vowels are much more evenly represented in largeness words, with /i/ demonstrating the second highest frequency after /a/.

Table 4 – Vowels in Qenya largeness words – Following Sapir's prediction, /a/ is the most common crucial vowel in *QL* largeness words.

Vowel	Instances	Percent
/e/	1	4.2%
/i/	6	25.0%
/a/	10	42.0%
/o/	1	4.2%
/u/	5	20.8%
/au/	1	4.2%

2.3 Combined Lexicons

The data presented in the previous two sections demonstrate that an interaction between sound and sense is at work in both the *QL* and the *GL*. Although no vowel is used exclusively with a given size category, both lexicons show similar trends – /i/ is strongly associated with meanings of smallness, while /a/ and /o/ are more associated with meanings of largeness. The results given above for the individual lexicons are underscored when the data are combined for both the *GL* and *QL*. The combined data show that in both the *GL* and *QL*, /i/ is clearly more associated with smallness than with largeness, as is seen from Figure 4, where 87% of instances of /i/ are in smallness words. A Chi-square goodness-of-fit test

for the combined data shows a stronger interaction between vowel and meaning than either the *QL* or *GL* alone, X^2 (5, N = 131) = 46.68, $p < .01$.

Although 81% of /a/'s occurrences were in largeness words, given the lower number of largeness words in each lexicon, and the variability in back vowel frequency across the lexicons, we are unable to point to /a/ as the "largeness" vowel in more than one lexicon with the same level of certainty as we can for /i/ as the "smallness" vowel. Regardless, the data clearly show differentiated use of front and back vowels in the Gnomish and Qenya lexicons.

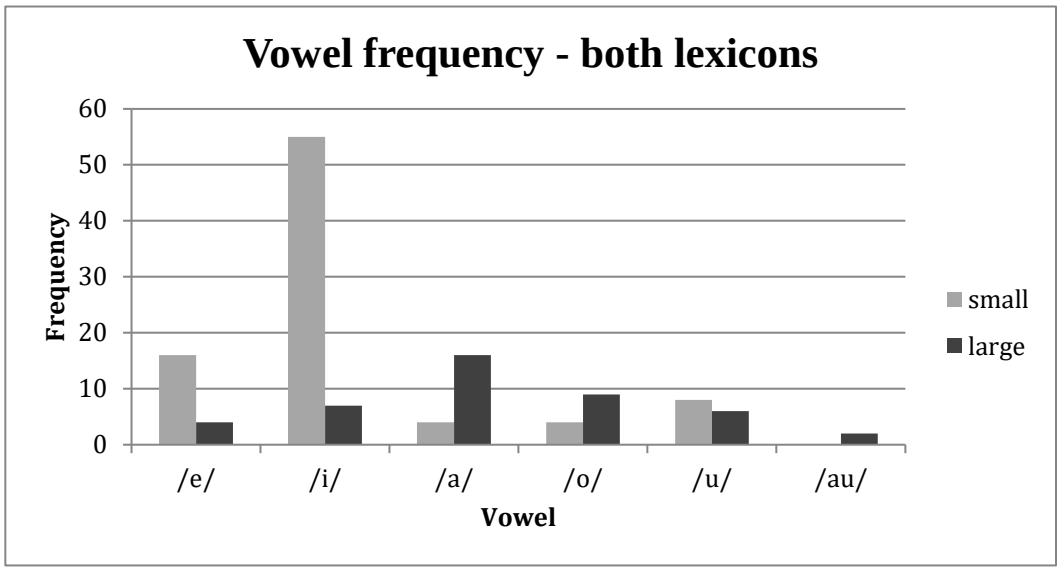

Figure 4 – Combined data from *Qenya Lexicon* and *Gnomish Lexicon*, broken down by vowel

3. Discussion and Conclusion

Although Tolkien clearly intended for phonetic symbolism to occur in his languages, he never indicated exactly how this sound symbolism was made manifest. The results of this study indicate that one way in which sound symbolism appears in the *Gnomish Lexicon* and *Qenya Lexicon* is through contrasting the use of front and back vowels to indicate meanings of smallness or largeness, respectively. The strongest finding is the correlation between the high front vowel /i/ and meanings of smallness in both lexicons. This finding confirms the connections Fimi (2008) and Rausch (2013) had suggested, and may have implications for the saliency of /i/ to others. Furthermore, in light of what seem to be physical/acoustic bases for the symbolic uses of front and back vowels (Ohala,

1994), it seems open to discussion whether this sound symbolism is more appropriately labeled as "synesthetic sound symbolism" (as per Fimi, 2018, citing Hinton, 1994), or indeed as a more basic – though less transparent – form of onomatopoeia.

One thing that stands out about word and vowel frequency is that in both lexicons, words with meanings of smallness were almost exactly twice as frequent as words with meanings of largeness (87 smallness words in the two lexicons combined, compared to 44 largeness words). With this being true, it is interesting to consider what other semantic categories Tolkien tended to favor in his invented languages.[12] Tolkien knew that language creation with the intent of giving "private satisfaction" could result in languages and words having a "tendency, to free as they were from cold exterior criticism, to be 'over-pretty', to be phonetically and semantically sentimental" (*SV*, 26). In the case of size words in both the *Gnomish Lexicon* and the *Qenya Lexicon*, Tolkien seems to favor what is small, quick, and nimble as opposed to what is big, slow, and obtuse. And so it seems likely that the effect Tolkien's languages have on the reader is a combination at least two things: 1) His intended phonotactic and grammatical designs; and 2) a difference in the content he expressed in his respective languages. For example, it seems an understatement to say that Tolkien was more likely to use one of the Elvish languages to express something that he thought was beautiful, and to use a language like the Black Speech to express something like, "Uglúk to torture (chamber) with stinking Saruman-filth. dung-heap. skai!"[13]

Regardless of the label we put on such sound-symbolic phenomena, our impressions upon reading Tolkien's invented languages are many, and very much dependent on what our linguistic exposure is. In the same way that Tolkien – based on his linguistic exposure – put into his languages sounds that he found appealing, the sounds that we find appealing in Tolkien's languages are dependent to an extent on our exposure. Any universals in phonetic appeal or correlations between sound and meaning, if they exist, must be based on other criteria (e.g., Ohala, 1994). While caution is advised when making statements regarding our impressions of phonetic symbolism in Tolkien's works and languages (due to differences in exposure between the author and the reader), it is nonetheless an area that warrants further investigation. What makes an impression on the reader of Tolkien may be something significant, as in the case of /i/. The study presented here investigated a single semantic category – size – demonstrating that it is

[12] Rausch (2013), for instance, investigated other semantic categories besides size and found additional associations with the vowels /i/ and /a/, such as proximity to speaker, temperature, gender, etc.

[13] This was Tolkien's latest translation (mid-to-late 1950s) of the phrase *Uglúk u bagronk sha pushdug Saruman-glob búbhosh skai* (*TT*, III, iii; *PE 17*, 78-79). Earlier translations of this curse were published in *Vinyar Tengwar* 26 and *The Peoples of Middle-Earth*.

possible to establish connections between sound and sense in Tolkien's languages, and furthermore that this area of inquiry has only just begun to be tapped.

APPENDICES

The appendices below contain the size words gathered from both the Gnomish and Qenya lexicons. As mentioned previously, only entries with definitions relating to size were included. Additionally, several entries were included that were clearly diminutive forms of other words, for example *ulumpingwe*, "caterpillar," derives from *ulumpe*, "camel." For each entry, I have included the entry form (or forms if more than one is placed together), and the definition. Some entries contain a comparison form in parentheses, which I have included here. For some of the entries that are clearly diminutive or augmentative, I have put a suggested source in brackets after Tolkien's definition. Items that appear in brackets elsewhere are part of the entry. When an entry contains more than one definition, both have been included. Entries with an asterisk (*) before them also contain the asterisk in the lexicon entry, used to mark either the basic form in a group, a hypothetical word (etymologically), or (rarely) a footnote.

The *Gnomish Lexicon* underwent multiple revisions. Most of the first entries (in pencil) were erased and replaced with a fair copy in ink, with later additions and revisions in crayon and pencil. Gilson, Wynne, Smith, and Hostetter include fair copy ink entries, along with later pencil and crayon entries. I also include only these forms and do not include or mention earlier pencil forms. In the case of multiple, nearly identical forms that appear on different pages (e.g., *gwen* and *gwent, gwenn* ("big, large. – fine") in the *Gnomish Lexicon*), only one form is included.

When determining stress, I have used Tolkien's description of stress and accent provided for each language in the *GL* and *QL* volumes, respectively. In Gnomish words, polysyllabic words have stress on the penultimate syllable. However, several exceptions exist. Except in disyllables, /i/ does not receive stress when in "hiatus" (i.e., adjacent to another vowel, where both vowels are in different syllables). For example the noun *glôr*, "gold," inflects in the genitive plural as trisyllabic *glorion,* but receives stress on the initial syllable, since Gnomish does not stress /i/ when in hiatus (*PE 11*, 12-13). Thus for *glen(d)rinios*, which is the only size word in the *GL* having more than two syllables *and* different vowels in possibly stressed syllables, stress is on antepenultimate /i/, *glen(d).'rin.i.os,* where each period indicates a syllable boundary, and the apostrophe in front of the second syllable indicates stress on that syllable.

In Qenya phonology – apart from the primary rule that word stress could never fall on the final syllable except in single-syllable words – two general

criteria guide determination of word stress in words of three or more syllables. The first of these is:

A. Due to sound changes in Cor-Eldarin,[14] in which initial syllables became stressed unless they were a discernable prefix, "dactylic words were the commonest in trisyllables and trochaic in dissyllables.[15] Therefore a grave ` is placed over any vowel bearing chief stress which is not in the antepenult... nor followed by two consonants" (*PE 12*, 6).

This historical fact indicates that *by default*, trisyllables have stress on the initial syllable, unless the second syllable is a heavy syllable consisting of a short vowel + two consonants, or unless stress is indicated otherwise with a grave accent. The second of these criteria is:

B. Stress could not appear further back (i.e., near the beginning of the word) than the antepenultimate syllable, and "favored the penult[imate syllable] if that syllable contained a long vowel either by quantity or position" (*PE 12*, 5).

Thus the rule is that in three- and four-syllable words, the antepenultimate syllable receives chief stress unless the penultimate syllable has either a long vowel or a short vowel followed by two consonants (see *PE 12*, p. 27 for syllable weight hierarchy). Tolkien restates this rule later in the Qenya Phonology as, "In trisyllables the first syllable is always accented, where possible by the laws stated below, i.e. in practice, if the second syllable is not long" (*PE 12*, 26).

So there are four considerations for determining stress in three- and four-syllable words in the *QL*.

1. Word stress can never fall on the final syllable except in single-syllable words.
    a. *lénuva* and *lenúva* are both possible, but not *lenuvá*.

2. In three- or four-syllable words, the antepenultimate syllable was stressed unless the penultimate syllable contained a long vowel or a short vowel followed by two consonants.
    a. *lenuva* has the stress pattern *lénuva* since all syllables are open syllables and neither stress nor vowel length is indicated otherwise.

[14] Accent was attached generally to the initial, "root," syllable, and medial long vowels that followed an initially accented long vowel were shortened.

[15] Dactyls are trisyllables in which the first syllable is stressed. Trochees are disyllables in which the first syllable is stressed.

   b. *tessare* has the stress pattern *téssare* since neither stress nor vowel length is indicated otherwise.

3. In three- or four-syllable words, the penultimate syllable is stressed if it contains a short vowel followed by two consonants (see note A above), or if that vowel is long.
   a. *velikse* has the stress pattern *velíkse*, since the penultimate syllable is followed by two consonants.
   b. The *QL* entry for *anūva,* "doughty," indicates long penultimate vowel, and stress therefore falls on the penultimate syllable.

4. Where both antepenultimate and penultimate syllables consist of short vowels followed by two consonants, the second of these two equally weighted syllables is accented (*PE 12*, 27).
   a. *ulumpíngwe*

Appendix A: List of Gnomish size words

Smallness Words

/e/
Benc or *bent* – small boat.
eglin or *egli* (cp. *ectha*) – needle.
**glenn* - *thin, fine.*
glen(d)rin – slender. also *gledhrin*
glent, glenweth – thinness.
gwent – brook, small river.
gwethli – maiden, little girl.
meg – any small animal - esp. mole.
nethli – long lush grass. little meadow.
tessil, tess – 1) little flower. 2) † maiden.

/i/
bilin or *bilinc* – small bird, especially sparrow.
chi-, chin(t) – diminutive suffix.
crinc – bent and thin. 2) (n.) crescent.
**fing* – narrow.
fingli – a narrow place. straits. a sound. a pass in mountains.
glen(d)rinios – slenderness.
grilthi – a finger-ring [<*grail*]
Ilfing, Ilfin, Ilfiniol – little one. little heart. [<*ilf*]
igli – young of fish. small fry.
**inig* – small. cp. *pinig*. also – *inig, inc*.
inthi – adv. less.
libli – 1) a small glass. 2) a small drop.
mib – a little kiss. a peck.
migin – little.
miginthi – littleness.
pi – anything very small. a bit. mote.
pibin – small berry. haw.
pim – bead. any small round thing. seed.
pinig – tiny, little.
sî – bead. small gem or pearl.
thimli – a whistle, piccolo. [<*thibin*]
thlind - fine, slender.
thribin – lean.
tifin – a small flute.
timp - a hoot. a note of a flute. (also a note on a small bell, cp. *timpi*)
timpi - a little bell.
tricthon - (fibrous, fine) root. cp. *tarc*.

/a/
salfinc – spoon. [<*salf*]
talpon – a slender pillar. cp. *clib. tl̨p.*
thathri – shavings, sawdust [<*thast*]

/o/
cloch, clog – a stone (small). also stone of fruit, especially *cloch*.
rogli, rothli – little pipe. especially musical.

/u/
hugin – young pig. [<*hunc*]
mugli – calf. [<*mû*]
puthli – baby. [<*pui*]
tuthli – a match. [<*tuth*]
uf – fine wool, down.

LARGENESS WORDS

/e/
beltha – open out (transitive), expand, unroll, set sails.
egrin – wide, vast. broad – far.
gwen - large, big. fine. cp. –*wen*.

/i/
intha- (or *gintha-*) – to join to, add, increase. add to.

/a/
gagron – yoke ox – bullock [<*gach*]
**gant (>-iant, -iont*) – larger, greater, more. Opposite of *inthi*.
gantha – more. cp. *iontha, -iantha. yn̥t.*
ganthan – (large.) waxen. grown big. grown up. adult.
habach – a big shoe. clog. sabot.
langon – great bell.

/o/
gôbi – a large hound.
gonn – great stone. rock.
gonthos – a great rock.
modwen – a large number.
odog – mighty, great – violent, excessive, exceeding. very.
odron, odrog – dour, mighty, stout, brave. – a brave man.
odwen-modwen – an expression = a large, indefinite number.
polc – thick, fat.

/u/
ûmi – large.

/au/
saul – a great wind.

APPENDIX B: LIST OF QENYA SIZE WORDS

SMALLNESS WORDS

/e/
lenwa – long and thin: straight: narrow.
lenuva – tight, narrow.
tessare (i) – little maid.
teste – small worm.
tetl – small flower.
tyetl – a tiny baby.

/i/
filma – fine hair, line.
filwa, filima – thin, lean.
fingwa – narrow.
fingil – narrow, straights, gulf.
inwilitse – little fairy.
inya – tiny.
itse – a small fly.
kilinke, kilintl – a small bell.
kilinkele – jingling of (small) bells.
kolosilde – long thin point.
lipte – a tiny drop.
lipil – a tiny glass.
minda- (*mindane*) – to diminish, fade, lessen, vanish.
minwa – small.

minu – make less, decrease, spoil, alter for worse.
miqilitse – little or tender kiss.
pî – speck, spot, dot, mote.
-pi, -pit, -pin, -pinke – diminutive endings.
pin or *pink* – a little thing, mite.
pînea – small.
pinqe (i) – slender, thin.
pinqisilda – slender and tapering.
pirin – thin rod, pin.
siripta – slender stem.
sirpe – stem, stalk. (slender tube, etc.)
titinwe – small star, a sparkle of dew.
tolipinke – little doll. [<*toli*]
ulumpingwe – caterpillar. [<*ulumpe*]

/a/
pat [papt-] – small leaf.

/o/
kolwa – narrow, thin.
tompa - small drum.

/u/
mul(d) – fine powder.
mulma – fine flour.
tulwe – tall thin pillar, standard, pole. – banner.

LARGENESS WORDS

/e/
velikĭ – great.

/i/
kalimbo – savage uncivilized man, barbarian. – giant, monster, troll.
kamillo – large poppy. = *fumella valinôrea.*
pingwa – fat, rich (of soil).
pīwe – fatness, richness, goodness.
velikse – greatly.
velitya – magnify.

/a/
alanda – broad, wide.
famba – belly, fat body.
fambo – fat man.
kantl – large harp.
kalon(ng·), kalonga – a large bell.
karkasarma – a large saw.
lāta- – intr. spread, extend. of country, lie.
panta – open, wie, spreading.
'yanta- – enlarge, increase, add to.
'yanta – large. (ynt)

/o/
kalongalan(d), [kalongal]e – ringing or jangling of (large) bells.

/u/
pulu- (*pūle.*) – swell, intr.
pulwa, pulpa – fat, bulky.
ūmea – large. Cp *–ūme.*
tumbe (*e*) – trumpet, large horn.
tyūka – thick. Cp. *tiura, tiuka.*

/au/
fauka – fat, large.

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