Cross-linguistic! Poetry! Sound! Affect!:

A cross-linguistic analysis of word-initial consonants in Finnish and Japanese love and war poems.

Suze Wesselingh (13921436)

8th of September, 2024

Faculty of Humanities, University of Amsterdam

BA Linguistics: Bachelor Thesis Linguistics

Supervisor: Marijn van’t Veer

Index

Abstract

There has been research regarding sound symbolism both in the literary field (Creangâ, 2022; Lehiste, 1997; Webster, 2015, 2017) and the linguistic field (Aryani et al., 2018; Bankieris & Simner, 2015; Bentley & Varon, 1933; Kanero et al., 2014; Levickij et al, 2013; Sidhu & Pexman, 2018;), but an integration of both the literary and linguistic to investigate the affect of sounds in poetry has largely been neglected, not to mention cross-linguistic research doing this. The aim of this thesis is to answer the following question: Will there be a difference in the occurrence of *a particular phonetic/phonological phenomenon* within *themes* poems of *language-1* versus *language-2*? In order to do that a set of components had to be determined, namely the phonological phenomenon, two languages, two themes, as well as the authors and poems. These were chosen to be word-initial consonants, Finnish and Japanese, love and war and sixteen poems in total, four per language+theme combination. Additionally, a decision tree integrating relative counting was created as a set-up for the analysis to pick out six words per poem to be analysed. Based on the research question and its components the hypothesis was that the occurrence of word-initial consonants within war and love poems will be similar across Finnish and Japanese. The combined analyses suggest that there is a case of both cross-linguistic overlap, i.e. similarities, and cross-linguistic differences. They also suggest that the love poems more accurately represent affect than the war poems. Additionally, this thesis' findings largely align with previous literature regarding sound symbolism. With regards to the hypothesis this entails that while there is evidence supporting it, there is also evidence opposing it.

Keywords: poetry, sound symbolism, affect, cross-linguistic, phonology

1. Introduction

Linguistics is about language. Poetry is about language. So far, so good. What if we continue that train of thought Linguistics is about poetry. Poetry is about linguistics. That does not seem quite right, but maybe there is some truth to it? Both the field of literary analysis and the field of linguistics are intrinsically about language, yet these fields do not overlap as much as would seem to be obvious. Particularly, the subject of sound in poetry could be seen as being under-investigated, excluding the heaps of research about metrical structure, which concerns aspects such as metre and rhythm. Hence, why this thesis aims to answer the question of whether specific phonological phenomena can be found in poetry across languages and, in turn, have similar occurrences within certain poetry themes across languages.

1.1 Importance of the link between linguistics and poetry

This thesis will start off by illustrating the importance of the link between linguistics and poetry. The conversation of whether literary research and linguistics research are intrinsically overlapping is not new. Jakobson (1960), a conference paper, is a perfect example of this. Roman Jakobson, a pioneer of

structural linguistics, was tasked with giving a talk about poetics in its relation to linguistics, his aim being to argue for poetics and linguistics being integral and indispensable parts of one another.

Jakobson (1960) begins by describing poetics as the study of literature, which wants to answer the question of what qualities make a verbal structure a work of art and describing linguistics as the global science of verbal structure. Kaur (2015) summarises Jakobson's five main arguments for similarities between poetics and linguistics, which can be seen in Figure (1). For the sake of brevity these summaries have been further adjusted for this thesis, so only the main point of the arguments is presented.

(1) Jakobson's five arguments

1. Both disciplines deal with verbal messages and their structure.
2. Both language and literature are part of semiotics and semiology.
3. As they are both a part of semiotics and semiology, language and literature deal with meaning generation.
4. Both discipline's data is dealt with objectively.
5. Both synchronic and diachronic approaches are equally used and applicable in poetics and linguistics

Adapted from (*Kaur, 2015: 238*)

In addition to these arguments, Jakobson claims that all verbal messages, whether poetic or linguistic, are purposeful and goal-oriented. Jakobson (1960) goes on to describe a linguistic model that presents the six factors and six functions of verbal communication. Importantly, one of the functions in this model is the poetic function of verbal communication, which is described as when a verbal act draws the attention of the speaker and/or listener to the verbal message's vocabulary use, sound patterns and syntax. Jakobson states that when language is involved at least one of the six functions will be present. In turn, the poetic function will not only be found in literature and within literature the poetic function may be joined by other functions. Kaur (2015) gives an example from Jakobson that clearly presents this. In the sentence from Figure (2) the speaker and/or listener is drawn to the re-occurrence of the sounds [s], [z] and [ʃ] in close proximity to one another, as well as how the words *she-sea* ([ʃiː]-[siː]) and *shells-sells* ([ʃɛlz]-[sɛlz]) are only differentiated by the /s/ and /ʃ/. The speaker will note that due to these sound patterns this sentence is more difficult to say. The poetic function is thus present in a non-literary verbal message.

(2) Example sentence from Kaur with IPA transcription added below

"She sells sea shells at the sea shore" *(Kaur, 2015: 240)*

IPA: [ʃiː sɛlz siː ʃɛlz æt ðə siː ʃɔː]

Jakobson (1960) illustrates how the topic of the link between poetry and linguistics was a contentious conversation at that point. So then the question is, how far has the conversation moved? In particular, the topic of sound in poetry.

1.2 Sound in poetry

The previous section showcases the importance of the link between linguistics and poetry. Linguistics is a discipline that contains many sub-discipline. As such, investigating poetry through the lens of all these sub-disciplines would make this an endless thesis. This thesis investigates sound, so instead of 'linguistics in poetry' this section is concerned with 'sound in poetry'. The purpose of this section is to illustrate how sound in poetry has been investigated with the use of linguistics, what different types of research have been done about sound in poetry, as well as introduce some key terms used within the literature. First off, Creangâ (2022), a case study of Edgar Allan Poe's *The Raven,* is the first mention of the concepts of 'sound symbolism' and 'sound iconicity', specifically going into the idea of 'phonesthemes' and 'phonaesthesia' through the investigation of the translatability of poetry. This is then followed by Webster (2015), which concerns conversations with Navajo consultants about 'sound symbolism' and poetry, showcasing how this concept is experienced by an individual or even a group of people. Additionally, to illustrate these experiences in a scientific manner this paper introduces the term 'sound affinities'. Then, similarly to Creangâ (2022), Webster (2017), a follow up study to his 2015 study, explores the translatability of a Navajo poem through the concepts of 'sound iconicity' and 'seductive ideophony'. Lastly, as this thesis does a cross-linguistic analysis, a cross-linguistic paper looking into sound and poetry is presented. Lehiste (1997) investigates how poetry may shed light on the way a language is structured. Specifically, comparing Japanese and Estonian haikus for insight into whether Estonian is a 'mora-timed' or 'syllable-timed' language.

To start off with, Creangâ (2022) is a case study of Poe's *The Raven* and aims to do two things. Firstly, Creangâ (2022) aims to showcase that linguistics can provide necessary theoretical and practical tools to inform the field of literary translation. Secondly, it aims to revisit the discussion of the (un)translatability of poetry from the perspective of iconic and non-iconic sound symbolism by investigating the extent to which aspects of the phonetic and phonological structure of the poem are preserved across languages. Creangâ (2022) describes sound symbolism as follows:

> Sound symbolism has been defined roughly as "the relationship between sound and meaning" (Burridge and Stebbins 205) and it is described as "the most general term for the natural, or apparently natural, connection between sounds and their meanings or referents (Ferber 87)" (166)

An important part of sound symbolism is sound iconicity, which refers to relations between sound and meaning. Examples of iconic sound symbolism are onomatopoeias, such as the word *hissing* (/hɪsɪŋ/), which mimics the literal sound of hissing. There are also phonemic units capable of carrying meaning

that is non-iconic in nature. A term coined in the 1930's by John Rupert Firth that describes such a unit is 'phonestheme' (Creangâ, 2022). These units are non-iconic in nature as the sound-shape can suggest any feature of meaning, not just sound. Figure (3) showcases a set of words that represent the monosyllabic phonestheme with initial /sk/.

(3) Set of words representing the monosyllabic phonestheme with initial /sk/

Skate, skedaddle, skid, skiff, skill, skim, skimp, skin, skirt, skit, skull

(Creangâ, 2022: 167)

This set of words illustrates what 'superficial' experiences this phonestheme appears to link together, namely superficial movement, edges, surfaces that are thin layers, or thin-shaped surfaces and certain kinds of thinness. Despite the various etymologies of the words, one could argue for the suggestive value of the grouping. Following from phonestheme Creangâ (2015) also introduces another term Firth used, namely 'phonaesthesia'. Phonaesthesia is described by Creangâ (2015) as follows:

> A linguistic phenomenon whereby a phonemic cluster that does not make up a morpheme can be associated by the speakers of a certain language with a certain semantic area or meaning. (167)

A poet may make use of phonaesthesia in their poetry and translating that poetry into another language can be a difficult task. In her analysis of translations of Poe's *The Raven,* for example, Creânga (2015 notes the following sentence:

> Open here I flung the shutter, when, with many a flirt and flutter (173)

This sentence contains three words that start with /fl/, namely *flung, flirt* and *flutter*. As can be seen in Figure (4), when looking at these words next to other lexical items with initial /fl/, a phonestheme can be seen taking shape. All these words mimic a specific sound and seem to share a fraction of their meaning indicating a specific kind of airborne movement. In both the translations Creânga (2015) investigates, this use of phonaesthesia is completely lost, as no sound cluster exhibiting a similar phonaesthetic effect exists in the language. Instead, both the authors opt for the use of alliteration.

(4) Set of words representing the phonestheme with initial /fl/

Fly, flow, flag, flap, flee, fling, flirt, flutter

Adapted from (Creânga, 2015: 173)

Thus, the concept of phonaesthesia suggests that the experience of sound symbolism is not limited to individuals, but may be a shared experience among the speakers of a language. The question that then arises in the context of this thesis is whether sound symbolism is also attested to be a shared experience within poetry among the speakers of a language.

A group of speakers that may help answer this question is the Navajo people, a Native American people of the Southwestern United States. Webster (2015) touches on conversations he had with Navajo consultants about poetry and sound. Before Webster's analyses of the conversations he introduces the term 'word affinities', which was coined by Dwight Bolinger. These word affinities are associative practices, such as alliteration, rhyme, homonyms and puns, as can be seen in Figure (5).

(5) Associative practices which constitute word affinities

- Alliteration
    - The occurrence of the same sound at the beginning of adjacent or closely connected words
        - ➔ "Similar starting sounds!"
- Rhyme
    - Correspondence of sound between words or the endings of words
        - ➔ *Rough*, *tough*, *enough*, but <u>not</u> *through*
- Homonyms
    - two or more words having the same pronunciation, but different meanings
        - ➔ *Plane* and *plain*
- Puns
    - a joke using the different possible meanings of a word or the fact that there are words which sound alike but have different meanings
        - ➔ "The duck said to the bartender, 'put it on my bill.'"
        - ➔ "What do you call a bagel that can fly? A plane (plain) bagel!"

The conversations Webster analyses were mainly about the sound associations that are evoked in a variety of poems. An important point that is made is that these sound associations do not align among all speakers, meaning the felt attachments to linguistic forms are unique per speaker. Repeated saying and hearing of a poem inspired contemplation of phonological iconicity across words. Here, the point of interest is that iconicities of sounds evoked other words, rather than iconicities of morphemes or words evoking other words. Webster (2015) sees these as 'sound affinities' rather than 'word affinities' as the affinity seems to be of sounds within words, rather than the words themselves. An example of this that Webster (2015) presents is found in how one of the Navajo consultants has the word *nihik'inizdláád* in one of her poems. She glosses it as "luminescence is all around" in English, yet it still feels incomplete to her. The relationship between language use and language form is missing. Tohe notes that what is evoked by *nihik'inizdláád* is a personal connection to light. This connection arises thanks to *nihi-*. As can be seen in Figure (6) there is the termative prefix *nihi-* and the first person possessive plural prefix *nihi-*. These prefixes do not structurally align as the termative prefix attaches to verbs (e.g. *nihik'inizdláád*) and the possessive prefix attaches to nouns (e.g. *nihizaad* 'our language'). As such, it is phonological iconicity that evokes the experience of a personal connection to light in *nihik'inizdláád*, rather than the morphological unit.

(6) *nihi-* prefixes

- *nihi-* = termative prefix → attaches to verbs
- *nihi-* = first person possessive plural prefix → attaches to nouns

Adapted from (Webster, 2015: 285)

Webster (2015) also mentions the pleasure of saying, which is the joy and delight in the saying of words. In his conversations over the years with the Navajo, Webster found that considerations about what words they love were not solely based on the meaning of the word, but also on the pleasure of the sound of the word and the pleasure of saying the word. For example, Webster (2015) mentions a Navajo woman explaining a poem that used the sound symbolic *w'u w'u*, which she described as both representing the sound of an approaching deity, as well as the sound of a crane taking flight over water. Then, showcasing the pleasure of saying a word, Webster (2015) describes how when saying *w'u w'u* the woman "flapped her arms as if they were the wings of a crane; a smile on her face." (285).

In 2017, Webster published a follow-up paper that analyses four translations by four different translators of one Navajo poem. Similar to Creangâ (2022), through this analysis Webster (2015) investigates translatability, sound iconicity, and seductive ideophony. Ideophony entails words that through sound imitation express or evoke sensory experiences and impressions. For example, the investigated poem in Webster (2017) contains the two lines: *da'diłdił* and *yiits'a'*, which has at least three different possible interpretations, as can be seen in Figure (7).

(7) Three different interpretations of *da'diłdił yiits'a'*

1. *da'diłdił* followed by *yiits'a'*
   - ➔ Evokes the sensory experience/impression of throwing the stick dice or the bouncing of stick dice in the stick game[1]

2. *da'* followed by *dil dil yiits'a'*
   - ➔ *Dil dil yiits'a'* evokes the sound sensory experience/impression of someone stomping their feet repeatedly

3. *da'* followed by *dił dił*
   - ➔ *Dił* by itself means blood

Adapted from (Webster, 2015: 186)

[1] The stick game is a Navajo game played with stick-dice (Webster, 2017: 187)

Webster (2017) argues for the phenomenon of seductive ideophony, where instead of ideophones being inherently iconic the depictive nature of an ideophone seduces people into treating a word as being a sufficient representation of the depicted event. This plays a role in poetry as the inclusion of ideophony may shift the interpretation of a poem. This is evidenced by the analyses of the translations in Webster (2017), where the repeated reading of the poem changed a translator's approach to translating. When first reading the poem aloud they pronounced *tsidił'ga and da'diłdił* as is written. However, after they read the last line *yiits'a'* they pronounced *tsidił'ga* as *ts'idil* and *da'diłdił* as *da' dil dil*. The reasoning behind this is that while *yiits'a'* can be analysed as 'having to do with sound' it is also often used as a verb of sounding following an ideophone. As such, the translator translated the poem as seen in Figure (8). They were seduced into hearing the poem as filled with ideophones.

(8) Translation of the Navajo poem

éh	oh
tsidił'ga	bang
da'diłdił	bang bang
yiits'a'	it sounds

Adapted from (Webster, 2017: 177-178)

Creangâ (2022), Webster (2015) and Webster (2017) all introduce important concepts for sound in poetry research, as well as introduce different methods of investigating sound in poetry. This thesis investigates sound in poetry by use of cross-linguistic analyses. Thus, what is still missing is a link to previous cross-linguistic research concerning sound in poetry.

An example of cross-linguistic research tying poetry to phonetics and phonology is Lehiste (1997). This paper looks into the phonetic realisation of orally produced poetry specifically through the lens of the idea that the suprasegmental system of a language can be found in the metric structure of its traditional poetry. Through the analysis of oral productions of Estonian and Japanese haikus she aims to shed light on two questions: the question of whether Estonian is a mora- or syllable-timed language and the general question of the relationship between syllables and morae. Types of timed language constitute classifications for languages based on their rhythmic properties where a distinction is made based on what property is the basis of the rhythm, which could be things such as morae, syllables and stress (Ramus, Nespor & Jasper Mehler, 1999). Figure (9) shows the rhythmic segmentation of the example sentence *"Lost little kitten"* in a stress-timed language (English), a syllable-timed language (Italian) and a mora-timed language (Japanese). That the English sentence is segmented based on stress can be seen by looking at *little kitten*, which consists of one rhythmic segment, namely |little kitten|, rather than the four segments |lit|, |tle|, |kit| and |ten|. The segmentation of the Italian sentence

does not line up with stress, as that would mean "*Picollo gattino perso"* would be segmented as follows: | Piccolo | gattino | perso |. Rather, the rhythmic segments line up with the syllables, see *perso* (e.g., | per|so |) for example. That the Japanese sentence is segmented based on morae can be seen by looking at *koneko-chan* with *chan* consisting of two rhythmic segments, namely the morae |cha| and |n|, rather than the one segment |chan|.

(9) Rhythmic segmentation of "Lost little kitten" in a stress-, syllable- and mora-timed language, stress = underlined, rhythmic segment boundary = bar

1. Stress-timed language: English
    - *"Lost little kitten"* | Lost | little kitten |

2. Syllable-timed language: Italian
    - *"Piccolo gattino perso"* | Pic|co|lo | gat|ti|no | per|so |

(Native speaker, personal communication, June 21, 2024)

3. Mora-timed language: Japanese
    - *"Maigo no koneko-chan"* | Ma|i|go | no | ko|ne|ko | cha|n |

Adapted from (Kubozono, 2017: 33)

Some have argued that Estonian is also a mora-counting language due to the Estonian syllable quantities. Syllables with a short quantity and syllables with a long quantity would consist of one mora, while syllables with an overlong quantity consist of two morae. Figure (10) shows example words with short, long and overlong quantities.

(10) Examples of Estonian words with short, long and overlong quantities

- Short → *paja* = 'pot' genitive case
- Long → *pada* = 'pot' nominative case
- Overlong → *patta* = 'pot' illative case

Adapted from (Helimski, 1998: 480-515)

Lehiste (2013) does mention there are enough counter-arguments against Estonian being a mora-counting language. The observations of the Estonian haikus are that the durational patterns vary considerably with respect to mora-count on the basis of syllable count and that there is considerable variability in the duration of morae and syllables. Lehiste (1997) concludes that neither morae nor syllables constitute the basic unit of timing in Estonian. This is based on two arguments. Firstly, if the mora were an isochronous unit of timing in Estonian then the duration of a mora should not decrease as their number in a line increases. Secondly, if the syllable were an isochronous unit of timing in

Estonian then the duration of the line should not increase when the number of morae increases while the number of syllables remains constant.

The above papers showcase how versatile the topic of sound in poetry is in what types of research can be done and what topics can be investigated, as well as how the topic of sound in poetry has been present for many years. There are case studies (Creânga, 2015), analyses of conversations with people (Webster, 2015), analyses of translations (Creânga, 2015; Webster, 2017), cross-linguistic research (Lehiste, 1997), production analyses (Lehiste, 1997) and still more. Topics include things such as translatability (Creânga, 2015; Webster, 2017), the importance of sound in culture and communities (Webster, 2015; Webster, 2017), and suprasegmental systems of languages (Lehiste, 1997). Sound symbolism, sound iconicity, phonestheme, phonaesthesia, word or sound affinities, seductive ideophony and type of timed language are terms that are deeply connected to both poetry and linguistics. Still, the conversation of sound in poetry does not seem to be discussed much. The current thesis aims to change that, at least a little bit, by filling in a gap in the literature. In order to do that, first, the relation between ‘affect’ and sound needs to be explored.

1.3 Affective effects of sounds

The previous subsection lays out how sound in poetry has been investigated, and introduces key terms used within that literature. Sound symbolism is one of those key terms and its existence as a concept suggests that sounds can carry meaning on their own (e.g., not grammatically or lexically attached). This raises certain questions, for example: How do sounds express meaning on their own? To what extent can a sound carry meaning on its own? Are there particular sounds that can carry a meaning on their own? What meaning can these sounds carry? Is the meaning attached to such a sound specific to one language or can it be found cross-linguistically? The answers to these questions may be found by exploring ‘affect’. Affect is an attitude or emotion that a speaker brings to an utterance and can be expressed through multiple channels, such as word-use, intonation and sentence structure. Affect can also be expressed through sound. The purpose of this subsection is to illustrate how affect and sounds are involved with each other by showcasing different linguistic papers investigating sound symbolism.

Firstly, to further elaborate on sound symbolism sub-subsection 1.3.1 gives an overview of five proposals for the mechanisms of sound symbolism, namely statistical co-occurrence, shared properties, neural factors, species-general evolved associations and language patterns (Sidhu & Pexman, 2018). Following this, 1.3.2 presents Kanero et al. (2014), an imaging study investigating the neural functionings behind sound symbolism. These two sections present the context to better understand the behavioural studies concerning sound symbolism. A concept often used in the methodologies of these behavioural studies is ‘scales’. As such, the studies using ‘scales' are compiled into one section, namely 1.3.3. This section starts off with introducing ‘scales’ by laying out some of

the first papers using this concept (Bentley & Varon, 1933). Then, a more recent paper by Bankieris & Simner (2015), investigating the link between synaesthesia and sound symbolism, is presented. This paper showcases how the use of these 'scales' has evolved from those early papers onward, moving from non-words to real words, as well as investigating other phenomena in conjunction with sound symbolism. Then, at the end of 1.3.3, an integral part to this thesis' analysis is explored, namely Levickij et al (2013), a large-scale cross-linguistic study of phonetic symbolism in natural languages. Lastly, 1.3.4 explores another integral part to this thesis' analysis, a lexical analysis of the general role of sound in affective meaning making done by Aryani et al. (2018).

1.3.1 Five mechanisms of sound symbolism

To understand the theoretical scope of sound symbolism as a concept, this sub-subsection discusses Sidhu & Pexman (2018), a review of five proposals for the mechanisms of sound symbolism. Firstly, they discuss two possibilities regarding the relationship between form and meaning: whether the relationship is or is not arbitrary. A non-arbitrary relationship between form and meaning can be through systematicity or iconicity. Systematicity refers to broad statistical relationships among groups of words belonging to the same semantic or syntactic categories. Iconicity is a resemblance between form and meaning, and three different types of iconicity can be distinguished, which can be seen in Figure (11).

(11) Types of iconicity

- Direct iconicity = form maps directly onto meaning via resemblance
    - For example: the word *'ding'* resembles the sound of a bell

- Indirect iconicity = the form's associations are what map onto meaning

↓

1. Imagic/Absolute iconicity = a relationship between a single form and meaning
    - For example: *'teeny'*
        - the meaning of *'teeny'* =/= related to the sound /tini/
        - the sound /i/ = sound symbolically related to smallness
            - The *impression* maps onto meaning

2. Diagrammatic/Relative iconicity = the relationship between two forms resembles the relationship between their two meanings
    - For example: the words *'goro'* and *'koro'* in Japanese
        - 'goro' = a heavy object rolling
            - /g/ = voiced consonant
            - Voiced consonants = associated with heaviness in Japanese
        - 'koro' = a light object rolling
            - /k/ = voiceless consonant
            - Voiceless consonants = associated with lightness in Japanese

Adapted from (Sidhu & Pexman, 2018: 1623)

The five mechanisms that Sidhu & Pexman (2018) review are as shown in Figure (12):

(12) Five mechanisms of sound symbolism

1. Statistical co-occurrence
2. Shared properties
3. Neural factors
4. Species-general, evolved associations
5. Language patterns

Mechanism 1 assumes the statistical co-occurrence between phonetic features and associated stimuli in the environment to cause sound symbolic associations. This mechanism regards the relationship between form and meaning to be non-arbitrary in nature through systematicity. An internalisation of probabilities may be caused by experiencing particular stimuli co-occuring in the world (see Figure (13) for examples). As this mechanism presumes co-occurrence-based associations to be made between a component feature of a phoneme and certain stimuli, rather than the complete phoneme, this does raise a question for phonemes that, as a whole, seem to carry sound symbolic association.

(13) Examples of proposed statistical co-occurrence based explanations for sound associations

- High pitch = small size → smaller things tend to resonate at higher frequencies
- Low pitch = large size → larger things tend to resonate at lower frequencies

- High auditory volume = large size → larger entities tend to emit louder sounds
- Low auditory volume = small size → smaller entities tend to emit smaller sounds

Adapted from (Sidhu & Pexman, 2018: 1626)

Mechanism 2 assumes a shared property among phonetic features and stimuli to cause sound symbolic associations. The explanations following this mechanism can be divided into those involving low-level properties and those involving high-level properties. Low-level properties are perceptual, meaning that one way of explaining sound symbolic associations is the suggestion that they involve an experience of the same perceptual feature in both phonemes and associated stimuli. For example, Sidhu & Pexman (2018) note that it has often been pointed out that vowels associated with roundness, like /u/ and /oʊ/, involve a rounded articulation. High-level properties are conceptual, affective or linguistic in nature. Cross-modal correspondences might emerge due to shared connotative meaning, which is what the stimuli suggest, imply or evoke (see Figure (14) for an example). It is not what the stimuli denote, in other words what they directly represent. A limitation of this mechanism is that it begs the question of how phoneme features come to be associated with their connotations.

(14) Example of proposed shared properties based explanation for sound associations

- High-pitched tones → connotation of being brighter, sharper and faster
- Small stimuli → connotation of being brighter, sharper, and faster

↓

- Associations between high pitch and small stimuli
    - due to link between shared connotations

Adapted from (Sidhu & Pexman, 2018: 1628)

Mechanism 3 assumes neural factors to cause sound symbolic associations. Structural properties of the brain, or the ways in which information is processed in the brain cause these associations to arise. This does not imply that other mechanisms do not rely on neural factors, rather this mechanism proposes neural factors to be at the forefront of causing the associations. Sidhu & Pexman (2018) note a cross-modal correspondence theory that proposes the existence of a common neural coding mechanism for stimulus magnitude. This entails that when stimulus dimensions can be quantified using the terms more or less (e.g., more or less heavy), the common neural coding mechanism may give rise to an association between the 'more' and the 'less' ends of the dimensions. For example, high volume and bright objects may have a correspondence due to them both being high in magnitude.

Mechanism 4 assumes species-general associations to be behind sound symbolic associations. The mechanism proposes that the associations, as opposed to the processes leading to those associations, themselves are a result of evolution. An example of this is the Frequency Code theory by Ohala (1994), which proposes an explanation for the mil/mal effect, which in short suggests that the *a*-end of vowels tends to imply largeness and the *i*-end tends to imply smallness (see section 1.3.3 for a more in depth look at the mil/mal effect). Ohala's explanation is based on the observation that when an animal

wants to appear threatening they utilise a low-pitched vocalisation to appear large and when they want to appear submissive or non-threatening they use a high-pitched vocalisation to appear small. In turn, Ohala proposes that humans have this same frequency code and that the sensitivity to the co-occurrence between pitch and size has become innate, thus explaining the mil/mal effect, as /a/ has a lower pitch and /i/ has a higher pitch.

Mechanism 5 assumes patterns extracted from language to cause sound symbolic associations. A distinction from mechanism 1 is that these theories propose co-occurrence between phonological and semantic features to cause associations rather than co-occurrences in the environment. An example of this mechanism is associations derived from phonesthemes (see section 1.2). Take for example the phonestheme *gl-*, which relates to light (e.g., *glint, glisten, glow*). Mechanism 5 proposes that repeated exposure to sounds in certain word contexts may lead to the association of the phonestheme. In other words *gl-* might become associated with brightness due to the repeated hearing of words like *glint*, *glisten* and *glow* rather than *gl-* being associated with brightness on its own.

To sum up, Sidhu & Pexman (2018) begins by explaining the different types of relationships that are possible between form and meaning, zooming in on the three different types of iconicity; direct, indirect imagic/absolute and indirect diagrammatic/relative. They then move to explain the five proposals for mechanisms behind sound symbolism, which are summarised in Table (1).

Proposal	Mechanism	Cause of sound symbolism
1.	Statistical co-occurrence	The statistical co-occurrence between phonetic features and associated stimuli in the environment
2.	Shared properties	A shared property among phonetic features and stimuli
3.	Neural factors	Structural properties of the brain, or the ways in which information is processed in the brain
4.	Species-general, evolved associations	Evolution: the associations, as opposed to the processes leading to those associations themselves are a result of evolution
5.	Language patterns	Patterns extracted from language

Table (1) Summary of the five mechanisms presented by Sidhu & Pexman (2018)

This section provides theoretical context to better understand sound symbolism, or in other words, the affective effects of sound. Additionally, there have already been glimpses into how these affective effects may present themselves outside of the theoretical context. For the clearest picture however, more than glimpses are needed.

1.3.2 Imaging study

The previous sub-sub-section outlines five mechanisms of sound symbolism. One of these mechanisms assumes that neural factors are the primary cause behind sound symbolic associations, Mechanism 3 (Sidhu & Pexman, 2018). A paper interested in the neural functioning behind sound symbolism is Kanero et al. (2014). While this paper might not directly give evidence corroborating or disputing Mechanism 3, it does provide more context with regards to the neural factors behind sound symbolism. Specifically, Kanero et al. (2014) did an fMRI study investigating the neural mechanisms underlying sensitivity to sound symbolism by looking at mimetic words in Japanese. A mimetic word is a sound symbolic word that mimics something through the use of sounds. Japanese has roughly three different categories of mimetic words, these are illustrated in Figure (15).

(15) Different categories of mimetic words

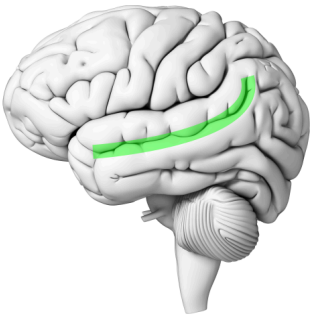
- Phonomime → onomatopoeia, acoustically imitate actual sounds
    - *wanwan* = dog barking
- Phenomime → represent the characteristics of input from non-auditory scenes
    - *yotayota* = walking clumsily
- Psychomime → represent psychological states
    - *wakuwaku* = feeling of excitement

Examples taken from (Kanero et al., 2014: 2)

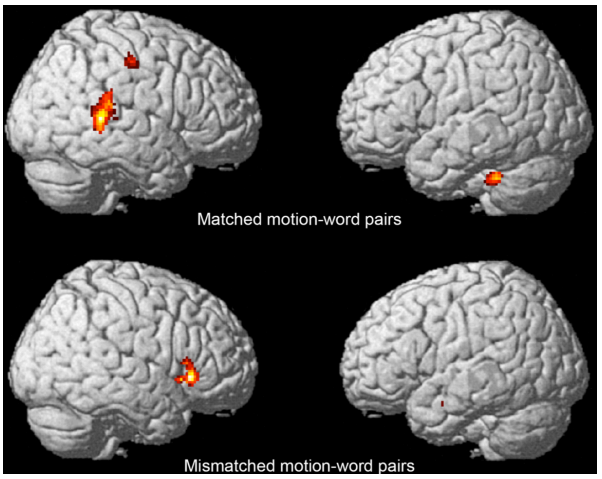
Kanero et al. (2014) investigates phenomimes. The neural region that is of particular interest is the right posterior superior temporal sulcus (STS). Figure (16) shows the placement of the STS, which is in the same spot for both hemispheres. The right posterior STS processes environmental sounds, while the left posterior STS processes linguistic sounds. That mimetic words can be understood universally suggests that something other than a feature of the language system is present and required within these words to support the occurrence of universal understanding. According to Kanero et al. (2014), a feature of non-linguistic environmental sounds may be fulfilling that role within the mimetic words, hence the interest in the right posterior STS rather than the left.

The results of their first experiment show that mimetic words activate the right posterior STS. This can be seen in Figure (17) where there is activation in the posterior STS area of the right hemisphere (upper, left hemisphere in the figure) for the matched motion word-pairs. This was despite the fact that all mimetic words were visually presented phenomimes, which showcases that the right posterior STS is not limited to processing onomatopoeias. The results of their second experiment show that the right posterior STS is activated not only for motion mimetic words, but also for mimetic words representing static shapes. This is supported by Figure (18) where it can be seen that the right

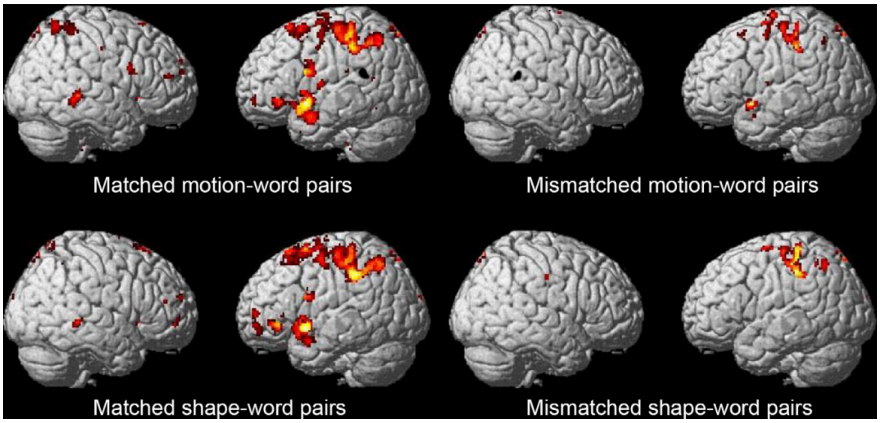
posterior STS shows activation for both the matched motion-word pairs (upper, most left hemisphere in the figure) and the matched shape-word pairs (lower, most left hemisphere in the figure).



(16) Image of the left hemisphere with the superior temporal sulcus highlighted in green. Adapted from (Howard, 2023)



(17) Regions that showed greater activation for mimetic words than for non-mimetic verbs and adverbs (p<0.05). Adapted from (Kanero et al., 2014; 5)



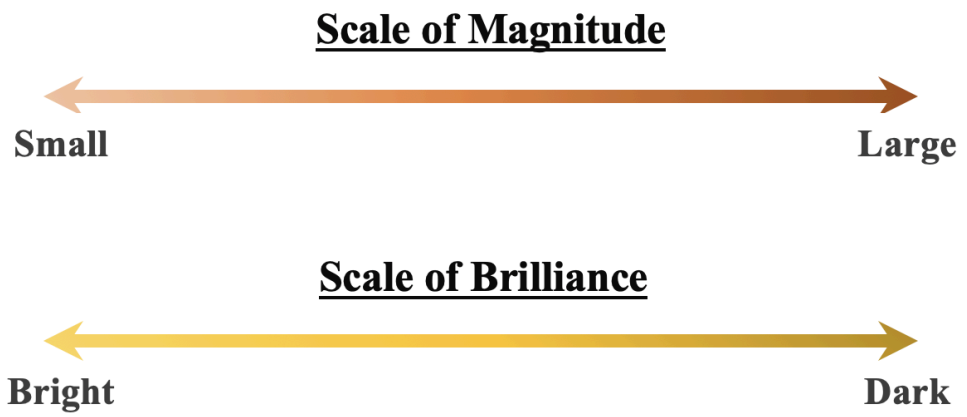
(18) Several brain regions, including the right posterior STS, showed significant activation compared to baseline (p<0.01). Brain activity observed during the motion and shape trials were not significantly different. Adapted from (Kanero et al., 2014; 6)

Kanero et al. (2014) conclude that the right posterior STS serves as a critical hub for processing Japanese mimetic words, and possibly sound symbolism in general. This paper provides neural context for sound symbolism. Sidhu & Pexman (2018) provides theoretical context for sound symbolism (see section 1.3.1). In that case, what is missing? It is the behavioural context.

1.3.3 Scales: behavioural studies

Previous sub-subsections provided theoretical and neural context (see section 1.3.1 and section 1.3.2 respectively), leaving the behavioural context unmentioned. However, these will be introduced in this section. Behavioural research regarding sound symbolism often uses the concept of 'scales' within their methodology. To illustrate this concept it is easiest to start by looking at early studies.

Bentley & Varon (1933) lays out some of the first research that was done using 'scales'. The first research they mention is a brief study by Sapir & Whorf in 1992. Participants were presented with two 'unfamiliar words' (non-words) with an arbitrary meaning. These words were *mil* and *mal* with the attached meaning of 'table'. They then had to report whether one word symbolised a larger or smaller table. The results showed a tendency for the *a*-end to imply largeness and the *i*-end to imply smallness. Sapir & Whorf concluded that certain phonemic units exhibit definite symbolic significance, which is unrelated to the lexical and semantic value commonly attached to words. The contrasting pair of 'large' and 'small' that Sapir investigated is a scale of magnitude. A follow-up study by Newman added the contrasting pair of 'bright' and 'dark', in other words a scale of brilliance. Figure (19) gives a visual representation of these 'scales'.



(19) Visual representation of the scale of Magnitude (left end pole = small, right end poll = large) and the scale of Brilliance (left end pole = bright, right end poll = dark)

Newman's follow-up study was bigger, using a method of statistical treatment and a much larger body of material. His findings confirm Sapir's earlier conclusions. He also had the belief that the distribution of vowel and consonant sounds upon a scale are determined by factors such as: position of

the tongue in articulation, resonance within the mouth, the size of the oral cavity and the length of the vowel sound. Bentley & Varon (1933) gives a look into how sound symbolism research using 'scales' started. However, methods expand and evolve with time, so too did the use of 'scales' in sound symbolism studies.

A study that clearly illustrates the evolution of 'scales' in sound symbolism research is Bankieris & Simner (2015). They investigated the link between synaesthesia and sound symbolism. Synaesthesia is defined by Bankieris & Simner (2015) as follows:

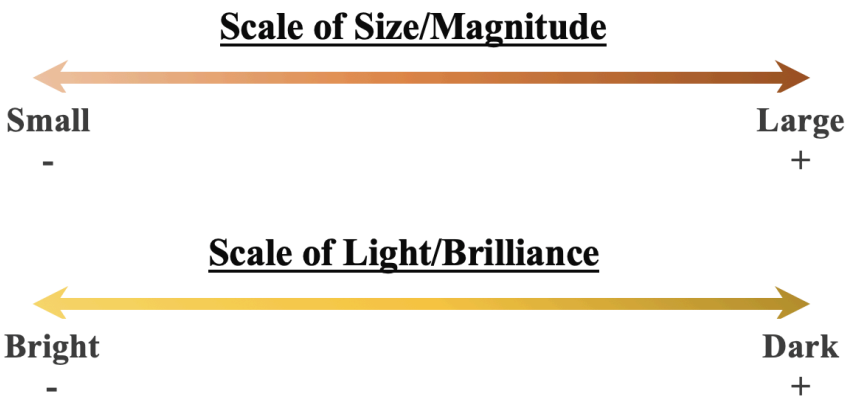
> An inherited condition in which sensory or cognitive stimuli (e.g., sounds, words) cause additional, unusual cross-modal percepts (e.g., sounds trigger colours, words trigger tastes) (186)

The first difference from the earlier studies described by Bentley & Varon (1933) is that Bankieris & Simner (2015) does not investigate the phenomenon of sound symbolism on its own, rather it focuses on the link between two phenomena, namely sound symbolism and synaesthesia. This, in turn, leads to the evolution from first having only one group of participants to then having multiple groups for comparison, as is the case for Bankieris & Simner (2015). Another evolution is present in how the earlier studies all make use of non-words, where Bankieris & Simner's (2015) stimuli consist of real words from different languages. In how these stimuli are categorised a similarity with the earlier studies can be found, as the real words are divided into four semantic domains, namely big/small, bright/dark, up/down and loud/quiet. These semantic domains describe scales, two of which are present in the earlier studies. The semantic domain big/small describes the scale of magnitude and bright/dark describes the scale of brilliance, as can be seen in Figure (19).

Summarising, research regarding 'scales' has moved from being solely about sound symbolism to investigating other phenomena in conjunction with it. Research now may investigate multiple participant groups, as well as real words instead of non-words. A thing that has not changed is the scales itself, with the scale of magnitude and brilliance being utilised in earlier studies as well as in Bankieris & Simner (2015) for example.

At this time, a question may be raised: aside from the behavioural context for the concept of sound symbolism, where can the link to this thesis be found? This thesis aims to investigate the possible cross-linguistic similarities in phonetic phenomena occurring in poetry with regards to affect (i.e., the different themes). Levickij et al. (2013) is a cross-linguistic paper investigating phonetic symbolism in natural languages by looking at twelve different scales in 53 languages. Apart from also doing a cross-linguistic investigation, what makes this paper an integral part of this thesis is that the findings from Levickij et al. (2013) can link this thesis' results to the concept of sound symbolism. As such, this paper's methodology and findings will be noted comprehensively.

Levickij et al. (2013) uses scales, these are the following: size, potency, activity, hardness, evaluation, smoothness, weight, solidity, warmth, light, sharpness and humidity. The poles of each scale are marked by a plus (+) and a minus (-), as illustrated in Figure (20). The analyses consist of statistical procedures looking at the frequency of occurrence of each sound following phonetic distinctive features, such as close, front, voiced, lateral, plosive, frontlingual and sonorous. Results show the degree of connection between phonetic and semantic units depends on the symbolic potential of a sound i.e., the ability of a certain sound to symbolise a certain concept or a group of concepts, and the symbolic activity of a scale i.e., the ability of a certain concept or scale to be symbolised by a certain sound or a group of sounds. Figure (21) provides a visual representation of these two concepts.



(20) Visual representation of the scale of Size/Magnitude (left end pole = small '-', right end poll = large '+') and the scale of Light/Brilliance (left end pole = bright '-', right end poll = dark '+')

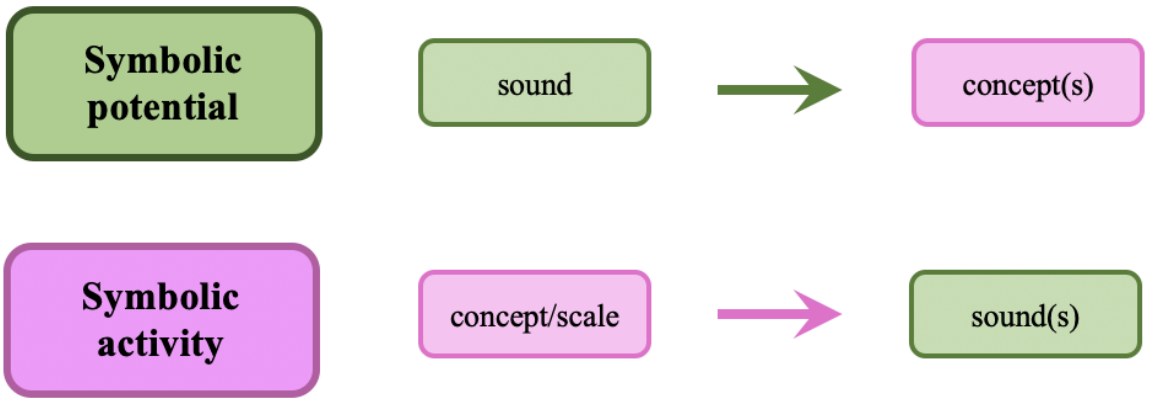


Figure (21) Visual representation of the concepts of symbolic potential and symbolic activity

The analysis on the level of distinctive features and polar concepts shows that the symbolic potential of each distinctive feature is different. In the case of consonantal distinctive features the following decreasing sequence of symbolic potential was found: lateral, rolled, frontlingual, voiceless, plosive, labial, fricative, voiced, palatalised, sonorous, backlingual, implosive-fricative articulations. Meaning

that the distinctive feature 'lateral' has the most symbolic potential, while 'implosive-fricative articulations' have the least. This information is valuable as it offers insight into this thesis' results.

Levickij et al. (2013) also do an analysis of the correlations between languages to investigate whether cross-language correlations exist and if they do, to find out whether the genetic relationship between languages corresponds to their phonetic relationship. They do this by investigating the frequency of the sounds used in the languages to symbolise small (in size), big, sharp, hot, light (not dark) and rough. Findings showed that cross-language correlations do exist. Table (2) showcases an example of the correlation between languages symbolising the concept 'little'.

	Germanic	**Baltic**	**Romance**	**Austronesian**
Germanic	-	+.05	+.65	+.84
Baltic		-	+.15	+.25
Romance			-	+.68
Austronesian				-

Table (2) Correlation between languages symbolising the concept 'little', adapted from (Levickij et al., 2013: 83) (green cells = statistically significant ($r \geq 0.58$))

The correlations between Germanic and Romance, between Germanic and Austronesian, and between Romance and Austronesian are statistically significant ($r \geq 0.58$)), while the other correlations are not. The study presents two factors that may influence the correlations, as can be seen in Figure (22). Factor b is supported by the results of the analysis. As can be seen in Table (2), the genetic relationship between languages does not necessarily correspond to their phonetic relationship. As this thesis will do a cross-linguistic analysis with two languages whose language families are far apart genetically (Finnish and Japanese), Levickij et al.'s (2013) conclusion that cross-language correlations do exist and do not depend on genetic relationship support the efforts and methodology of this thesis (see section 1.5).

(22) Two factors that may influence the correlation between languages

a. The vocabulary similarity of the languages, caused by their genetic relationship or contacts which led to borrowing.
b. The similarity of sets of phonetic units of lexemes (not bound etymologically), which is caused by certain historical conditions in which lexico-semantic and phonetic systems of each language developed i.e., 'chance' causes.

Adapted from (Levickij et al., 2013: 84)

Additionally, Levickij et al. (2013) poses two contrary theories for factors causing phonetic symbolism, as summarised in Figure (23). This is of interest as Levickij et al. (2013) builds on section

1.3.1 of this thesis, which provides theoretical context of what may be behind sound symbolism, by utilising their results to support one of the two theories they pose.

(23) Two contrary theories for factors causing phonetic symbolism

1. Associative = phonetic symbolism is based on the association between certain concepts and sounds, in other words on the so called language habit
2. [2]Synaesthetic = phonetic symbolism is based on the physical (acoustic and articulatory) properties of sounds. These properties make it possible to transpose perceptions into others (e.g. motive into acoustic or visual, etc.)

Adapted from (Levickij et al., 2013: 86)

The first theory, the association theory, does not recognize the existence of universal symbolism. Following the results of the paper the authors conclude that phonetic symbolism is universal in the sense that the phenomena of phonetic symbolism are statistical universals in the sense that the phenomena of sound symbolism can be applied to most languages but not to any language. In addition, the effect of phonetic symbolism universals is limited to certain scales. From this follows the conclusion that the cause of phonetic symbolism is synaesthetic, with both direct and indirect evidence. The direct evidence is the significant correlation between the physical (articulatory) properties of sounds and semantic units which are symbolised by these sounds. Part of the indirect evidence consists of the existence of universal phonetic symbolism rules. This point is not possible in the case of language habit.

This sub-sub-section started with the introduction of scales by looking at some of the first research that has been done regarding scales (Bentley & Varon, 1933), followed up by a more recent study, Bankieris & Simner (2015), that showcases the evolution of 'scales'-research. At first, this research was focused solely on non-words, the one phenomena of sound symbolism and a single group of participants. Now, this research has evolved to using real words, investigating other phenomena in conjunction with sound symbolism and comparing different groups of participants. Lastly in this section, Levickij et al. (2013), a study investigating phonetic symbolism in natural languages, is an integral part to this thesis. Their results regarding the symbolic potential of distinctive features provides possible insight into this thesis' results and their analysis of the correlations between languages showcase that these correlations are not dependent on the genetic relationship, which supports this thesis' methodology. Additionally, Levickij et al. (2013) utilise their results to support a theory regarding the cause behind phonetic symbolism, namely that the cause is synaesthetic in nature.

[2] Synaesthetic as a concept in this context is not related to the concept of synaesthesia as mentioned in Bankieris & Simner (2015).

Sound symbolism seems to have a bigger scope than just scales, as is evidenced by the existence of phonesthemes (see section 1.3.2), which are not tied to a scale. Additionally, this thesis will not investigate scales. Meaning the question is raised of: is there also research that is integral to this thesis that does not use scales? The answer is yes.

1.3.4 No scales: behavioural studies

A paper investigating the role of sound in affective meaning making using a method other than 'scales' is Aryani et al. (2018), who did a lexical analysis. Similar to Levickij et al. (2013), Aryani et al.'s findings can link this thesis' results to the concept of sound symbolism. Below follow the three major issues in previous research Aryani et al. (2013) aim to address and how they aim to do this, as summarised in Figure (24).

(24) Three major issues in previous research + Aryani et al's (2018) aims to address them

1.
    a. Focus on semantic effects of phonemes in nonwords instead of natural words
    b. Improve the understanding of the effect of implicit sound on the process of meaning making for natural words, in particular concerning their affective meaning
2.
    a. Problem of deciphering the likely cause(s) of sound-to-meaning correspondences, two theories iconicity and systematicity
    b. Show that the relation between affective sound and meaning reflects more than just some statistical regularities within the language (i.e. systematicity) to which language users might be sensitive
3.
    a. The operationalisation of meaning in this field of research has so far been restricted to only some selective aspects of sensorimotor information (e.g. shape, movement)
    b. Move beyond the narrow focus on single, limited semantic concepts

Adapted from (Aryani et al., 2018: 19)

They do this by using a large-scale normative database with two types of ratings: emotional valence going from 'unpleasant' to 'pleasant' and the degree of emotional arousal ranging from 'excited' to 'calm'. Their hypothesis is that phonological word forms also contribute to valence and arousal ratings so that a statistically significant portion of their variance can be accounted for by words' acoustic features. In order to test this hypothesis they quantify a *Phonological Affective Potential* of words, separately for arousal (PAParo) and for valence (PAPval). Firstly, they quantify the *Phonological Affective Potential* (PAP) after which they do a study relating words' acoustic features and PAP. The findings show that even when they are visually presented (and silently read) the acoustic features of phonemes significantly co-determined words' affective ratings. This is followed up with

two other studies. The combined results of all their studies firmly support the presented hypothesis. Additionally, Aryani et al. (2018) includes further analyses to investigate the acoustic phonetic cues underlying the effect of sound on meanings. The findings from these analyses may give insight to this thesis' results. For example, in the case of voicing, the results indicate that voiceless consonants sound on average more arousing and negative than voiced consonants, which, in turn, appear to make words sound softer and more pleasing. Another example is the plosive consonants, where it was found that while they reduce sound energy, they play a significant role in making the sound (moderately) more negative and arousing. In other words, findings showed that some specific phonetic features are potential candidates of carrying the effect of sound on meaning. Voiceless consonants, hissing sibilants and (potentially) plosives significantly contribute to making a word more negative and arousing.

This marks the end of subsection 1.3: Affective effects of sound. Each sub-subsection provided a different context of sound symbolism. Theoretical context is provided for in 1.3.1, neural context is provided for 1.3.2 and behavioural context is provided for in both 1.3.3 and 1.3.4, with 1.3.3 focusing on research using 'scales' in their methodology. With all this context regarding sound symbolism, it is possible to move a step closer to the purpose of this thesis.

1.4 Using phonetics to evaluate poetry?

Before talking about the research question, the main motivation of the current thesis will be discussed, namely Önkaş (2012). Önkaş (2012) aims to evaluate poetry by its phonetic characteristics and values. This is done by the use of a 'word scoring table', as can be seen in Table (3).

Type of consonant		The Number of The Sounds in The Word									
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
		Points									
Sonorant	lmnry	100	50	33.3	25	20	16.7	14.3	12.5	11.1	10
Voiced fricative	jvz	70	35	23.3	17.5	14	11.7	10	8.8	7.8	7
Voiced plosive	bcdg	60	30	20	15	12	10	8.6	7.5	6.7	6
Voiceless fricative	fhsş	15	7.5	5	3.8	3	2.5	2.1	1.9	1.7	1.5
Voiceless plosive	çkpt	10	5	3.3	2.5	2	1.7	1.4	1.3	1.1	1

Table (3) 'word scoring table' adjusted for this thesis (Önkaş, 2012: 4719) (rows = type of consonant, columns = number of the sounds in the word)

The consonant types are noted to be in order of most to least 'lyrical' and seem to mirror the sonority hierarchy, though this is not explicitly stated within the paper[3]. According to Önkaş (2012), by use of this table the mean score of a whole poem can be found, which determines whether the poem is lyrical or epic. Multiple critiques can be put forth for the methodology used in Önkaş (2012), the ones important for the current thesis will be noted. This approach seems to be based on orthography, rather than actual phonetics. The first clue for this is that the Turkish alphabet is used instead of the International Phonetic Alphabet (IPA), as evidenced by the inclusion of *ç* and *ş*. The second clue is found within one of the evaluations in Önkaş (2012), in the word *rose* the letter *s* is given the score of the 'phoneme' /s/ and not /z/. This is odd, as *rose* is pronounced as /rəʊz/ in UK English, so the *s* should be given the score of the phoneme /z/. Another example is that in the word *my* the *y* is considered a consonant, when in actuality it is a diphthong, namely /aɪ/ as *my* is /maɪ/ in IPA. As the concept behind this paper is interesting, but the execution is more than questionable, this thesis will start from scratch and do it right/properly.

[3] The sonority hierarchy is a hierarchical ranking of speech sounds (Parker, 2011)

1.5 Research question

The reason Önkaş (2012) generated the motivation for this thesis is that through reading and analysing it, the question arose of: is something like "evaluating poetry using phonetics" with actual linguistics possible? And if so, how? A method of finding this out is by doing cross-linguistic research, as this gives insight into whether a phenomenon occurs across languages. Investigating all phonetic or phonological phenomena would be both extraordinarily time-consuming and increase the risk of research bias, thus investigating one phenomenon is favourable. Lastly, there is the fact that there are many different types of poetry, as well as different types of themes and subjects poems can be about. This is the reason why this thesis will select two particular themes to compare with one another. With these three factors, namely two languages, one phonetic/phonological phenomenon and two particular poem themes, the general research question can be formulated:

Will there be a difference in the occurrence of *a particular phonetic/phonological phenomenon* within *themes* poems of *language-1* versus *language-2*?

To answer this question sixteen poems in total will be looked at to see whether the phenomenon occurs similarly in both languages. This entails four poems per theme in each language. Importantly, the analysis will be made on the basis of the written form of the poems rather than the spoken form. This means that the phenomenon being investigated will be an idealised phonological expression. The phonological phenomenon will be chosen based on avoiding problems that may occur during the analysis due to aspects of poetry, such as end rhyme or alliteration. The languages will be chosen based on certain aspects of the language and whether these do or do not align with the other language. These aspects are language family, sound inventory, mora-language or not, type of -timed language, stress/pitch-accent, syllable structure and poetry history. To avoid skewing the findings, the authors of the eight poems per language will be controlled for in terms of the following exclusion criteria: bilingual authors, expressly mimicking authors from a different language, patriotic war poems and sad love poems. The hypothesis is that the occurrence of *a particular phonetic/phonological phenomenon* within *theme* poems will be similar across languages.

2. Methodology

Having established the background, research question and hypothesis, methodology is the next logical step. To start off this methodology section, the phonological phenomenon is determined in sub-section 2.1. Then in 2.2 the two languages are chosen based on certain aspects, namely language family, phonemic inventory, tone, the type of counting language, stress/accent, syllable structure and poetry history. In 2.3 two opposing themes are chosen, one generally perceived as associating with 'positive' emotions and another generally perceived as associating with 'negative' emotions. Having determined the languages and themes, in 2.4 the authors and poems are chosen using a set of exclusion criteria.

Lastly, 2.4 sets up this thesis' analysis, illustrating how a decision tree and relative counting will be used to determine the analysed words.

2.1 Determining the phonological phenomenon

The first step of the methodology was determining the phonological phenomenon. To limit the scope of the research and ensure a clear analysis the phenomenon that was chosen to investigate was word-initial consonants. Part of the reasoning behind this is that there are more word-initial consonants than word-final consonants with CV being the preferred syllable (Gussenhoven & Jakobs, 2017). Another part is that oftentimes initial consonants have some degree of prominence, even outside the realm of poetry, for example through phonetic enhancement (Hall, 2011).

2.2 Determining the two languages

The second step was to determine the two languages that would be compared with one another. The following aspects were looked at for determining the two languages: language family, phonemic inventory, tone, the type of counting language, stress/accent, syllable structure and poetry history. The aim was to find two languages with multiple aspects overlapping while simultaneously differing notably in one aspect.

One aspect was chosen to differentiate between the languages. Of all the noted aspects, language family was the focus for this position. This was done to eliminate the confounding variable of language relatedness. A variety of languages were considered and their aspects noted, namely: Arabic, Bengali, Finnish, Hawaiian, Hindustani, Hungarian, Japanese, Malay, Maori, Persian, Russian, Swahili, Vietnamese and Wolof. The two languages that were chosen were Finnish and Japanese. Table (4) shows the overview of all the aspects that were noted.

	Language family	**Phonemic inventory**	**Tone**	**Counting language type**	**Stress/ Accent**	**Syllable structure**	**Start of poetry history**
Finnish	Uralic	16 vowels 13 consonants	No	Hotly debated	Non-phonemic	(C)V(S)(C)	19th century
Japanese	Japanese	5 vowels 15 consonants	Yes	Mora-timed	Pitch-accent	(C)(G)V(C	Middle Ages

Table (4) Noted aspects of Finnish and Japanese for determining the two languages

In the case of language families, Finnish is a part of the Uralic language family and Japanese is part of the Japonic language family. These two language families are far removed from each other. With regards to phonemic inventory Finnish has sixteen vowels and thirteen consonants, while Japanese has five vowels and fifteen consonants. Note that sounds that only occur in loanwords within the

languages are not included. The difference in vowels is quite large, but the number of consonants is similar. As consonants will be looked at, the difference in vowels does not pose a problem. Finnish and Japanese have nine consonants in common. Table (5) showcases the combined consonantal sound inventories of Finnish and Japanese, with the overlapping sounds in the yellow-coloured cells.

	Labial		**Coronal**		**Palatal**	**Velar**		**Glottal**
Nasal	**m**		**n**			ŋ		
Plosive	**p**	b	**t**	**d**		**k**	g	
Fricative			**s**	z				**h**
Approximant/ Semivowel	ʋ		r		**j**	w		

Table (5) Combined consonantal sound inventories of Japanese and Finnish (rows = manner of articulation, columns = place of articulation, yellow cells = overlapping sounds, blue cells = Japanese only, green cells = Finnish only)

Overall, the nine overlapping sounds encompass all PoA's and almost all manner of articulations (liquid being the exception) present in the two languages. As this thesis will investigate word-initial consonants, sounds that do not occur in this position have to be excluded in the analysis. In Finnish the /d/ cannot occur word-initially (Sulkala & Karjalainen, 1992: 369-372). In Japanese the /p/ only occurs in native (Yamato[4]) words as a word-medial geminate, as in *kippu* 'train ticket' or after a moraic obstruent, as in *kenpa* 'a game similar to hopscotch' and in Chinese-derived (Sino-Japanese) words after a moraic obstruent, as in *hoppō* 'northern' or moraic nasal, as in *onpu* 'note' (Labrune, 2012: 60-62, 75-76). Because of this, the /d/ and the /p/ are excluded from the analysis.

Type of counting language was accounted for as metric structure is an important (possibly integral) part of poetry. Japanese is a mora-timed language, while for Finnish it seems hotly debated what type of counting language it is. It could be argued that Finnish is also a mora-timed language, as morae have been analysed as an integral part of Finnish sound structure (Suomi, Toivanen & Ylitalo, 2008: 65-68, 85-101). Thus, whether the type of counting language is truly controlled for depends on how it is viewed, for the sake of this research this aspect is noted, but not relied upon as an overlapping aspect of the two languages. In the case of syllable structure the languages are similar. The Finnish structure is (C)V(S)(C), with the S being a segment that could be a C or a V, and the Japanese structure is (C)(G)V(C), with the G being a glide. Syllable structure was noted as it limits the different word structures able to exist within a language and thus a similar syllable structure means more

[4] The lexical organisation of Japanese works as such, there are four strata: Yamato, Sino-Japanese, mimetic and foreign. Yamato constitutes the native stratum and Sino-Japanese the learned vocabulary of the language, in the case of Japanese Chinese-derived (Itō & Mester, 1995).

‘similar’ words. Since word-initial consonants were chosen as the investigated phonetic phenomenon it was also important to have two languages that allow for those.

The aspect of the start of poetry history was noted for determining the authors and poems. The start of Japanese poetry history dates from around the middle ages, while the start of Finnish poetry history dates from around the 19th century. There is quite a long time period between the start of Japanese poetry history and the start of the Finnish one. This does not pose a problem, as poems from the 19th century onwards can be found for both languages, but it does mean Japanese poems from before the 19th century will not be looked at as there is no corresponding poem to be found in Finnish from those time periods. The two aspects not mentioned yet are tone and stress/accent. The two languages differ in these two aspects as Japanese has tone, while Finnish does not, and Finnish stress is non-phonemic, while Japanese is a pitch-accent language. As both of these aspects are not considered here as the phonological phenomenon these differences do not pose a problem, but they are still noted as variables that may affect the affectiveness within poetry.

2.3 Determining the themes of the poems

In order to investigate affect, the third step was choosing two opposing themes to compare with each other. One theme generally perceived as associating with ‘positive’ emotions such as joy and the other generally perceived as associating with ‘negative’ emotions such as sadness. For the ‘positive’ emotions theme ‘love’ was chosen, as the expression of any form of love may clearly be expressed through things such as joy, excitement, and other ‘positive’ emotions. Additionally, love is simultaneously a universal experience as well as a very personal experience, thus cultural differences in the concept of love were not accounted for. For the ‘negative’ emotions theme ‘war’ was chosen, as within the abundance of war poetry forms of emotions like sadness, fear and despair are often expressed. In addition, both languages’ countries have clear and distinct histories concerning war (Drea, 2016; Kettunen, 2018).

2.4 Authors and poems, why these?

Having narrowed down to two languages and two themes, the fourth step started with determining a set of exclusion criteria for finding the authors and poems. The exclusion criteria consist of the following: bilingual authors, expressly mimicking authors from a different language, patriotic war poems and sad love poems. In addition, the time period in which the authors were active and gender were controlled for. Bilingual authors were excluded, in the sense that authors that are known to have acquired more than one language as a young child or spent most of their lives in another language speaking country were excluded. These were excluded so as to not confound the findings, because the other language may have had influence on their poetry in the target language. In a similar vein, authors expressly mimicking the style of an author from another language were excluded, because it is

possible that the word usage, sentence structure and/or poetry structure are not representative of how the target language is usually used by poets of the target language to express the themes within poetry. Patriotic war poems were avoided as they often express triumph, which does not fit into the 'negative' emotions theme. As 'love' was chosen to signify the 'positive' emotions theme, sad love poems were not considered. Whether a poem fit the target theme was determined by investigating the author's life history in full, as well as the point of writing, what type of love or war poetry the author is known for, outsider opinions and commentary on the poems, and my own reading of the piece. Despite cultural differences existing in all moments of history, time period was controlled for as a factor in picking the authors, as events occurring in parts of the world may, in turn, affect other parts of the world and in that way cultural differences are somewhat controlled for. As such, the authors were all picked from the 20th century. The 20th century was a time of war for both countries. Apart from WWII both countries dealt with other wars like Finland with the Finnish Civil War and Japan with the Second Sino-Japanese War. Additionally, due to the Swedish occupation of Finland, from 1150 to 1809, there is not much documentation of Finnish poetry history from before the start of the 19th century. Meaning that the documentation of Finnish poetry was more established by the time of the 20th century. In the case of gender per theme and language combination two male and two female poets were chosen, making the total number of poets sixteen. Convenience sampling was used to gather the poems of the authors. For the Japanese poems, sources with transliterations were looked for. If unavailable, the text was put through a software to get a transliteration, which was checked afterwards.

Language, gender, date of birth and death, occupation and investigated work was noted for each author and can be seen in Tables (6) and (7), which showcase the authors for the love and war themes respectively. In addition, all poems can be found in the Appendix. As can be seen in the table for some authors two poems are noted, this was done in order to ensure enough words were surveyed for analysis. Note that doing this would have been avoided if possible. These poems were considered to be one poem, with the justification that they can be found directly next to each other in a poetry collection, as is the case for Yosano Akiko, Bokusui Wakayama and Nakamura Kusato, or were written in the same year, 1985, in the case of Suzuki Masajo. A thing of note is that Yukio Ozaki (Table (7)) is the only non-poet occupationally. He wrote the investigated poem in response to the events of Pearl Harbor (Yellen & Campana, 2016), which showcases that he was not a stranger to poetry, though sadly more information about Ozaki writing poetry was not found.

	Language	Gender	Date of birth and death	Occupation	Active period of writing period	Investigated work	Source of the investigated work(s)
Arvo Turtiainen	Finnish	M	1904 - 1980	Writer, translator	1932 onwards	Kaunein	(Turtiainen, unknown)
Risto Rasa	Finnish	M	1954 -	Poet, librarian	1971 - 1990	Odotan sinua takaisin	(Rasa, 2003)
Katri Vala	Finnish	F	1901 - 1944	Teacher, poet, translator	1920's through to 1930's	Valkoiset maljakot	(Vala, 1979)
Kirsi Kunnas	Finnish	F	1924 - 2021	Academic, poet, children's writer translator	1944 onwards	Herra Saksafoni ja Neiti Klarinetti	(Kunnas, 1991)
Yosano Akiko	Japanese	F	1878 - 1942	Author, poet, social reformer	1898 onwards	*Untitled 1.* *Untitled 2.*	(Akiko, 1957)
Suzuki Masajo	Japanese	F	1906 - 2003	Poet	1936 onwards	*Untitled 3.* *Untitled 4.*	(Masajo, 1958)
Bokusui Wakayama	Japanese	M	1885 - 1928	Poet	1903 onwards	*Untitled 5.*	Masajo, 1958)
Nakamura Kusato	Japanese	M	1901 - 1983	Poet	1929 onwards	*Untitled 6.* *Untitled 7.*	(Wakayama, 1958)

Table (6) Noted aspects of the authors and their investigated work for the 'Love' poems (rows = authors, columns = noted aspects)

	Language	Gender	Date of birth and death	Occupation	Active period of writing period	Investigated work	Source of the investigated work(s)
Viljo Kajava	Finnish	M	1909 - 1998	Poet, writer	Mid-1930's onwards	*Untitled 8.*	(Kajava, 1918)
Yrjö Jylhä	Finnish	M	1903 - 1956	Poet, translator	1916 onwards	Kaivo	(Jylhä, 1951)
Helvi Hämäläinen	Finnish	F	1907 - 1998	Writer	1936-1967 Twenty year gap 1987	Surupäivä	(Hämäläinen, 1987)
Eeva-Liisa Manner	Finnish	F	1921 - 1995	Poet, playwright, translator	1944 onwards	Strontium	(Manner, Unknown)
Sadako Kurihara	Japanese	F	1913 - 2005	Poet	1930's onwards	<Hiroshima> to iu toki	(Kurihara, 1983)
Noriko Ibaragi	Japanese	F	1926 - 2006	Poet, playwright, essayist, children's literature writer, translator	1950's onwards	Watashi ga ichiban kireidatta toko	(Stanford, 2008)
Ryūichi Tamura	Japanese	M	1923 - 1998	Poet, essayist, translator	1956 onwards	Kareha	(Tamura, 1967)
Yukio Ozaki	Japanese	M	1890 - 1954	Japanese politician	*Unknown* (wrote two poems in response to Pearl Harbor)	*Untitled 9.*	(Yellen & Campana, 2016)

Table (7) Noted aspects of the authors and their investigated work for the 'War' poems (rows = authors, columns = noted aspects)

2.5 Determining the algorithm, decision tree

The things that have been determined so far in the methodology are: word-initial consonants as the phonological phenomenon, Japanese and Finnish as the two languages, war and love as the two themes and the poems that will be analysed. Then, what is left to do? The last step is to determine how the analysis will be set up.

A decision tree was created in order to pick words for analysis within the poems, as can be seen in Figure (25). There will be an illustration of how the set-up for the analysis using the decision tree functions after touching on the considerations that were made regarding the decision tree and some extra details regarding this thesis' analysis.

(25) Decision tree

- ➢ Only words starting with consonants that are both in Finnish and Japanese
- ➢ No consonant clusters (CC) at word-onset position
- ➢ Only content words (except for quantifiers)
- ➢ No loanwords
- ➢ No repeated words
    - ○ if already used, pick the one next to it on the right
    - ○ If that is the same word pick the one on the left

By use of this decision tree alliteration is accounted for, as the problem of confounding the spontaneous occurrence of sounds by selecting for similar sounding ones is addressed. Quantifiers were also considered, despite being function words, as there are many choices for quantifiers that could all signify a slightly different meaning while still serving the same purpose. As such, there is a lot of variation possible in terms of quantifier use in poetry. In the case of pronouns, Japanese has a lot of opportunity for variation based on aspects such as formality. Finnish does not have this to the same extent and thus to limit the scope of the research pronouns were not chosen to be an exception to the no-function-words rule.

To ensure the same amount of words per language, six words per poem were chosen. After making use of the decision tree, relative counting was used to pick the words to be analysed. This entails taking the total number of words that can be considered (remaining after the decision tree) and dividing that number by the amount of number wanted per poem i.e., six words. Relative counting accounts for the differences in total number of words within a poem with regards to the other poems. To illustrate the process of picking the words to be investigated an example set-up will be done of the first three verses of *Twinkle, Twinkle, Little Star*. Figure (26) showcases the first three verses.

(26) First three verses of *Twinkle, Twinkle, Little Star*

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

…

When the blazing sun is gone,

When he nothing shines upon,

Then you show your little light,

Twinkle, twinkle, all the night.

…

Then the trav'ller in the dark

Thanks you for your tiny spark,

He could not see which way to go,

If you did not twinkle so.

Before the set-up can be started, the investigated sounds need to be picked. For this example set-up the word-initial consonants /b/, /n/, /t/, /l/ and /h/ are investigated for no particular reason. In this thesis's actual analysis word-initial consonant clusters were excluded, but for this example set-up they are allowed for ease. This means the consonant clusters /tw/ in *twinkle* and /bl/ in *blazing* are counted under /b/ and /t/. The first step of the set-up is to only note the words with word-initial /b/, /n/, /t/, /l/ or /h/, which can be seen in Table (8). The next step is to exclude the function words (with the exception of quantifiers, although not present in this poem). As can be seen in Table (9) the question word *how*, the preposition *like*, the pronoun *he*, as well as the adverb *not* were excluded. The following step is to start the relative counting in order to determine the to-be-investigated words.

twinkle	twinkle	little	how
high	like	the	blazing
he	nothing	little	light
twinkle	twinkle	the	night
the	trav'ller	the	tiny
he	not	not	twinkle

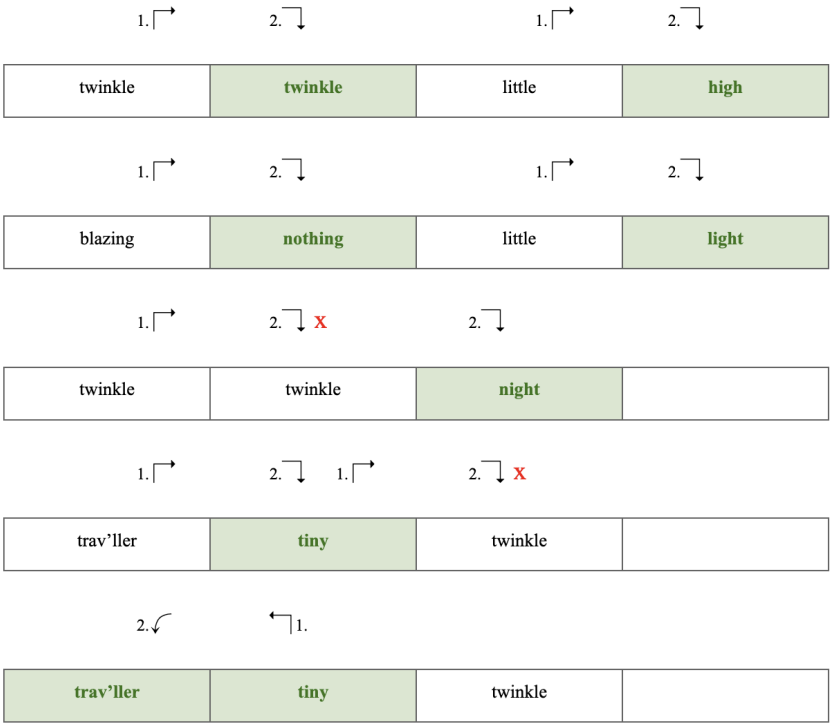
Table (8) Words starting with /b/, /n/, /t/, /l/ or /h/ in the first three verses of T*winkle, Twinkle, Little Star*

twinkle	twinkle	little	~~how~~
high	~~like~~	~~the~~	blazing
~~he~~	nothing	little	light
twinkle	twinkle	~~the~~	night
~~the~~	trav'ller	~~the~~	tiny
~~he~~	~~not~~	~~not~~	twinkle

Table (9) Words starting with /b/, /n/, /t/, /l/ or /h/ in the first three verses of T*winkle, Twinkle, Little Star*, excluding function words (red columns + crossed-out red text = excluded function words)

The total number of words left over is fourteen. To investigate seven of these sounds[5] fourteen is divided by seven (14/7 = 2), which means that in a set of two one word should be considered. Figure (27) shows how this process was done. In the third row, the second word in the set of two is *twinkle*, but as the decision tree has the rule of no repeated words and *twinkle* has already been chosen, the word next to *twinkle* is chosen i.e., *night*. In the fourth row *tiny* is chosen and as there is only one other word left *twinkle* would be considered. However, the no repeated words rule makes it so that *twinkle* cannot be chosen. As there is no word on the right of *twinkle* the word on the left of *tiny* is chosen, i.e., *trav'lerr*.

[5] Note that this thesis' analysis analysed six words per poem.



(27) Relative counting for the example set-up of *Twinkle, Twinkle, Little Star* (green cells = words chosen for analysis)

Now that the seven words have been chosen the word-initial consonants can be noted, as can be seen in Figure (28). As this is an example set-up with the sole purpose of showing how the decision tree functions, no notable observations can be made from these noted sounds.

(28) Noted sounds from the example analysis of *Twinkle, Twinkle, Little Star*

- twinkle = /t/
- high = /h/
- nothing = /n/
- light = /l/
- night = /n/
- trav'ller = /t/
- tiny = /t/

→ /t/ = 3 /h/ = 1 /n/ = 2 /l/ = 1

This section started with determining the phonological phenomenon, which was chosen to be word-initial consonants. Then the two languages, Finnish and Japanese, were chosen on the basis of multiple aspects, namely language family, phonemic inventory, tone, the type of counting language, stress/accent, syllable structure and poetry history. After this, war and love were picked to be the two opposing themes under investigation. War represents the theme generally perceived as associating

with ‘negative’ emotions and love represents the theme generally perceived as associating with ‘positive’ emotions. With the languages and themes determined, the authors and poems could then be selected with the use of a set of exclusion criteria, namely bilingual authors, expressly mimicking authors from a different language, patriotic war poems and sad love poems. Additionally, the time period in which the authors were active and gender were controlled for. Finally, this section ended by determining the set-up of this thesis’ analysis. This set-up entails using a decision tree and relative counting to pick six words per poem to be analysed further. Now it is finally time… to move to the actual analysis!

3. Analysis

Now that the analysis has arrived, in order to best understand the presented analyses, the research question, hypothesis and determined components of this research are presented again in Figure (29) and Table (10).

(29) Research question and hypothesis

- **Research question:** Will there be a difference in the occurrence of *a particular phonetic/phonological phenomenon* within *themes* poems of *language-1* versus *language-2*?
- **Hypothesis:** The occurrence of word-initial consonants within war and love poems will be similar across Finnish and Japanese.

	Determined component
Phonological phenomenon	Word-initial consonants
Themes	Love + War
Languages	Finnish + Japanese
Poems	Four per theme + language combination
Analysed words	Six per poem

Table (10) Determined components for this thesis’ research based on the research question and hypothesis

[6]Firstly, this section will start with the language analyses by looking at Finnish and Japanese separately in sub-subsections 3.1.1 and 3.1.2 respectively. Secondly, in 3.2, similar to 3.1, the theme analyses of love and war are presented. Thirdly, 3.3 presents the analysis looking at all the variables, in other words the language + theme analysis. Lastly, in 3.4 the descriptive statistics done in the previous sections will be lined up with some of the sound symbolism literature mentioned in sections 1.3.3 and 1.3.4 to tie everything together and, in turn, answer the research question.

[6]A thing of note is that this thesis’ analyses are restricted to descriptive statistics, so no inferential statistics will be present.

3.1 Language analysis

3.1.1 Finnish

Figure (30) shows the word-initial consonants found in the analysis of the Finnish love and war poems. Multiple things can be observed. Firstly, some sounds were only found in one theme. The /n/ was not found in the love poems, while the /h/ and /j/ were not found in the war poems. On the other hand some sounds were found a similar amount of times in the themes namely /m/, found four times in the love poems and three times in the war poems, and /k/, found five times in the love poems and seven times in the war poems. The /t/ was found twice as many times in the war poems as opposed to the love poems and the /s/ was found more than twice as much in the love poems as opposed to the war poems. In the love poems the sounds /k/ and /s/ had the highest number of occurrences, which was five. In the war poems the sound /k/ had the highest number of occurrences, which was seven.

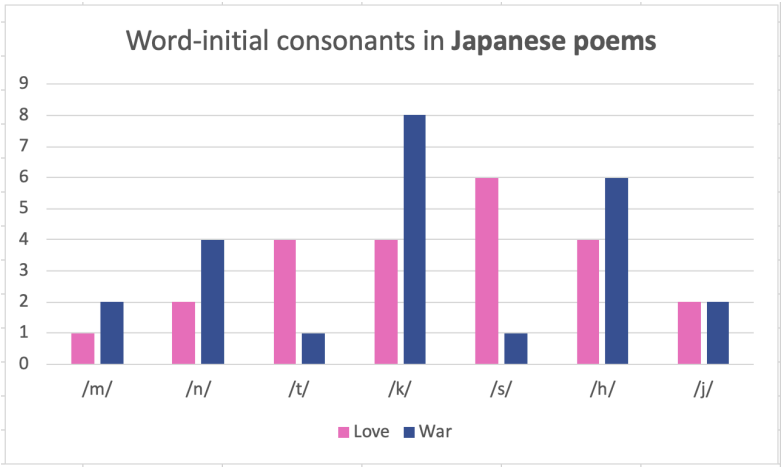
(30) Word-initial consonants in Finnish poems (y-axis = number of occurrences, x-axis = word-initial consonant, pink bars = love poems, blue = war poems)

The differences between the themes in occurrence of the sounds /n/, /t/, /s/ and /h/ (and potentially /j/, though it is a one step difference) suggests that these sounds express affect relating to the theme where they occur most. Following that observation, the sounds /n/ and /s/ express a 'positive' affect as they occur most in the love poems, while /t/ and /h/ (and possibly /j/) express a 'negative' affect as they occur most in the war poems. Additionally, this would imply that /m/ and /k/ do not express, in the sense of 'positive' or 'negative', as they have similar occurrences in both the love and war poems.

3.1.2 Japanese

Figure (31) shows the word-initial consonants found in the analysis of the Japanese love and war poems. The sound /j/ was found the same amount in the love and war poems, which was twice. Some sounds were found a similar amount of times in the themes, namely /m/, found once in the love poems

and twice in the war poems, and /h/, found four times in the love poems and six times in the war poems. The /n/ and /k/ were found twice as frequently in the war poems as opposed to the love poems. Opposite of that, the /t/ and /s/ were found more than twice as much in the love poems as opposed to the war poems. In the love poems the sound /s/ had the highest number of occurrences, which was six. In the war poems the sound /k/ had the highest number of occurrences, which was eight.



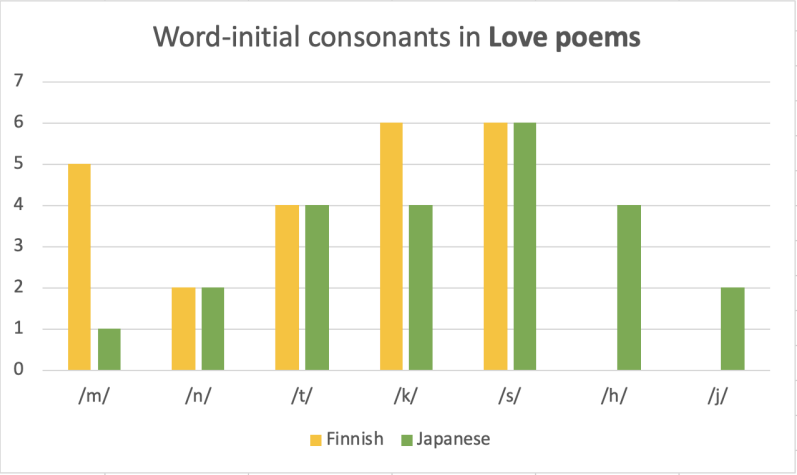
(31) Word-initial consonants in Japanese poems (y-axis = number of occurrences, x-axis = word-initial consonant, pink bars = love poems, blue = war poems)

The differences between the themes in occurrence of the sounds /n/, /t/, /k/ and /s/ suggests that these sounds express affect relating to the theme where they occur most. Following that observation, the sounds /t/ and /s/ express a 'positive' affect as they occur most in the love poems, while /n/ and /k/ express a 'negative' affect as they occur most in the war poems. Additionally, this would imply that /m/, /h/ and /j/ do not express in the sense of 'positive' or 'negative' as they have similar occurrences in both the love and war poems.

3.2 Theme analysis

3.2.1 Love poems

Figure (32) shows the word-initial consonants found in the analysis of Finnish and Japanese love poems. Some sounds were found the exact same amount in the two languages, namely /n/, /t/ and /s/. The /n/ was found twice, the /t/ four times and the /s/ six times in both languages. The /k/ was found a similar amount of times, with six times in the Finnish poems and four times in the Japanese poems. Differences between the languages were found in the sounds /m/, /h/ and /j/. The /m/ was found more than twice as much in the Finnish poems as opposed to the Japanese poems. The /h/ and /j/ were found more than twice as much in the Japanese poems as opposed to the Finnish poems where both sounds were not found.



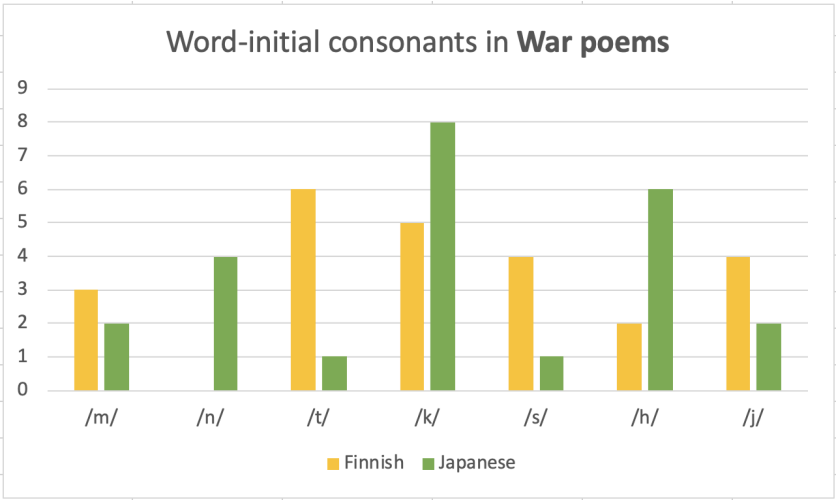
(32) Word-initial consonants in love poems (y-axis = number of occurrences, x-axis = word-initial consonant, yellow bars = Finnish poems, green = Japanese poems)

A possible explanation for the same occurrences of /n/, /t/ and /s/ in the Finnish and Japanese love poems may be a cross-linguistic overlap of these sounds expressing affect. This could include /k/ as well. Assuming the love poems accurately represent 'positive' affect, these sounds may specifically be a cross-linguistic overlap in expressing 'positive' affect. Following this, the cases of /m/, /h/ and /j/ are not a part of this overlap.

3.2.2 War poems

Figure (33) shows the word-initial consonants found in the analysis of Finnish and Japanese war poems. The /m/ was found a similar amount of times in the Finnish and Japanese poems, namely three times in the Finnish poems and twice in the Japanese poems. The /k/ was found a similar amount of times in the two languages, namely five times in the Finnish poems and eight times in the Japanese poems. The /t/ and /s/ were found more than twice as much in the Finnish poems as opposed to the Japanese poems. The /j/ was found exactly twice the amount of times in the Japanese poems as opposed to the Finnish poems. The /n/ and /h/ were found more than twice the amount of times in the Japanese poems as opposed to the Finnish poems, with no /n/ being found in the Finnish war poems.

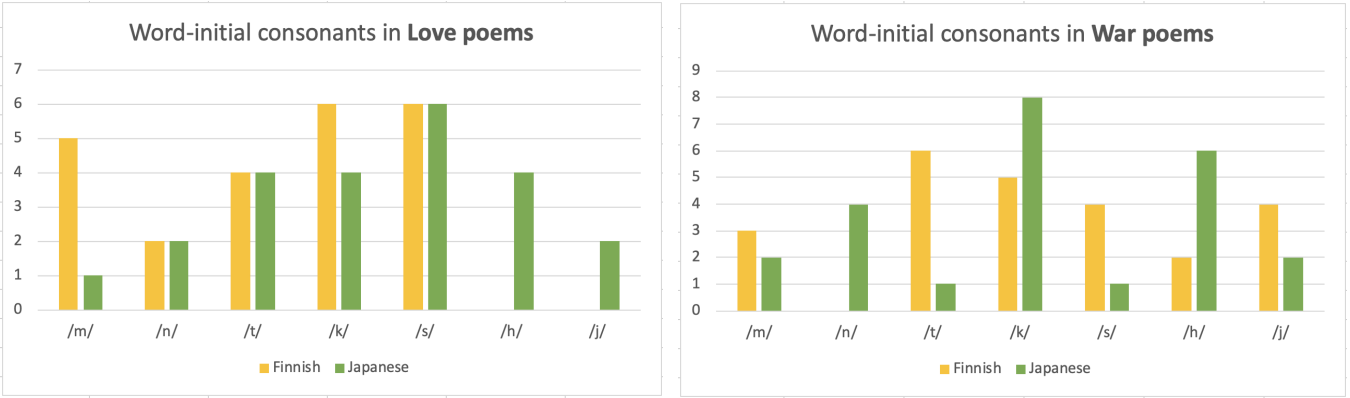
The only potential for a cross-linguistic overlap of any of these sounds expressing affect can be found with the sounds /m/ and /k/, as these have similar(-ish) occurrences in the Finnish and Japanese war poems. Otherwise it seems that in the case of the war poems analysis there are more observations suggesting differences cross-linguistically, rather than similarities in sound use. Additionally, these cross-linguistic differences can, but do not have to relate to affect.



(33) Word-initial consonants in war poems (y-axis = number of occurrences, x-axis = word-initial consonant, yellow bars = Finnish poems, green = Japanese poems)

3.3 Language + theme analysis

In Figure (34) graphs (32) and (33) can be seen next to each other. The correspondence between the occurrence of sounds when comparing the two languages is much more similar in the love poems than in the war poems, with three sounds (/n/, /t/ and /s/) having the same amount of occurrences in the Finnish and Japanese love poems. The /k/ has a high occurrence in all language and theme combinations (Finnish + love = six, Japanese + love = four, Finnish + war = five, Japanese + war = eight). The step from love to war for the sound /h/ is an addition of two occurrences in both Japanese and Finnish. The movement for /s/ from love to war is similar in both languages, dropping in occurrences (six to four occurrences in Finnish, six to one occurrence in Japanese). The sounds /m/, /n/, /k/ and /t/ exhibit an opposite movement from love to war when comparing the languages. For /m/, /n/ and /k/ the occurrences drop in Finnish and rise in Japanese. For /t/ the opposite happens, the occurrences rise in Finnish and drop in Japanese. In the case of /j/, when moving from love to war the occurrences stay the same in Japanese and rise in Finnish (from zero to four).



(34) graphs (32) and (33) next to each other (y-axis = number of occurrences, x-axis = word-initial consonant, yellow bars = Finnish poems, green = Japanese poems)

The observation of the correspondence between the occurrence of sounds when comparing the two languages is much more similar in the love poems than in the war poems may be explained by the love poems more accurately representing affect than the war poems. This is explained by the similarity between the Finnish and Japanese poems due to the sounds expressing 'positive' affect. The sound /s/ possibly expressing 'positive' affect is supported when comparing the Finnish and Japanese love and war poems, as the occurrences drop when moving from love to war for both languages. The sounds exhibiting different steps between the languages when moving from love to war suggests cross-linguistic differences rather than similarities. The /k/ being present in both themes for both languages in high amounts could suggest that /k/ does express affect. It could express both 'negative' and 'positive' affect, it could be that it expresses a different type of affect or it could even be that it functions as an enhancer of the affect that is communicated.

3.4 Sound symbolism analysis

The previous subsections showcased the language analyses (3.1), the theme analyses (3.2) and the language + theme analysis (3.3). In this subsection the affective effects of sound will be touched on by relating the results from these analyses to previous literature related to sound symbolism, namely Levickij et al. (2013) and Aryani et al. (2018) (see section 1.3.3 and 1.3.4). By doing this, all the pieces of the research question will be tied together and it can be determined whether or not the hypothesis is supported.

Levickij et al. (2013) is a large-scale cross-linguistic study of phonetic symbolism in natural languages. Different from this thesis, they investigate 'scales' (see section 1.3.3). Take for example the scale of brilliance with light and dark as its two poles. Despite this difference it is interesting to note whether this thesis's observations overlap with Levickij et al.'s (2013) broader conclusions. One conclusion they came to is that the phenomena of phonetic symbolism are statistical universals, meaning that the phenomena of sound symbolism can be applied to most languages but not to any language. This thesis' observations support this conclusion as both cross-linguistic similarities and cross-linguistic differences were found. The clearest example of a cross-linguistic similarity is the occurrence of /s/ in the love poems, as it occurs the exact same amount (6 times) across both Finnish and Japanese. An example of cross-linguistic difference is that the /t/ occurs more in the war poems for Finnish (love = 4 times, war = 6 times) and more in the love poems for Japanese love = 4 times, war = 1 time).

Another conclusion of theirs is that the similarity of sets of phonetic units of lexemes (not bound etymologically) influences the phonetic symbolism correlation between languages rather than languages' genetic relationship or contact. Even though Finnish and Japanese are not genetically or historically intertwined, cross-linguistic overlap does exist between the two, as this thesis'

observations showcase, take the previous example of the occurrence of /s/ in Finnish and Japanese love poems.

Additionally, Levickij et al. (2013) investigated the symbolic potential of distinctive features. Symbolic potential refers to the ability of a certain sound to symbolise a certain concept or a group of concepts. They found that the symbolic potential of each distinctive feature is different. In the case of consonantal distinctive features the following decreasing sequence of symbolic potential was found: lateral, rolled, frontlingual, voiceless, plosive, labial, fricative, voiced, palatalised, sonorous, backlingual, implosive-fricative articulations. In Table (11) the analysed consonants and their features are noted.

	Labial	Coronal	Palatal	Velar	Glottal
Nasal	**m**	**n**			
Plosive		**t**		**k**	
Fricative		**s**			**h**
Approximant/ Semivowel			**j**		

Table (11) Analysed consonants (left of split cells = voiceless)

The findings of Aryani et al. (2018) will give more insight into how this sequence of symbolic potential relates to this thesis' analysis, i.e. the analysed consonants seen in Table (11). They did a lexical analysis of the general role of sound in affective meaning making. One thing they found was that in the case of voicing, voiceless sounds sound more negative (as in more unpleasant) and arousing (as in more exciting), whereas voiced sounds sound more pleasing and softer. As can be seen in Table (11), the voiceless sounds that are analysed are /t/, /k/, /s/ and /h/ and the voiced sounds are /m/ and /n/. An interesting note here is regarding the voiced sounds. While the /m/ occurs similarly in the love and war poems of Japanese (love = 1 time, war = 2 times), in Finnish it occurs more in the love poems (love = 5 times, war = 3 times). This is in line with the love poems expressing 'positive' affect and Aryani et al.'s (2018) findings that voiced sounds sound more pleasing. However, the /n/ behaves differently. It occurs the same amount in both Finnish and Japanese love poems (two times), but occurs more in Japanese war poems (4 times) and does not occur at all in Finnish war poems. The occurrence of /n/ in the Finnish poems is in line with Aryani et al.'s (2018) findings, but the occurrence of the sound in Japanese goes against them, as war expresses 'negative' affect rather than pleasantness and softness.

Another thing they found was that hissing sibilants sound more negative and arousing. The /s/ is the only hissing sibilant part of this thesis' analysis and it appears more in love poems than war poems for both languages (Finnish: love = 6 times, war = 4 times, Japanese: love = 6 times, war = 1 time) and

occurs the same amount in the love poems of both languages (six times). The /s/ occurring more in love poems signifies that it expresses ‘positive’ affect rather than ‘negative’ affect, which would mean Aryani et al.’s findings are not in line with this thesis. However, the ‘positive’ affect carried by the /s/ in the love poems may be expressing excitement, which can be a part of the expression of love. This would be in line with Aryani et al.’s assessment that hissing sibilants sound more arousing.

What they also found was that, similar to hissing sibilants, plosives sound more negative and arousing. In this thesis the two plosives /k/ and /t/ were analysed. The /k/ occurs a lot in both languages in both love and war poems (Finnish: love = 6 times, war = 5 times, Japanese: love = 4 times, war = 8 times). There are multiple ways Aryani et al.’s assessment and this observation can be in line. Firstly, it may be that in both the love and war poems the /k/ expresses excitement rather than calm. Secondly, it could be that the /k/ expresses negativity in the war poems and the exciting in the love poems. Thirdly, both of the above could be true, with excitement being expressed in both the love and war poems, but negativity only being expressed in the war poems. In the case of the /t/, in Finnish it occurs more in the war poems than the love poems (love = 4 times, war = 6 times) and in Japanese it occurs more in the love poems than the war poems (love = 4 times, war = 1 time). This would entail that for /t/ the expression of negativity is more present in Finnish and the expression of excitement is more present in Japanese.

This section started with the language analysis. The findings of the analysis of the Finnish poems suggest that the sounds /n/ and /s/ express a ‘positive’ affect, /t/, /h/ and possibly /j/ express a ‘negative’ affect and /m/ and /k/ do not express ‘positive’ or ‘negative’ affect. The findings of the analysis of the Japanese poems suggest that the sounds /t/ and /s/ express a ‘positive’ affect, /n/ and /k/ express a ‘negative’ affect and /m/, /h/ and /j/ do not express ‘positive’ or ‘negative’ affect.

After the language analysis follows the theme analysis. The findings of the analysis of the love poems suggest a cross-linguistic overlap exists in the expression of ‘positive’ affect for the sounds /n/, /t/, /s/, /k/. In turn, this means that there is no suggestion of cross-linguistic overlap in the expression of affect for the sounds /m/, /h/ and /j/. The findings of the analysis of the war poems suggest a cross-linguistic overlap exists in the expression of ‘negative’ affect for the sounds /m/, and /k/. In turn, this means that there is no suggestion of cross-linguistic overlap in the expression of affect for the sounds /t/, /h/, /s/, /n/ and /j/. Overall, the findings of this analysis suggest more cross-linguistic differences in sound use, rather than cross-linguistic similarities.

Having done both the language and theme analysis, the language + theme analysis follows suit. The correspondence between the occurrence of sounds when comparing the two languages is more similar in the love poems than in the war poems, suggesting that the love poems more accurately represent affect than the war poems. Some sounds exhibit different steps between the languages when moving from love to war, suggesting cross-linguistic differences rather than similarities. However, the /s/

expressing ‘positive’ affect cross-linguistically is supported when comparing the Finnish and Japanese love and war poems, as the occurrences drop when moving from love to war for both languages. Additionally, the /k/ being present in both themes for both languages in high amounts could both suggest that /k/ does or does not express affect.

Lastly, in this subsection the affective effects of sound were touched on by relating the results from these analyses to previous literature related to sound symbolism. The findings of this thesis align with Levickij et al.’s (2013) broader conclusions that the phenomena of phonetic symbolism are statistical universals and that the similarity of sets of phonetic units of lexemes (not bound etymologically) influences the phonetic symbolism correlation between languages rather than languages’ genetic relationship or contact. In the case of Aryani et al.’s (2018) findings this thesis’ results largely align, with voiceless sounds, hissing sibilants and plosives sounding more negative and arousing, and voiced sounds sounding more pleasing and softer. The one exception, where the results opposed Aryani et al.’s (2018) findings, is found with the occurrence of the /n/ in the Japanese poems. The /n/ occurs more in the war poems, which suggests that the sound expresses ‘negative’ affect rather than sounding more pleasing and softer. With all of these analyses done, a conclusion may be drawn. First, however, it is good to look at the past, this thesis’ limitations, in order to better shape the future research.

4. Discussion

With the analyses done, it is time to acknowledge the limitations of this thesis and look towards future research. Firstly, the reliance on convenience sampling meant that shorter poems had to be settled on, which in turn meant that the analysed words per poem had to be less than it potentially could have been. Secondly, the lack of investigation into the frequency of investigated sounds within the target languages in word-initial position, as this may be an explanation for the observations following the analyses. Lastly, the neglected point of interest of the phonetic enhancement of word-initial consonants, which could serve as further reasoning to investigate word-initial consonants as the phonetic/phonological phenomenon.

For future research the hope is that these limitations would be addressed. On top of that, some or even all of the building blocks of the research question can be switched out so there is a different phonetic/phonological phenomenon, different themes and/or different languages. In the case of themes it would be interesting to add a ‘neutral’ theme, like nature, to the mix to see if those poems can serve as a control or if they too carry affect through sound (that may be cross-linguistically overlapping). Comparing within a language family might be a point of interest too, as Levickij et al. (2013) found that in the case of ‘scales’ the overlap in sound symbolism was not bound to the genetic relationship between languages (see section 1.3.3), meaning the results may not be predictable. For the methodology, the use of consultation with native speakers of the target language can help in the

process of finding poems, as well as ensure the orthography to sound correspondence is accurate. A suggestion regarding the picking of authors is to investigate a different time period, for example investigating languages around the start of their poetry history can be insightful. An analysis of the influence of gender can be a valuable addition too. As this thesis focused only on the written form of poetry, looking at the oral production of poetry and maybe even comparing it to the written form can be an ambitious, but fruitful endeavour. Clearly, there are a lot of routes to walk following this thesis.

5. Conclusion

To reach this conclusion many things were crossed on the course of this thesis: the study of literature, sound symbolism in poetry, the theoretical, neuro-linguistic and psycholinguistic side of the affective effects of sound, even history was touched upon in the search for authors and poems. Now, the end has been reached. The aim of this thesis was to answer the following question:

Will there be a difference in the occurrence of *a particular phonetic/phonological phenomenon* within *themes* poems of *language-1* versus *language-2*?

In order to do that a set of components had to be determined, namely the phonological phenomenon, two languages, two themes, as well as the authors and poems. These were chosen to be word-initial consonants, Finnish and Japanese, love and war and sixteen poems in total, four per language+theme combination. Additionally, a decision tree integrating relative counting was created as a set-up for the analysis to pick out six words per poem to be analysed. Based on the research question and its components the hypothesis was as follows:

The occurrence of word-initial consonants within war and love poems will be similar across Finnish and Japanese.

The combined analyses suggest that there is a case of both cross-linguistic overlap, i.e. similarities, and cross-linguistic differences. They also suggest that the love poems more accurately represent affect than the war poems do. Additionally, this thesis' findings largely align with previous literature regarding sound symbolism. With regards to the hypothesis this entails that while there is evidence supporting it, there is also evidence opposing it. In conclusion, this has been a successful dive into the gap of research that is the cross-linguistic investigation of sound in poetry. The hope now is to see this gap filled!

6. References (linguistic style)

Akiko, Yosano. 1957. The poetry of Yosano Akiko. *Tokyo: The Hokuseido Press*.

Aryani, Arash, Markus Conrad, David Schmidtke, Arthur Jacobs & Emmanuel Manalo. Why 'piss' is ruder than 'pee'? The role of sound in affective meaning making. 2018. *PloS one,* 13(6). 1-27.

Bankieris, Kaitlyn & Julia Simner. 2015. What is the link between synaesthesia and sound symbolism?. *Cognition,* 136. 186-195.

Bentley, Madison & Edith J. Varon. 1933. An Accessory Study of "Phonetic Symbolism". *The American journal of psychology,* 45(1). 78-86.

Creangâ, Maria-Teodora. 2022. The Translatability of Poetry: Phonaesthesia, Sound Iconicity, Orchestration, and Aesthetic Function. A Case Study of Poe's The Raven. *American, British, and Canadian studies,* 38(1). 163-178.

Drea, Edward J.. 2016. Japan's Imperial Army: Its Rise and Fall. Lawrence: University Press of Kansas.

Gussenhoven, Carlos & Haike Jakobs. 2017. Between the segment and the syllable. In *Understanding Phonology*, 4th edn., 126-147. Routledge.

Hall, Daniel C.. 2011. Phonological contrast and its phonetic enhancement: dispersedness without dispersion. *Phonology*, 28. 1-54.

Hämäläinen, Helvi. 1987. Sukupolveni unta: runoja. Porvoo etc.: Söderström.

Helimski, Eugene. 1998. In Daniel Abondolo (ed.), *The uralic Languages,* 480-515. London: Routledge.

Howard, Harry. 2023. First 1000 ms: The superior temporal sulcus. https://www2.tulane.edu/~h0Ward/BrLg/STS.html (22 August 2024.)

Itō, Junko & Armin R. Mester. 1995. In John A. Goldsmith (ed.), *The Handbook of Phonological Theory,* 817-838. Cambridge, Massachusetts & Oxford, England: Blackwell Publishers.

Jakobson, Roman. 1960. Linguistics and Poetics. *Style in linguistics*. 350-377.

Jylhä, Yrjö. 1951. Kiirastuli, 1st edn.. *Helsinki: Otava*.

Kajava, Viljo. 1918. Tie Tampereelle 1918 Tampereeen runot Kevät 1918. *Helsinki, Finland & Norderstedt, Germany: BoD - books on Demand.*

Kanero, Junko, Mutsumi Imai, Juro Okada, Tetsuya Matsuda & Hisao Nishijo. 2014. How sound symbolism is processed in the brain: a study on Japanese mimetic words. *PloS one,* 9(5). 1-8.

Kaur, Amanpreet. 2015. Roman Jakobson on the relationship between linguistics and poetics. *Research Scholar,* 3. 237-240.

Kettunen, Pauli. 2018. Wars, nation and the welfare state in Finland. In Herbert Orbinger, Klaus Petersen & Peter Starke (eds.), *Warfare and Welfare: Military Conflict and Welfare State Development in Western Countries,* 260-289. Oxford: Oxford University Press.

Kubozono, Haruo. 2017. Mora and Syllable. In Natsuko Tsujimura (ed.), *The Handbook of Japanese Linguistics.* 31-61. Wiley-Blackwell.

Kunnas, Kirsi. 1991. Tiitiäisen pippurimylly. *Helsinki: Otava.*

Kurihara Sadako. 1983. Kuroi tamago: senryō-ka ken'etsu to hansen/genbaku shiika-shū kanzehan. *Kyoto, Kyoto: Jinbun Shoin*.

Kusato, Nakamura. 1976. Modern Japanese haiku: an anthology = Gendai Nihon haiku senshū. *Toronto: University of Toronto Press.*

Labrune, Laurence. 2012. The phonology of Japanese. Oxford, England: Oxford University Press. 60-62, 75-76.

Lehiste, Ilse. 1997. The phonetic realization of the haiku form in Estonian poetry, compared to Japanese. *Speech Production and Language,* 13. Germany: De Gruyter, Inc. 241-250.

Levickij, Viktor V.. 2013. Phonetic symbolism in Natural Languages. *Glottotheory,* 4(1). 72-91.

Manner, Eeva-Liisa. Unknown. Strontium. https://www.babelmatrix.org/works/fi/Manner%2C_Eeva-Liisa-1921/Strontium_%28poiminto%29/en/32566-Strontium_%28detail%29 (16 July 2024.)

Masajo, Suzuki. 2016. Untitled. *https://www.wattpad.com/200431070-haiku-notes-suzuki-masajo-1906-2003-a-life-of-love/page/2* (16 July 2024.)

Önkaş, Nilgun Açik. 2012. The phonetics and Semantics Relationship in Poems. *Procedia, social and behavioural sciences,* 46. 4718-4730.

Parker, Steve. 2011. Sonority. In Marc van Oostendorp, Colin J. Owen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 2, 1160-1185. Blackwell Publishing.

Ramus, Franck, Marina Nespor & Jasper Mehler. 1999. Correlates of linguistic rhythm in the speech signal. *Cognition*, 73. 165-292.

Rasa, Risto. 2003. Odoton sinua takaisin. https://www.luminarium.org/suomenrunous/odotan.htm (16 July, 2024.)

Sidhu, David & Penny M. Pexman. 2018. Five mechanisms of sound symbolic association. *Psychonomic bulletin & review,* 25(5). 1619-1643.

Stanford, Sue. 2008. Four Japanese poems for peace. *COLLOQUY text theory critique,* 16. 246-261.

Sulkala, Helena & Merja Karjalainen. 1992. Finnish. London: Routledge. 369-372.

Suomi, Kari, Juhani Toivanen & Riikka Ylitalo. 2008. Finnish sound structure: Phonetics, phonology, phonotactics and prosody. University of Oulu, Oulu, Finland: Oulu university press. 65-68, 85-101.

Tamura, Ryūichi. 1967. Midori no shisō. *Tokyo: Shichō-sha.*

Turtiainen, Arvo. Unknown. Kaunein. https://www.babelmatrix.org/works/fi/Turtiainen%2C_Arvo-1904/Kaunein/fr (16 July 2024.)

Vala, Katri. 1979. Kootut runot, 5th edn.. *Porvoo j.n.e: Werner Söderdtröm.*

Wakayama, Bokusui. 1958. The poetry of Wakayama Bokusui. *Tokyo: The Hokuseido Press*.

Webster, Anthony K. 2015. The poetry of sound and the sound of poetry: Navajo poetry, phonological iconicity, and linguistic relativity. *Semiotica,* 2015(207). 279-301.

Webster, Anthony K. 2017. “So it’s got three meanings dil dil:” Seductive ideophony and the sounds of Navajo poetry. *Canadian journal of linguistics,* 62(2). 173-195.

Yellen, Jeremy & Andrew Campana. 2016. Japan, Pearl Harbor, and the Poetry of December 8th. *The Asia-Pacific Journal: Japan Focus,* 14(24). 1-17.

7. Appendix

7.1 Kaunein - Arvo Turtiainen

Kaunein runo syntyy
kun ihminen on lähellä ihmistä,
kun hellys,
yksinkertainen ja rajaton,
vailla kysymyksiä
virtaa toisesta toiseen.

Kauneinta runoa ei unohda.
Se on sinetöity otsaan, silmiin,
huuliin ja sydämeen,
sinetöity rakastavien lukea,
rakastavien kirvoittaa.

7.2 Odotan sinua takaisin - Risto Rasa

Odotan sinua takaisin.
Kulkisimme kaikki tutut paikat
ja ne tuntuisivat minusta melkein uusilta.

7.3 Valkoiset maljakot - Katri Vala

Sinun yksinkertainen hellyytesi
on täyttänyt sydämeni
aamukasteisilla kukilla.

Väkevänä ja hyvänä
polvistut eteeni.
Oi, älä silmiäni katso!

Olet puhunut sanoja,
jotka ovat pysähtyneet seppeleeksi otsalleni.
On kuin huoneestani kaikkialta
loistaisivat ohuet valkoiset maljakot
auringonhohtoa täynnä.

äla nosta rajua päätäsi nyt,
ettemme loukkaisi käsiämme
pienten maljakoiden sirpaleihin!

7.4 Herra Saksofoni ja Neiti Klarinetti - Kirsi Kunnas

Herra Saksofoni
oi mooni mooni mooni
rakatui Klarinettiin:
Oi pikku varikseni!
Oi mooni mooni mooni,
lauloi Saksofoni.

Neiti Klarinetti
sen toiveet petti:
En tule pariksesi!
En ole variksesi!
kun kyyhkyn nyyhkytyksin
lemmestäkin laulan yksin!

Oi mooni mooni mooni,
valitti Saksofoni.

7.5 Untitled 1. - Yosano Akiko

Aitomo ni sasubeki kasa no ame to fure
Yamagi ni kaeru jitcho ga hodo

7.6 Untitled 2. - Yosano Akiko

Dakogusa
Waga mune wa ushio tamuro hi no ie to
Amari arawa ni hito koi someshi

7.7 Untitled 3. - Suzuki Masajo

hito koishi aoki konomi wo te ni nukume

7.8 Untitled 4. - Suzuki Masajo

tare yori mo kono hito ga suki karekusa ni

7.9 Untitled 5. - Bokusui Wakayama

Tamagawa no suna ni tanpopo saku koro wa
Ware nimo omou hito no arekashi

7.10 Untitled 6. - Nakamura kusato

Towa ni ikitashi onna-no koe to semi-no ne to

7.11 Untitled 7. - Nakamura kusato

Sora wa taisho-no aosa tsuma yori ringo uku

7.12 Untitled 8. - Viljo Kajava

Mutta vielä välähti palokujasta
koneaseen tai puukon teräs.
Vielä oli voittajien otettava Amuri
jonka kellarinluukuista ampui yksinäinen kivääримies,
vielä heidän oli mentävä Pyynikin hirsiseinäisiä
juoksuhautoja kohti
ja kaaduttava niihin.
Jokainen metri nosti veljen veljeä vastaan.

Oi murheen tulipalonsavu, huntu
kaupungin kasvoilla
ja kaikki kirkonkellot vaiti.

Pirkkalantien lumihyhmään jäi tallattua viljaa,
tuhottujen kotien kekäleitä
ja lyödyn joukon viimeiset rippeet: miehiä,
eväslaukkuja, saastaa.
Voi miksi eivät kellot soineet, miksi?

Oi murheen tulipalonsavu, huntu
kaupungin kasvoilla
ja kaikki kirkonkellot vaiti.

7.13 Kaivo - Yrjö Jylhä

Talvipäivä puolessa on vasta,
hyökkäystä ei, vain tykkitulta:
viuhuu sirpaleet ja roiskuu multa.
Alla maan on niin tyyntä, kodikasta;
Haavoissaan vain joku hiljaa huokaa:
Veljet, vesitilkka tuokaa- - -.

Korsun yllä tykkien soi jyry,
Kaivotietä pyyhkii luotipyry
Päivin sekä öin, ja polun päässä

Kaivon partaalla on verta jäässä- - -
Kaivon luona luoti tapas monta
liian janoista ja maltitonta.
Janoos älä täällä vettä pyydä,
astiaas vain lunta syydä,
sitäkään jos löydät enään maasta- - -
niin sen peittää pirstat sekä, savu, saasta.
Iltaan kestä vain, niin lääkkeen saavat
Kurkut kuivat, vihlovaiset haavat

Haavoissaan vain joku hiljaa huokaa:
Veljet, vesitilkka tuokaa- - -.

Lähtee mies, kun vettä pyytää veikko,
Tuskissaan huojuva ja heikko,
Lähtee, koska veljellä on jano,
Enempää ei mieti eikä sano.
Käteensähän sieppaa vesikannun,
Juoksee yli myllerretyn mannun,
Häipyy sekaan viuhunan ja tuiskeen
Kuullen korvissaan vain avunkuiskeen.

Tykit jyskyttävät korsunsuuta,
Viipyy vesimies- - -ei muuta.
Haavoissaan vain joku hiljaa huokaa:
Veljet, vesitilkka tuokaa- - -.

Päivä hämärtyy, ja vihdoin kuullaan
Kaivon partaall’ mies on suullaan,
Verta valunut on kaivoon, josta
yksikään ei enään vettä nosta.
Verta pulpahtavat suonet lähteen
verta valuvaiseen iltatähteen.

Haavoissaan vain joku hiljaa huokaa:
Veljet, vesitilkka tuokaa- - -.

7.14 Surupäivä - Helvi Hämäläinen

Yksi päivä minulla on oikeus surra,
yhdeksi päiväksi suljen taivaan ikkunat,
poistan sinen,
nostan mustan auringon suruni merkiksi.
Yhdeksi päiväksi vaiennan linnut.

Minulla on oikeus surra yksi päivä, minulla on oikeus surra.

Hänet on lyöty taistelussa,
ruumis haavoja täynnä,
hänet on lyöty taistelussa,
jättiläishaavoista vuotaa veri.

Silmien meret ovat autiot
hiekkaa tukka,
minulla on oikeus surra aurinkohiuksista miestä,
haavoja täynnä hän kuoli.
Yhden päivän istun toimetonna,
suljettuna taivaan ikkunat,
yksikää hevonen ei ole satuloitu.

7.15 Strontium - Eeva-Liisa Manner

Tankki on pysähtynyt pellolle
Juoksuhauta kasvaa leinikin
Bunkkerin katolle on puhjennut utuinen heinä
kuin pitsi tyhjyyttä vasten
Rauha.

Ja radioaktiiviset perheet ilmanpaineen
kääntämät huojuvat, tyhjät luut,
paisunut ruumis ui kanavassa
jalat merelle päin,
taistelukala on tuonut kypärään puolison
ja viettää häitä kyljet loistaen

Laiturilla nääntyy sanomalehti
siivet auki
muste haipuen:
Holland ist in Not
Holland gibt’s nicht mehr
Ruumis on tullet perille
Maailma varistanut sairautensa

Weltall kohoaa, lepakko ääretön,
kauheat siivet, joita koskaan
ei mitata, poimuissaan armeijat,
keihäsmetsä, maine ja kunnia
ja uskonnolliset kulkutaudit.
Welt als Wille und Vorstellung
Sie Welt als Wolle die Welt
als Hölle und als Verstelltheit

Sudennaamainen nisäkäs Mahtava
piipittäjä maistanut kaikki taudit
kerännyt kaikki lemut
levitää itsensä
saapuu sulaan magmaan.

Ja ryöstetty tähti, joka arvalla jaettiin
suuren armeijain kuten muinoin
jumalten kesken, varistaa kauneutensa
sokean ihmisen vuoksi.
Leikkivät, tanssivat, laulavat eläimet,
kuultavat kalat ja innokkaat linnut kuolevat.

Autius.
Vuorilla sataa lunta.
Jokuruoko ei muista.

Tuolla puolen kääntyvät tähdet.

7.16 <Hiroshima> to iu toki - Sadako Kurihara

<Hiroshima> to iu toki
<Ā Hiroshima> to
Yasashiku kotaete kurerudarou ka
<Hiroshima> to ieba <pāru hābā>
<Hiroshima> to ieba <nankingyakusatsu>
<Hiroshima> to ieba on’na ya kodomo o
Gō no naka ni tojikome
Gasorin o kakete yaita Manira no kakei
<Hiroshima> to ieba
Chi to honō no kodama ga kaette kuru noda

<Hiroshima> to ieba
<Ā Hiroshima> to yasashiku wa
Kaette konai
Aija no kuniguni no shisha-tachi ya mukokunotami ga
Isseini okasa reta mono no ikari o
Fukidasu noda
<Hiroshima> to ieba
Fukidasu noda
<Ā Hiroshima> to
Yasashiku kaette kure tame ni wa

Suteta hazu no buki o hontō ni
Suteneba naranai
Ikoku no kichi o tekkyo seneba naranai
Sonohi made Hiroshima wa
Zankoku to fushin no nigai toshida
Watashitachiha senzai suru hōshanō ni
Yaka reru pariada

<Hiroshima> to iu toki
<Ā Hiroshima> to
Yasashī kotae ga
Kaette kuru tame ni wa
Watashi-tachi wa
Watashi-tachi no yogoretate o
Kiyomeneba naranai

7.17 Watashi ga ichiban kireidatta toko - Noriko Irabagi

Watashi ga ichiban kirei datta toki
Machi wa garagara kuzurute itte
Tondemonai tokoro kara
Aozora nanka ga mie tari shita

Watashi ga ichiban kirei datta toki
Mawari no hitotachi ga takusan shinda
Kōjō de umi de namonai shima de
Watashi wa oshare no kikkake o otoshite shimatta

Watashi ga ichiban kirei datta toki
Dare mo yasashī okurimono o sasagete wa kurenakatta
Otoko-tachi wa kyoshu no rei shika shiranakute
Kireina me-sa dake o nokoshi kai hatsu tte itta

Watashi ga ichiban kirei datta toki
Watashi no atama wa karappo de
Watashi no kokoro wa katakunade
Teashi bakari ga kuriiro ni hikatte

Watashi ga ichiban kirei datta toki
Watashi no kuni wa sensō de maketa
Son’na bakana koto tte aru mono ka
Burausu no ude o makuri hikutsuna machi o noshiaruita

Watashi ga ichiban kirei datta toki
Rajio kara wa jazu ga afureta
Kin’en o yabutta toki no yō ni kurakura shinagara
Watashi wa ikoku no amai ongaku o musabotta

Watashi ga ichiban kirei datta toki
Watashi wa totemo fushi awase
Watashi wa totemo tonchinkan
Watashi wa meppō sabishikatta

Dakara kimeta dekireba nagaiki suru koto ni
Toshitotte kara sugoku utsukushī e o kaita
Furansu no ruō jīsan no yō ni ne

7.18 Kareha - Ryūichi Tamura

Soshite
Kare-ra wa shinda midori no
Chi mo nagasazu ni

Tsuchi ni kaeru mea ni
Kare-ra wa tsuchi no iro ni
Hitotsu no shi o shinda chinmoku no
Iro ni kawaru

Dōshite nanimokamo
Sukete mieru no ka Ni~Tsu to yoru no
Kyōkai o kareha no naka o
Ware-ra wa doko made mo aruitaga

Hoshi no
Kimatte iru mono wa
Furimukanai

7.19 *Untitled 9.* - Yukio Ozaki

Tsumete naki
Shōgi o sashi tsutsu
Kachi nuku to
Usobuku hito no
Medetakarazu ya