**Research Proposal: How Iconicity Shapes the Human Language**

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1. **Introduction**

The linguistic sign can no longer be considered to be fully arbitrary. There an increasing amount of typological studies that show certain linguistic meanings prefer to be represented with certain sounds. 1st and 2nd person pronouns tend to have nasals (Gordon, 1995; Nichols & Peterson, 1996); words for ‘lips’ and ‘nose’ tend to contain bilabials and nasals, respectively (Urban, 2011); round body parts (‘knee’, ‘breast’, ‘neck’, and ‘navel’) prefer to be represented by words containing rounded vowels, and concepts related to hard texture (‘hard’, ‘stone’, ‘to hit/beat’) by those containin coronal stops (Blasi *et al*. 2016; Joo, to appear).

It is now clear that sound-meaning association is biased. The following question would be: how does this bias emerge? Is it the case that new iconic words are constantly created, and non-iconic terms repeatedly fall out? How do iconic terms “survive” throughout sound and semantic change? For example, if we see a nasal sound in a word for ‘nose’, what is this phenomenon the result of? Was, at some point in history, a new word for ‘nose’ created out of thin air, preserving its nasal sound for centuries or millennia to our date? If that’s the case, how can so many basic words of our languages be still iconic, given that new words for basic terms are rarely created, and phonological change has a huge of amount of time enough to “blur” its original iconicity? Moreover, how should we regard the case where a word for ‘nose’ did not contain a nasal sound earlier in history, but later acquired a nasal sound through sound change? What about words with nasal sounds that originally did not mean ‘nose’ but later acquired that meaning through semantic change? Would such cases count as iconic phenomena?

My hypothesis is that there exist plural mechanisms that assure lexical iconicity throughout the time, including not only neologism but also other diachronic mechanisms, which will be the subject of this study.

1. **Hypothesis**

The following explanation of hypothetical mechanisms of how iconicity shapes languages is an excerpt from my MA thesis in progress. I hypothesize that there are three mechanisms of iconic motivation:

1. Neologism
2. Influence on language change
	1. Resistance to regular sound change
	2. Motivation for irregular sound change
	3. Motivation for semantic change
3. Survival of the iconic
	1. **Neologism**

One evident origin of iconic items is invention. Taub's (2001) Analogue-Building Model explains well how iconic symbols are created, in sign and spoken languages. The model consists of the following process:

To create an iconic item, one *selects* an image to represent, modifies or *schematizes* that image so that it is representable by the language, and chooses appropriate forms to show or *encode* each representable part of the image. Moreover, when modifying the image or “translating it to linguistic form, one makes sure that the new image preserves the relevant physical structure of the previous stage.

For example, the creation of the English onomatopoeic word *ding* consists of the selection of the actual sound of a ringing bell as the image; *schematization* into the sequence “abrupt onset” – “loud midsection” – “gradual fade”; *encoding* into the phonological sequence /d – ɪ –ŋ/.

Although Taub has only mentioned this onomatopoeic item as an example for spoken language’s iconic item creation, there is no reason to assume that non-onomatopoeic spoken lexicon cannot arise from the same model. One example is Spanish /tʃup/ ‘to suck’ which has imitative origin (Roberts, 2014). If we apply Taub’s model, then we can illustrate the creation process as follows:

1. **Selection**: The experience of sucking

**Schematization**: Friction caused when sucking the material – Lip protrusion – Labial contact with the sucked material

**Encoding**: /tʃ – u – p/

/tʃup/ has replaced Latin *sug–* ‘to suck’ as the primary morpheme for this meaning. We see that even the most basic words can be newly invented and replace old ones. Neologism is a powerful mechanism that fuels the iconicity of a language.

* 1. **Influence on language change**

Neologism is not the only way for iconicity to emerge. Jespersen, (1922 [2010] pp. 287-300) listing words that include the vowel *i* and whose meanings are related to smallness, rejects the notion that all of these phonosemantic correlations have necessarily existed ever since these words were created:

[…] I am not speaking of the origin or etymology of the words enumerated: I do not say that they have from their very first taken their origin from a desire to express small things symbolically. It is true that *some* of the words mentioned have arisen in that way, ––many of our *i-*words are astonishingly recent––but for many others it is well-known that the vowel *i* is only a recent development, the words having had some other vowel in former times. What I maintain, then, is simply that there is some association between sound and sense in these cases, however it may have taken its origin, and however late this connexion may be (exactly as I think that we must recognize secondary echoisms).

I agree with his idea that iconic relationship can also be established via language change. For example, if a morpheme designating a round object acquires a rounded vowel later on through sound change, an iconic relationship “emerges” between the roundness and the rounded vowel. This process is similar to how folk etymology causes morphemes to emerge, such as in the case of *hamburger,* which is originally from the German city name *Hamburg*. Even though *hamburger* was not etymologically created as *ham*+*burger*, English speakers have associated itsphonetic part/hæm/ with the referent’s meaning, whence emerged the new morphemic relationship *ham+burger.* Similarly, regardless of whether a word’s diachronic origin was iconically motivated or not, speakers can iconically associate a word’s meaning with its synchronic phonetic form if they feel that there is an iconic correspondence.

If lexical items are only iconic at birth, we cannot explain how the lexical items of natural languages, which are usually very old, can still remain iconic even after centuries of sound and semantic change, especially when there is a tendency for languages to sacrifice the iconic resemblance of lexical items for the sake of ease of articulation and perception. (Frishberg, 1975) has illustrated how the American Sign Language (ASL) has gradually changed its iconic signs (or “icons”) into arbitrary signs (or “symbols”) over a century. Throughout the diachronic development of ASL, a sign tends to make its hands movements symmetrical (to make hand programming easier and increase visual cues), move from face center to face perimeter (to easily deliver facial information), and merge compounds into unified motions, all of which can blur the original iconic characteristics the signs had in their earlier form.

One could argue that new words are constantly created, which ensures the preservation of the iconicity of a language. But I don’t think we see new words that often. Most of the words we use, especially the basic ones, are quite old, although there are some exceptions like Spanish /tʃup/.

A counterexample to the assumption that iconic items are always born iconic is *thud.* While most of us would agree that the vowel /ʌ/ of *thud* is iconically associated with the heavy, dull sound it designates, in Old English, it originally bore the vowel /y/ and meant ‘to thrust, push’ (Liberman, 2009). Thus, the iconic association emerged *after* the word was originally created. Although Taub’s Analogue-Building Model can explain the neologism of iconic items, it cannot explain *a posteriori* emergences of iconicity like the case of *thud*.

To overcome the limitations of neologism as the sole explanation for iconicity, I must argue that the tendency towards arbitrariness must not be the only tendency of language change. That is, the change between iconicity and arbitrariness cannot be unidirectional. If it were so, then it would be necessary for sign languages to eventually end up being nearly totally non-iconic. No one has ever attested such a sign language; all sign languages are iconic to some degree. Frishberg concludes that “there exists some ideal proportion between icons and symbols that any language will approach” (p. 718). Although she did not go further into details regarding how this proportion may be attained, it cannot be explained by the tendency towards arbitrariness alone. It would not make sense to assume that the changes towards arbitrariness seize to function once a sign language reaches its ideal balance between iconicity and arbitrariness; no language ever stops changing, including when the change is motivated by the ease of perception and articulation. Therefore, the reasonable explanation for the fact that a language maintains its balance between iconicity and arbitrariness would be that there also exists the tendency in the opposite direction, i.e. the tendency for a language to become more iconic.

The evidence for the idea that there is a tendency towards iconicity is that sound symbolism can influence sound change. Lexical items can resist regular sound change to some degree for the sake of preserving iconicity. The English word *peep* has avoided going through the Great Vowel Shift, which would have made it /paip/. This resistance to regular change is arguably because its vowel /i/ is similar to the sound of chicks (McMahon, 1994).

Iconicity can not only repel regular sound change but also motivate irregular sound change. One example is early modern Koreanㄱㆍ득 /kadɨk/ ‘full’ andㄱㆍㅅ득 /kat’ɨk/ ‘very full,’ where ㅅㄷ /t’/ of the latter was originally ㄷ /d~t/, which became a fortis consonant due to the symbolic value of fortis consonants that exaggerates the degree of fullness (김무림, 2015).

Although I have only mentioned cases where sound symbolism has affected sound change, I do not have any evidence for sound symbolism motivating semantic change as of yet. But it would be unlikely that iconicity can only affect sound change but not semantic change. If it does affect semantic change, then we can hypothesize the following tendency: when a lexical item has a certain sound that is iconically associated with certain meanings, it is more likely that that lexical item will change its meaning into one of those certain meanings. For example, when a lexical item has a rounded vowel, it is more likely that its meaning will change into something of round shape, as compared to those who do not have a rounded vowel.

* 1. **Survival of the iconic**

Another mechanism that preserves linguistic iconicity is the survival of the iconic. Following the abovementioned citation of Jespersen, he goes on to suggest that this phonosemantic association could have been motivated by iconic items outliving non-iconic ones:

[…] I am firmly convinced that the fact that a word meaning little or little thing contains the sound [i], has in many, or in most, cases been strongly influential in gaining popular favour for it; the sound has been an inducement to choose and to prefer that particular word, and to drop out of use other words for the same notion, which were not so favoured. In other words, sound-symbolism makes some words more fit to survive and gives them a considerable strength in their struggle for existence. If you want to use some name of an animal for a small child, you will preferably take one with sound symbolism, like *kid* or *chick,* (see § 3), rather than *bat* or *pug* or *slug*, though these may in themselves be smaller than the animal chosen.

In this way languages become richer and richer in symbolic words. I do not believe in a golden first age in which everything in language was expressive and had its definite significative value, but rather in a slow progressive tendency towards fuller and easier and more adequate expressions (also emotionally more adequate expressions) —and in this movement the increasing number of sound-symbolisms forms to my mind a not inconsiderable element.

This survival theory is supported by the fact that onomatopoeic items who have lost their iconic value through regular sound change do not survive. If onomatopoeic words survive regardless of how sound change affects them, then we should be seeing very old onomatopoeic words that sound completely different from the sounds they represent (such as /blib/ for canine barks, or /laz/ for feline meows). Such cases rarely exist, if at all. The reason would be that once onomatopoeic items are no longer iconic, they fade away (or, at least, stop being onomatopoeic), and iconic alternatives are selected. One such case is English *laugh,* originally Proto-Germanic \**hlahhian*, which is seemingly iconically related to the sound of laughter (Liberman, 2009). After sound changes have steered /læf/ away from its original iconic form, no one uses it as onomatopoeia anymore; we now rather use *haha* and the like*.* Another example is Germanic \**gauk–* ‘cuckoo’ > Old English /’je:ak/ > dial. *yeke*, which, having lost its iconicity, has faded away from most dialects of English, where *cuckoo* was borrowed from French instead. (Liberman, 2009, 2010).

1. **Research goals**

I have laid out three possible mechanisms of iconic motivation. My Ph.D. study aims to investigate and verify these three hypothetical mechanisms. It will be a diachronic typology, based on a large database. It will statistically examine (1) how often new words are created, and how iconic they are; (2) how irregular sound change is correlated with iconicity; (3) whether words that did not originally mean *x* are as significantly represented by sounds that are iconically related to *x* as the words for *x* that had such sounds since birth: and (4) whether iconic words are more likely to survive than non-iconic words.

I will examine the diachronic development of at least 100 genealogically and areally diverse sample languages whose diachronic data is readily available. I will focus on 28 lexical concepts that my MA thesis has shown to be highly iconic. For example, for the word ‘to blow’, which is positively correlated with labial stops and rounded vowels and negatively correlated with nasals, the questions would be:

1. When new words for ‘to blow’ are created, do they tend to have labial stops and rounded vowels, and to not have nasals?
2. Are there any irregular sound changes regarding words for ‘to blow’? If so, do they align with the iconic tendencies?
3. Do words for ‘to blow’ that originally meant something different also show a high preference for labial stops and rounded vowels and dispreference for nasals?
4. Do words for ‘to blow’ with labial stops and/or rounded vowels live longer than those without? Do those with nasals live shorter? For languages that had more than one word for ‘to blow’, did the iconic ones outlive the non-iconic ones?
5. **Conclusion**

My MA thesis, concurring with previous studies, further confirms the iconicity of spoken language lexicon. Even though typological tendency does not necessarily imply iconicity, the two are strongly correlated, and we now have a general idea of which linguistic concepts are highly iconic. The time is now ripe to see how iconicity emerges throughout history. This diachronic typological study must be both quantitative and qualitative, and statistical analysis of a large database and fine-grained analysis of individual languages are both necessary. Since I am passionate about typology, historical linguistics, and linguistic iconicity, this future research will be an ideal task for me.

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