The Significance of Onomatopoeia in Languagization: From the perspective of sound-meaning relationship under dynamic system principle *

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Abstract: Onomatopoeia acts as the first step of linguistic expression, and is an important sign of quasi-language evolving into real language (i.e. languagization). It may gradually lose its onomatopoeic characteristics as it is adapted to the systematicity of language. As a primitive word class, typical onomatopoeia is inevitably constrained by language system in many aspects, while still maintaining its deeper nature beyond the system. Many non-onomatopoeias still carry onomatemes to various degree and manners, among which the imitation of all human sounds and some sounds of external world possess a linguistic universality. Various factors such as the equivalent selectivity, versatility and the variability of onomatopoeias keep interacting and make the whole vocabulary system be chaotic. The model of onomatopoeia structures can be deemed as an imitative target or a structural meme of other models of non-onomatopoeia structures. This paper mainly aims at demonstrating how onomatopoeias assist language in becoming systematic, and how they are constrained by general knowledge and existing language foundations.

Keywords: onomatopoeia, dynamic system, the loss of onomatopoeic characteristics, factors of onomatopoeia, general knowledge fields, chaos, meme

1. Introduction

As the first step of linguistic expression, onomatopoeia originates from onomatopoeic interjections (such as sounds people make to lure animals). Knowledge ought to be based on association, while association is the cornerstone of the systematicness of language. Therefore, onomatopoeia is a significant sign of quasi-language evolving into real language. As a primitive word class and the foundation of linguistic system, onomatopoeia possesses following characteristics and functions:

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* The Chinese version of this paper, published in 2013, is one of the research results in the field of languagization along with the paper on interjections also by Ma Qinghua (2011b).
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(a) It gradually loses its onomatopoeic characteristics as it is adapted to the systematicity of language. Approximate onomatopoeias, as a typical kind of onomatopoeia, are inevitably constrained by language system in many aspects, while still maintaining their deeper nature beyond this system.

(b) The lexicon mainly consists of non-onomatopoeias originating from onomatopoeias either directly or indirectly, and these non-onomatopoeias still, to various degrees and manners, carry onomatemes (the new term “onomateme” in this paper indicates the smallest unit of onomatopoeic words that can be used to describe the sound they refer to) that are synergistic with general knowledge fields, while at the same time possess language universality.

(c) Various factors of onomatopoeias such as equivalent selectivity, versatility and variability keep interacting with each other, rendering the whole lexical system chaotic.

(d) The model of onomatopoeia structures can be deemed as an imitative target or a structural meme of other models of non-onomatopoeia structures.

This paper is going to, by illuminating above characteristics and functions, demonstrate the process through which onomatopoeias assist in forming language system and which they are constrained by general knowledge and existing language foundations.

2. The systematic and super-systematic properties of phonetic features

Based on the criteria of language system, it can be found that the phonetic features of onomatopoeias are systematic and super-systematic. The phonetic system can be divided into the subjective, internal and deep-seated parts and the objective, external and superficial parts (Gan Shifu, 1956; E. Sapir, 1964:33). There is a dialect correspondence within the former part, while the latter part, although belongs to the sound class of its phonetic system, is actually beyond the dialect system in terms of dialect correspondence.

Onomatopoeias can be divided into vivid onomatopoeias and approximate onomatopoeias. To achieve ideal acoustical effect, the former tends to be used independently, so as to avoid the reduce in vividity caused by the interference of the phonetic system. Even used in sentences, it’s quite hard for this kind of onomatopoeias to blend in smoothly with neighboring compositions since one has to slow down when pronouncing these words, which causes obvious trace of citation. Therefore, the phonetic factors of vivid onomatopoeias are very likely beyond the phonetic system. For example, the final and tone of the vivid onomatopoeia in (1) doesn't belong to the tone of its phonetic system.

\[(1) \text{mәr}53 \text{ miau}533 \text{ miau}533 \text{ tɕiɣ}51 \text{ lә}55 \text{ lә}55 \text{ pũ}51 \text{ t’ĩ}45 (\text{猫儿喵喵叫了老半天})\]

cat mew mew cried PART a long time

(‘Mew, mew, the cat cried for a long time.’) (dialect of Jinsha, Nantong, Jiangsu province)

Approximate onomatopoeias, on the other hand, under the influence of blending with
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other compositions or for the adaptation of neighboring compositions, are often pronounced perfunctorily so as to be more smooth. This kind of onomatopoeias, whose phonetic factors all belong to its phonetic system, are restricted by this system. For example, the final and tone of the approximate onomatopoeia in (2) belongs to the tone of its phonetic system.

(2) mәr35 мia35mia35mia35 tɕiɣ51 lә lә55pũ51t'ĩ45 (猫儿喵喵喵叫了老半天)
cat mew cried PART a long time

(‘The cat mewed for a long time.’) (dialect of Jinsha)

However, the approximate onomatopoeias are restricted merely at a superficial level. At a deeper level, approximate onomatopoeias (a kind of typical onomatopoeia, and most onomatopoeias are approximate onomatopoeias) have already got rid of the restriction of phonetic system, which can be manifested by the fact that their tones are actually beyond the dialect system in terms of dialect correspondence. Be them monosyllabic (see group one) or polysyllabic (see group two), almost all the dialect onomatopoeias possess one or more fixed tonal patterns that are beyond the dialect correspondence, which seems to become a sign of onomatopoeias. Nevertheless, polysyllabic onomatopoeias are more complicated considering the relationship between different syllables. Try to compare the following examples:

Group one: mu44 (‘moo’), ku44 (‘laugh’) (dialect of Yinchuan, the Ningxia Hui Autonomous Region); fiak33 (‘slap’), fok33 (‘thud’) (dialect of Haikou, Hainan Province); bәu13 (‘bark’), lat55 (‘tear of cloth’) (dialect of Nanning, Guangxi Province); oy33 (‘hum’), tay33 (‘rub-a-dub’), toγ33 (‘splash’), miau33 (‘miaow’), toγ33 (‘rat-a-rat’), tay33 (‘gong beat’) (dialect of Guiyang, Guizhou Province); hent55 (‘panting’), sap55 (‘slurp’), a33 (‘caw’), mo33 (‘moo’), kәγ33 (‘ring’), p’aγ11 (‘gong beat’), bә4 (‘noise’), γαu4 (‘wail’) (dialect of Leizhou, Guangdong Province); xa13 (‘sound of the wind’), p’aγ12 (‘slap’), k’uαŋ2 (‘crash’), p’aγ42 (‘gunshot’) (dialect of Wuhan, Hubei Province)

Group two: li11luε33luε55 (‘bark’), ki11kiau33kiau55 (‘noise’) (dialect of Leizhou, Guangdong Province); pәγγ (‘roar of guns’), p’i12pa12li21 (‘sound of firecrackers’) (dialect of Nanning, Guangxi Province); cε12ricε12ri12 (‘pitter-patter’), te’i12k’e12te’i12k’e11 (‘sound of sawing’), t’i12t’o42 t’i12t’u42 (‘clatter’), te’i12k’uαŋ2te’i12k’uαŋ2 (‘clang’) (dialect of Nanchang, Jiangxi Province)

Similarly, onomatopoeias in mandarin are often pronounced in level tone regardless of the number of syllables, for example mәu (‘moo’), sәu (‘whiz’), wәŋ (‘hum’), bәdә (‘click’), c’ilu (‘whistle’), gәzә (‘creak’), and only several archaic onomatopoeias are pronounced in rising tone, for example cәn’chәn (‘bubble’), cәngcәng (‘gurgling’) and so on.

Tones of Chinese onomatopoeias can avoid the restriction of the deep-seated phonetic system, forming a fixed pattern in superficial phonetic system based on the classification in terms of meaning, which is attributable to the fact that this kind of onomatopoeias
originates from the simulation of sounds, being directly restricted by the external world. The non-onomatopoeias other than interjections all originates from the linguistic motivation based on association (Ma Qinghua, 2011a), and along with the interaction of various factors of the linguistic system, these non-onomatopoeias are restricted by both deep-seated and superficial phonetic system in every way. For example, the pronunciations of the noun māo (猫, ‘cat’) in different Chinese dialects all originates from miāo (喵, ‘onomat. cry of cats’), and their initials, finals and tones are all restricted by the rules of corresponding sound class. In some dialects the pronunciation of māo (猫, ‘cat’), máo (毛, ‘fur’) and māo (茅, ‘thatch’) are all the same, and in others the pronunciation of māo (猫, ‘cat’) is the same as miāo (苗, ‘seedling’). All these pronunciations follow the rules of the sound class of corresponding dialect.

From vivid onomatopoeias to approximate onomatopoeias, to the onomatemes of their derivatives (see 3.1) and to their variations (see 5.1), the onomatopoeic characteristics gradually weaken as it is adapted to the systematicity of language, while the non-onomatopoeic characteristics start to strengthen. Although the existence and development of the latter are truly worth being researched, they beyond the scope of present research, so the details would not be discussed in this paper.

3. Onomatemes as etymological markers and their universality

3.1 The weakening of onomatopoeic characteristics of derivatives and onomatemes

When being converted into non-onomatopoeic derivatives, the onomatopoeic characteristics of these onomatopoeias gradually weaken for the need for these derivatives to be distinguished formally from source words and for the relatively lower requirement to preserve their onomatopoeic characteristics. Among the 58 kinds of mandarin onomatopoeias listed in the Modern Chinese Classification Dictionary, none of them is completely isomorphic to their non-onomatopoeic derivatives. There are only 11 non-onomatopoeias that possess obvious etymological relations with their onomatopoeic sources, and their onomatopoeic characteristics are greatly weakened through such approaches as deformation, simplification (to turn monosyllables into monosyllables) and narrowing the range of application (only to retain a limited range of application). Try to compare the following examples:

**Deformation:**<change in finals> miāo (喵, ‘onomat. cry of cats’) – māo (猫, ‘cats’); <change in tones> kā (咯, ‘onomat. noise made in coughing or vomiting’) – kā (咯, ‘to cough’), guōguō (嚤嚤, ‘onomat. croak’) – guóguó (嚤嚤, ‘grasshopper’), hūlū (呼噜, ‘onomat. snore’) – hūlū (呼噜, ‘n. snore’), bādā (吧嗒, ‘onomat. click’) – bādā (吧嗒, ‘to click’)

**Simplification:** hōng /hōnglōng (轰/轰隆, ‘onomat. rumble’) – hōng (轰, ‘to rumble’), hā/hāhā (呼/呼呼, ‘onomat. whir’) – hā (呼, ‘to whir’), shuā /shuāshuā (刷/刷刷, ‘onomat. swish’) – shuā (刷, ‘to
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Narrowing the range of application: *hōng* (轰, *onomat*. sound of thunder, artillery or collapse of heavy things) – *hū* (呼, *onomat*. breathe or whir) – *hū* (呼, ‘v. used for the sound of breath only’), *shuā* (刷, ‘onomat. swish’) – *dī* (滴, ‘onomat. sound of liquid, clock and trumpet’) – *dī* (滴, ‘v. n. used for the sound of liquid only’)

Derivatives, either evolved from onomatopoeias directly or indirectly and no matter how many links involved, may still possess some phonemes. Although their motivation has become somewhat obscure, they can still act as the marker of onomatopoeic etymology, becoming onomatemes, and from these phonemes or (local) phoneme combinations that are smaller than speed we can find a common factor in terms of intrinsic meaning (Ma Qinghua, 2000:134).

Among the phonetic components of the derivatives, the stability, universality and characteristic of the onomatemes are not balanced. Sometimes compared with vowels or finals, the onomatopoeic characteristics of consonants or initials are more likely to be retained. Words or morphemes referring to cats always contain the consonant [m-]. In contrast, their finals and tones are quite complex, for example some compound vowels are simplified as single essential vowels, some possess both essential vowels and tail vowels, and some have head vowels and essential vowels (and tail vowels). Moreover, even if those vowels have the same structure, their phonemes are not exactly the same. Some tones are flat, some are rising tones, some are falling ones, and some are falling-rising tones. Moreover, even the tonal models are identical, their tone pitch may not be the same. Try to compare the following examples:

**Essential vowels:**
- *mɔ̃55* (dialect of Xuzhou, Jiangsu Province), *mɔ̃44* (dialect of Loudi, Hunan Province), *mɔ̃44* (dialect of Liyuan, Hunan Province) (Chen Hui, 1999:130), *mɔ̃31* (dialect of Hangzhou, Zhejiang Province); *mɔ̃55* (dialect of Yangzhou, Jiangsu Province), *mɔ̃24* (dialect of Chongming District, Shanghai), *mɔ̃24* (dialect of of Xi’ning, Qinghai Province), *mɔ̃31* (dialect of Shanghai), *mɔ̃31* (dialect of Suzhou, Jiangsu Province), *mɔ̃31* (dialect of Urumchi, Xinjiang), *mɔ̃31* (dialect of Fuzhou, Fujian Province), *mɔ̃31* (dialect of Xinzhou, Shanxi Province); *mɔ̃213* (dialect of Ningbo, Zhejiang Province)

**Essential vowels + Tail vowels:**
- *maʊ55* (dialect of Guiyang, Guizhou Province), *mɔ̃55/z/35* (dialect of Yuanling, Hunan Province), *mɛu55* (dialect of Nanning, Guangxi Province), *mou31* (dialect of Hengshan, Hunan Province); *maʊ55* (dialect of Xupu, Hunan Province) (He Kailin, 1999:131), *maʊ31* (dialect of Nanchang, Jiangxi Province), *mɔ̃ɔ̃31* (dialect of Nanjing, Jiangsu Province)

**Head vowels + Essential vowels (+Tail vowels):**
- *mio55* (dialect of Liuzhou, Guangxi Province), *mio31* (dialect of Danyang, Jiangsu Province), *mio31* (dialect of Yudu, Jiangxi Province), *mio55* (dialect of Hangzhou, Zhejiang Province), *mio55* (dialect of Nanchang, Jiangxi Province)
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of Lichuan, Jiangxi Province); miau³³ (dialect of Meixian, Guangdong Province), miu²¹³ (dialect of Dongguan, Guangdong Province), miu³₅₅ (dialect of Ningyuan, Hunan Province) (Zhang Xiaoqin, 1999:143)

Of course in some onomatopoeias the finals serve as onomatopoetic constants, for example onomatopoeias “dōng (咚), tōng (嗵), hōng (哄), bēng (砰), pēng (砰)” with -ong and -eng as finals all refer to loud voice.

3.2 The pluripotency and selectivity of onomatemes

A single phonetic factor could simulate various sounds. For example, [m-/n-/ŋ-] could be used to simulate substantial sounds that are irrelevant to each other. Based on the combination of form and meaning, figure 1 contains 42 onomatemes: \{[m-], [n-], [ŋ-]\} × \{a, b, c, d, e, f, g, h, i, j, k, l\} ∪ \{[ŋ-]× \{o, p\}\} ∪ \{[m-]× \{m, n, o\}\} ∪ \{[n-]× \{m, o\}\} “[m-] (b)” can be transferred into “[m-](sound of exerting oneself)”, and so forth.

Figure 1. Figure of onomatopoeic functions of [m-][n-][ŋ-] in Chinese

And by concluding almost all the [m-] initials in Cantonese, we found that initial [m-] possess 8 onomatopoetic functions:

- (a) sound of swallowing: mei53 (‘sound of licking’), mui²³ (‘sound of chewing made by people without tooth’), miu²³ (‘to curl one’s lip’); (b) sound of exerting oneself: man²³ (‘to strain at’), man³³ (‘fierce, exuberant, imposing, important’), maa²³ (‘to drag, to pull’), maa³³ (‘to tear, to open, to stare at’), miu³³ (‘to tear, to peel’), maa²¹ (‘crazy, barbaric’); (d) sound of questioning: mei³³ (‘why, what’), maa²² (‘to ask’), maa²³ (‘to smell’), maa³³ (‘to listen’); (h) greeting: mei²¹ (‘noun’); (i) sound used to express denying: maa²¹ (‘don’t’), maa²² (‘no’), maa³¹ (‘no’), maa³³ (‘no’); (j) sound of getting angry: man²³ (‘to close one’s mouth (because of getting angry)’), man³³ (‘to get in a rage’), maa³³ (‘unreasonable’); (n) neigh: ma²³ (‘horse’); (o) meow: mau²³ (‘cat’)

On the other hand, a single onomatopoeic function has a variety of speech elements for the speaker to choose. Different phases of an action have different sounds, and the pronunciation intensity, place of articulation as well as manner of articulation are also distinct from each other when simulating the sound of the same phase. Each simulating pronunciation of every sounds affiliated to the same knowledge field is eligible to express the action, and it is us who have to make choice upon the requirement of the economic
principle. The action of suck can be expressed with the sound of suction ['s-'-] (‘’ means the matching sound, and the same below) in some Chinese dialects, for example shùn (吮) in Beijing dialect and eyн55 (呪) in Jinsha dialect, and can be expressed with the sound of smacking lips ['ts-'] in other Chinese dialects, for example zā (咂) in the dialect of Xi’an, Shaanxi Province, and it can also be expressed with the sound of swallowing [m-], [n-] and so on, for example mut in Vietnamese. It can be told that varied languages or dialects tend to choose different onomatemes to carry out similar meaning derivation activities. Try to compare the following examples:

[m-] ma21ma (‘breast’), ma51 (‘mom’) (dialect of Jinsha). [n-] niáng (娘，‘nipple, mom’) (dialect of Quzhou, Hebei Province). ['ts-'] zār (咂儿, ‘breast’), zâotur (咂头儿, ‘nipple’) (dialect of Pingquan, Hebei Province), zâzâ (咂啊, ‘breast’), zâzâsuir (咂咂穗儿, ‘nipple’) (dialect of Ningjin, Hebei Province). ['s-'] susu (‘milk, breast’) (Indonesian)

Furthermore, most languages and dialects among those being analyzed use onomatopoeic consonant [m-] to express the concept of cat and its cry (see 3.3.2), yet a small number of languages and dialects use nasal consonant [n-], [ŋ-] and so on as onomatopoeic consonants. Try to compare the following examples:

[n-] nyā (‘meow’), neko (‘cat’) (Japanese)
[ŋ-] njau55 (‘meow’), njau33 (‘cat’) (Jingpho language, STTB) (Dai Qingxia, 1995:125)

3.3 The universality of onomatemes

Onomatemes can be divided into human-voice onomatopoeia and objective sound onomatopoeia. The former is the simulation of human voice (for example ‘giggle’), namely the direct use or transfer of interjections, hence this kind of onomatopoeia possess a higher level of linguistic universality. The latter is the simulation of objective sounds, in which several processes are involved such as sensation, perceptive selection and reproduction. Therefore, the variation in this kind of onomatopoeia is relatively larger than the former, while there still exist a few universal properties.

3.3.1 The universality of human-voice onomatopoeia

In terms of the universality of human-voice onomatopoeia we have several examples. For interjections in the quasi-language stage, phonetic factors [m-/n-/ŋ-] are used to express negation or interrogation (Ma Qinghua, 2011b). After being blended in with other compositions, these negative onomatopoeias and interrogative onomatopoeias turn from affective component to cognitive component, and their typical phonetic factors turn to onomatemes.

A. Negative onomatemes

Negative words/morphemes in many languages possess onomatemes as [m-/n-/ŋ-] (negative). Try to compare the following examples:
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\(m^21\) (‘no, not’), \(m^23\) (‘don’t’), \(m^24\) (‘no, not’) (dialect of Guangzhou, Guangdong Province); \(n^242\) (‘no’), \(m^242\) (‘won’t, don’t, no’), \(m^243\) (‘no, not’), \(m^245\) (‘not’) (dialect of Fuzhou, Fujian Province); \(n^24\) (‘no’), \(n^245\) (‘not’, ‘no’) (dialect of Jinhua, Zhejiang Province); \(m^25\) (‘no’, ‘don’t’), \(m^252\) (‘not’) (dialect of Guangzhou, Guangdong Province); \(n^242\) (‘no’), \(m^242\) (‘not’) (dialect of Changsha, Hunan Province); \(n^24\) (‘no’), \(m^245\) (‘no’) (Jiongnai language, STHM) (Mao Zongwu, 2002:303); \(m^22\) (‘no’), \(m^224\) (‘don’t’), \(m^2245\) (‘not’) (Liang Min, 2002:272), \(m^22\) (‘no’), \(m^224\) (‘not’) (Biao language, STKT); \(m^21\) (‘haven’t’), \(m^212\) (‘negation’) (Indonesian); \(n^2\) (‘no’), \(n^2\) (‘no’) (Japanese); \(m^2\) (‘mistake’) (Mongol); \(m^2\) (‘negative’) (Persian); \(m^2\) (‘no’, ‘not’), \(m^2\) (‘prefix’) (English); \(n^2\) (‘no’, ‘not’), \(n^2\) (‘haven’t’, ‘never, won’t’) (German); \(n^2\) (‘no’), \(n^2\) (‘no’), \(n^2\) (‘prefix’) (Italian); \(n^2\) (‘no’, ‘not’) (Romanian)

B. Interrogative onomatemes

Interrogative words/morphemes in many languages possess onomatemes as \[m-/n-/ŋ-\] (interrogative). Try to compare the following examples:

\(\nu^2\) (šū, PAC, ‘to doubt; doubt(s)’), \(m^2\nu^2\) (šū, PAC, ‘to ask’) (archaic Chinese); \(m^31\) (‘what’) (dialect of Mouping, Shandong Province); \(n^2y^2\) (‘how’) (dialect of Danyang, Jiangsu Province); \(m^3y^2\) (‘what’) (dialect of Changsha, Hunan Province); \(n^2y^1\) (‘where’) (dialect of Meixian, Guangdong Province); \(m^2y^1\) (‘what’) (dialect of Haikou, Hainan Province); \(m^2y^1\) (‘what, why’) (dialect of Guangzhou, Guangdong Province); \(m^3\) (‘who, where’), \(d^2\nu^2\) (‘where’) (Wa language, SAMK); \(m^2\) (‘who, where’), \(m^2\) (‘ask’) (Biao language); \(m^2\nu^2\) (‘what’) (Dai language, STKT); \(n^2\nu^1\) (‘where’, ‘what’) (dialect of Fangcun, Mo language); \(m^2\nu^1\) (‘what’) (Mang language); \(m^2\nu^2\) (‘how’, ‘how many’) (Vietnamese); \(\nu^1\) (‘which, where’), \(\nu^1\) (‘how come, how’) (Indonesian); \(nai\) (‘yes’, ‘what’), \(na\) (‘how many, what’) (Japanese); \(m^2\nu^2\) (‘interrogation’) (Mongol); \(\nu^1\) (‘interrogative’) (Persian); \(m^2\) (‘what’), \(m^2\) (‘how’) (Hungarian)

Compared with the onomatemes \[m-/n-/ŋ-\] (negative) in negative words or morphemes, the universality of these properties in interrogative words or morphemes is much weaker, which is attributable to the fact that people who have questions have already developed basic knowledge system and noticed that there existed new things that were incompatible with this system. Assertion/negation refers to will or attitude, which is irrelevant to knowledge, hence interrogation comes later than assertion/negation. Accordingly, expressions of interrogation are much richer than those of negation. In addition, since interrogation and assertion is opposite to each other, some tonal languages or dialects use words with same phonemes but different tones to manifest the opposition between interrogative pronouns and assertive pronouns, while the former often have rising tones
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(Liu Xiangbo, 2010), retaining the mode of interrogating with tones as interrogative interjections (Ma Qinghua, 2011b). Therefore, the phonemic form of interrogative pronouns might submit to that of the assertive pronounce, and vise versa, hence its select range of phonemic form is much wider than negative words.

3.3.2 The universality of objective sound onomatopoeia

It is widely known among scholars that objective sound onomatopoeias possess linguistic particularities. But there still exist some universal onomatemes, for example the onomatopoeic phoneme \([m-]\)(meow) in words referring to cat and its cry:

- \(mi\`au\) (‘meow’), \(m\`ao\) (‘cat’) (mandarin);
- \(mi\`au\(\)m\`eu\) (‘meow’), \(m\`eu\(\) ‘cat’) (Dai language);
- \(mi\`u\(\)m\`\(\) ‘meow’), \(m\`\) (‘cat’) (Li language, STKT);
- \(m\`\(\) ‘cat’) (Buyang language, STKT) (Li Jinfang, 1999:198);
- \(my/fk\) (‘cat’) (Kirgiz) (Hu Zhenhua, 1995:292);
- \(a^5mi\(\) ‘cat’) (Sangkong language, STTB) (Li Yongsui, 2002:286);
- \(dab\ mang\) (‘cat’) (Miao language in Xiangxi, Hunan Province, STHM);
- \(mi\(\)lom\) (‘cat’) (Mian language, the Yao nationality, STHM);
- \(m\`\) (‘cat’), \(m\`\) (‘meow’, ‘cat’), \(me\(\) meong\) (‘meow’) (Indonesian);
- \(maullar\) (‘meow’)
- \(m\`\) (‘cat’), \(ma\) (‘wild cat’), \(ma\) (‘cat’) (Mogol);
- \(m\`\) (‘meow’) (Persian);
- \(maullar\) (‘meow’)
- \(ma\) (‘meow’), \(mi\) (‘meow’), \(a\ mi\) (‘meow’), \(a\ m\) (‘meow’), \(m\`\) (‘cat’) (Romanian);
- \(ma\) (‘meow’), \(m\`\) (‘meow’) (Czech)

L. Bloomfield noticed that in English there existed initials and finals with “morphological features” (L. Bloomfield, 1997:189-190, 307-309), which is also an evidence to the fact that onomatemes are universal. Some scholars mistook this as an evidence to relationship of languages, and few people have noticed this.

4. The role of basic knowledge field in form-meaning producing based on onomatopoeia

The Motivation Theory under Constraint of Knowledge Field, as I propose in several papers, holds that: elements of general knowledge in knowledge fields are inter-related with each other, and are reflected in the development of form-meaning relationship. In the derivative of lexical items and other lexical form-meaning relations, these elements serve as pillars; various knowledge fields are not isolated from each other, instead they are inter-related because of the intersection of some knowledge elements; there exists a precedence order among different knowledge fields in terms of genetic linguistics (Ma Qinghua, 2000:96-113; 2011a; 2012. Ma Qinghua & Teng Xinyi, 2012). Basic knowledge fields, namely the basic knowledge that cannot be traced back to any original knowledge field, are related with onomatemes and the pictographic characters of lips. This is because that the beginning of linguistic motivation can only be found in the primitive physiological and physical level whose emergence is ahead of language. Physiological motivation (interjections), physical motivation (onomatopoeias), psychological or significant

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motivation (polysemant) and grammar motivation (including lexical motivation and syntactic motivation, while the former refers to morphology and the latter refers to grammaticalization and multi-category words) enter the lexical system successively, and in turn promote the development of the whole system (Ma Qinghua, 2011a; 2011b). Onomatopoeia is an important sign of quasi-language evolving into real language, after which the function of language turns from expressing feelings to knowledge. Substantial non-onomatopoeias come from onomatopoeias either directly or indirectly, including nouns, verbs and adjectives, consist of the majority of lexis. And relatively stable onomatemes, whose motivations have become quite obscure after repeated changes in meaning and form though, still exist in these non-onomatopoeias.

4.1 The multiplying of lexical meanings/items of onomatopoeias led by field relationship

Complex lexical system comes from the multiplying of the simplest concepts under limited rules, and this directly leads to the expansion of lexical meanings/items/functions. The basic knowledge field and onomatemes collaborate to play a leading role in the form-meaning relationship and multiplying of primary or secondary concepts/notions. The form-meaning multiplying based on onomatopoeias focuses either on making changes in functions while retaining onomatopoeic factors, or on directly developing non-onomatopoeic concepts/notions, and spread to other general domains with these concepts/notions as starting points, so as to further promote the development of the sound-meaning system. The changes, no matter occur within the meaning of a word itself, or among various words through such approaches as phonetics change (including mutation, deletion and epenthesis), are all made within typical concepts under the limit of fields. Try to compare the following examples:

A. **Onomatopoeia meaning → Onomatopoeia meaning**: <thing, action> *feqhd* (‘hum’) – *feqhd* (‘to hum’), *feqhd* (‘to make something hum’) (Tajik)

B. **Onomatopoeia meaning → Non-onomatopoeia meaning**: <onomatopoeia, subject> *noŋ55niŋ55* (‘chirp, cicada’), *kɯ11roŋ51* (‘croak, frog’) (Li language); дзвінбк (‘sound of ringing; bell, clock’) (Ukrainian). <onomatopoeia, property> *rak53rak53* (‘sound of boiling water, wet’) (Li language). <onomatopoeia, action/property> *rw:p51rw:p51* (‘sound of chewing bones, crisp’) (Li language)

C. **Onomatopoeia → Onomatopoeia**: <thing, action> *bürakhas* (‘gurgle’) – *bürd* (‘to gurgle’), *gürgür* (‘whir’) – *gürd* (‘to whir’), *gürgür* (‘to gurgle’), дзвінбк (‘tinkle, sonorous’) – дзвінбк (‘to tinkle’), дзвінбк (‘hum, whiz’) – дзвінбк (‘to hum, to whiz’), дзіркіт (‘babble’), дзіркіт (‘to babble’), дзвінбк (‘sound of boiling, tweet’) – дзвінбк (‘to boil, to tweet’) (Ukrainian).

D. **Onomatopoeia → Non-onomatopoeia**: <onomatopoeia, subject>*a:k55a:k55* (‘croak, caw’) – *e:k55*
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('crow'), \textit{mi:u55mi:u55} ('meow') – \textit{mi:u55} ('cat') (Li language); meo ('meow') – \textit{meo} ('cat') (Vietnamese). <onomatopoeia, action> \textit{i55he11} ('neigh') – \textit{i:y55} ('to neigh'), \textit{ro:k53ro:k53} ('rustle') – \textit{ro:k53} ('to sweat'), \textit{rut53rut53} ('sound of many people's footsteps') – \textit{rut53} ('to move') (Li language).

<onomatopoeia, property> \textit{re:p53} ('sound of chewing gritty food') – \textit{re:p53re:p53} ('gritty') (Li language); крик ('sound of shouting') – криклӣвки (Ukrainian).

4.2 The field relationship of concepts/notions with the same onomatemes

There exists a field relationship among concepts/notions with the same onomatemes. Reversely, concepts/notions in the same knowledge field may possess same onomatemes. And the difference between concepts and notions lies in that, the former is expressed with words, while the latter with semantemes. In the communication with infants, guardians often use reiterative onomatopoeic interjections, whose contents are in related with their basic daily needs. To some extent, the communication between guardians and infants is much more urgent, primitive and elementary than that between adults. The knowledge field of breast-feed is a basic one that cannot be traced back to a more primitive field, and it may be more primitive than the knowledge field of chewing. The typical components of general knowledge in this field (highlighted with “[ ]”) are inter-related with each other.

Basic knowledge field: sounds of sucking and gulping infants make when being breast-fed.

Details: Infants [+INFANT]→ [+SMALL] often take breast milk [+MILK]→ [+FOOD+LIQUID] as their food [+FOOD]. Mothers [+MOM]→ [+FEMALE] would make their babies to lean to one side [+LEANING/SIDE] against [+GETTING CLOSE] their plumpl [+]FULL] and soft [+SOFT] breast [+BREAST], and the babies suck [+TO SUCK] their mother’s nipple [+NIPPLE] with their mouth [+MOUTH] so as to take in the milk [+TAKE IN] and at the same time make the sound of sucking and gulping [+TO MAKE SOUND].

In the following 9 groups of words/concepts whose initials are the same as “明(Ming)” in archaic Chinese, there might exist a generalized multiplying of concepts based on onomateme [m-](sound of gulping) and the knowledge field of breast-feed. For one thing, these words/concepts all possess phonemes the same as onomateme [m-](sound of gulping). For the other, their relevant features, whose coexistence could reflect the intrinsic connection of general knowledge, are all general components of the knowledge field of breast-feed. For example, knowledge field of eating instead of breast-feed couldn’t cover the two groups of words/concepts of [+MOTHER] and [+SMALL]. Another example is that, getting close is the precondition of suck, leaning to one side is the general posture or position of breast-feed for infants, plumpness and tenderness are the features of breast, and softness is the feature of such foods. All these features would be reflected on the etymological relationship. In addition, there may also exist linguistic universality in the form-meaning and meaning-meaning relationship. Similar phenomenon can also be found.
in randomly selected Czech words/concepts.

**Archaic Chinese (PAC):** 1.[+MOTHER] *mu (母, ‘mother, female’); (→[+FEMALE]) *mu (姆, ‘governess of girl’); (→[+FEMALE+SMALL]) *maad (妹, ‘younger sister’). 2.[+SMALL] *mul (微, ‘tiny, small, little’), *mreeg (萌, ‘to sprout’), *mrow (苗, ‘seedling’), *mew (秒, ‘the tip of a twig’), *maw (묘, ‘small, petty’), *meed (蔑, ‘slight’), *maad (末, ‘treetop’), *mni (眉, ‘the end of a bow’), *mu (眸, ‘pupil of the eye’), *mraaq (艋, ‘grasshopper’), *mraaq (艋, ‘boat’); (→[+SMALL+SOFT]) *men (頸, ‘fine filament’), *men (頸, ‘soft’), *meeg (系, ‘threadlet’); (→[+SMALL+SOFT+FOOD]) *meens (麩, ‘powder of wheat’). 3.[+GETTING CLOSE] *muun (扪, ‘to touch’), *maal (摩, ‘to mill, to grind’), *maals (摩, ‘to rub, to stroke’), *maa (華, ‘copy’), *mu (伴, ‘equal’), *mlug (願, ‘peaceful’). 4.[+MOUTH] *muun? (呪, ‘lips’); (→[+MOUTH+FOOD]) *mni (呪, ‘to drink’), *muds (麴, ‘taste’). 5.[+FOOD] (→[+FOOD+LIQUID]) *mlig (蜜, ‘honey’), *mral (蔑, ‘gruel’); (→[+FOOD+FEED]) *maad (袂, ‘fodder, to feed’), *mug (牧, ‘to feed’). 6.[+LIQUID] *mni (呪, ‘to wash the body’), *moog (沐, ‘to bathe’); (→[+LIQUID+SMALL]) *mul (濡, ‘a light rain’), *meep (濡, ‘a light rain’); (→[+LIQUID+SMALL +MOUTH]) *maad (沫, ‘saliva’); (→[+LIQUID+FULL]) *moons (満, ‘to flood’), *moon? (滿, ‘full of water’), *mnel? (濬, ‘full of water’). 7.[+LEANING/SIDE] *mral (蔑, ‘to lean’), *meens (#af, ‘to glance sideways’). 8.[+SOFT] *mlju (柔, with initials the same as “日(Ri)” in archaic Chinese, but its pictophonetic character supports PAC. ‘soft’), *maaw (尾, ‘hair, feather’). 9.[+FULL] *mnel (滿, ‘full’).

**Czech:** 1.[+MOTHER] máma (‘mother, wife’), matka (‘mother’), macecha (‘stepmother’); (→[+FEMALE]) madam (‘madam’). 2.[+SMALL] mazánek (‘beautiful girl, baby’), miminko (‘baby’), mře (‘baby’), málo (‘little’), mály (‘small’), malíčko (‘a little, slightly’), mol (‘small moth’), mladé (‘whelp’), mizivý (‘little, petty’). 3.[+GETTING CLOSE] mazat (‘smear’), makat (‘touch’), magnet (‘magnet’), mísit (‘to blend’), mhorit (‘to squat’), mrkat (‘to wink’). 4.[+MOUTH] mlaskat (‘to lick and sip’). 5.[+FOOD] mlis (‘delicious food’), leloun (‘watermelon’), medicína (‘medicine’), maso (‘meat’); (→[+FOOD+LIQUID]) mléko (‘human milk’), mléčný (‘dairy’), med (‘honey’), mok (‘beverage’), marináda (‘vinegar, marinade’), marmeláda (‘jam, jelly’), máslený (‘creamy’), mastný (‘oily’), majonéza (‘mayonnaise’); (→[+FOOD+SOFT]) makaron (‘macaroni’), mouka (‘flour’). 6.[+LIQUID] mácet (‘soak’), moci (‘soak’), mok (‘liquid’), moknout (‘to be soaked’), mokrý (‘wet’), máchat (‘to rinse’), mtý (‘to wash’), morek (‘narrow’), miza (‘sap’); (→[+LIQUID+FULL]) more (‘ocean’). 7.[+LEANING/SIDE] (→[+SIDE+APPROACH]) mimo (‘nearby’). 8.[+SOFT] měkký (‘soft’), mast (‘ointment’), mîrný (‘tender’).

The derivative concepts with the same onomateme are not isolated from each other. They all belong to the same knowledge field, and play different roles in the building of field relationship. The field relationship among the above-mentioned concepts and features complies with the basic principle and theoretical precondition of Gestalt Theory—holism, manifesting the functional connection of the different components of this theory (Yang Xinhui, 2000:14, 41).

The form-meaning division of words tends to divide in layers as it gains intensity, and
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the outer the layer is, the lower the form-meaning accessibility become. The restrictive effect of knowledge field has been certified in the first (polysements), second (homophonous paronyms) and third (paronyms with similar pronunciations) homologous layers (Ma Qinghua, 2012; Ma Qinghua & Teng Xinyi, 2012), while onomateme manages to spread this effect to the forth homologous layer (the basic system of semantics) (Ma Qinghua, 2000:135), showing the most primitive form of language. To untangle the etymological relationship of various components, we need the systematic proof of illocutionary indicators (real or psychological indicators), locutionary indicators (such synchronic or diachronic indicators as pronunciation-meaning relationship, meaning, word-formation and pragmatics) and cross-language indicators (linguistic universality, non-debtor-creditor relationship and so on). Yet the forth homologous layer reflects the homologous relationship of the symbolizing element of words, instead of whole word or morphemes with homologous properties. The symbolizing element of words, a unit even smaller than morphemes, consists of onomatemes and pictographic properties (namely the symbolizing elements of lips). Therefore, its distinguishing method should be different from other homologous layers that reflect the homologous relationship of whole words.

5. The variation of onomatemes and the formation of the chaos of motivation system

The equivalent selectivity, versatility and the variability of onomatopoeic properties would affect the form-meaning relationship of onomatopoeic derivatives, making the lexical motivation system become increasingly complicated and finally turn into the chaos state. One of the significant features of the chaos state are the sensitivity to the initial value. A small difference would lead to great gully in the end (Xu Guozhi, 2004:113; Liang Meiling & Wang Zeke, 1991:175-178). As the initial value of motivation system, onomateme is of great importance in the research field.

5.1 The variation approach of onomateme

It is quite difficult for the relatively stable onomatemes to avoid variation in the non-onomatopoeic system. Variation of consonant occurs along the horizontal and vertical axis of manner and point of articulation.

| Manner of articulation | [m-] | [b-] | [p-] | [f-] |
|------------------------|------|------|------|------|
| [n-]                   |      |      |      |      |
| [ŋ-]                   |      |      |      |      |
| [ŋ̊-]                  |      |      |      |      |
| [ŋ-]                   |      |      |      |      |

Figure 2. Variation of onomateme [m-](meow)
Take the variation of onomateme [m-] (meow) as an example, the phonemic differences in words of Hani language (STTB), Yi language (STTB) and Southern Fujian dialect reflect the variation relationship between onomatopoeic phoneme m-ȵ-n or ȵ-ŋ-n-l. Try to compare the following examples:

**Hani language:** $a^5mi^{55}$ (‘cat’) (dialect of Dazhai), $\delta^5\eta^{55}$ (‘cat’) (dialect of Shuikui), $a^5\eta^{55}$ (‘cat’) (dialect of Caiyuan) (Li Yongsui, 1986:165).

**Yi language:** $a^{10}mie^{55}$ (‘cat’) (dialect of Dafang), $a^{13}ni^{55}$ (‘cat’) (dialect of Nanjian), $a^{12}\eta^{55}$ (‘cat’) (dialect of Xide) (Chen Shilin & Bian Shiming & Li Xiuqing, 1985:237).

**Southern Fujian dialect:** $\eta^{12}i^u^{22}$ (‘cat’) (morpheme) (dialect of Cangnan), $\eta^{14}iau^{55}$ (‘cat’) (dialect of Xiamen), $\eta^{14}iau^{44}$ (‘cat’) (morpheme) (dialect of Xiamen) (Tan Bangjun, 1996:127).

The differences between nasal consonants [n-], [ŋ-], [ȵ-] and [m-] lie in the point of articulation, while the differences between [l-] and [n-] lie in the manner of articulation. In Xiamen dialect, [ȵ-] transfers to [l-] with two steps: firstly, [ȵ-] turns to [n-], experiencing a vibration in point of articulation based on the same manner of articulation, and secondly [n-] turns to [l-], experiencing a vibration in manner of articulation based on the same point of articulation. After the two steps of variation, its motivation has become quite obscure. Another example is the variation of onomateme [n-] (interrogation): $\eta^{12}i^u^{212}$ (‘where’) (morpheme) (dialect of Wenzhou), $l^{213}$ (‘where’), $lo^{35}$ (‘how’) (dialect of Nanchang).

Sometimes such variations may occur by a larger margin. For example, onomateme [m-] (negation) turns from nasal sound to oral sound, from pronouncing with stress to unstressed, and from possessing onomatemes or their derivatives to getting rid of these properties. The phonetic variation in the following negative words of archaic Chinese or Chinese dialect is caused by systematic phonetic change.

**Archaic Chinese (PAC):** *ma(a)* (无, ‘no, none, nothing’), *maaɡ* (没, ‘not, have not’), *maud* (勿, ‘don’t’), *muds* (未, ‘not, not yet’), *muud* (没, ‘not, have not’). // *puq* (弗, ‘no, not’), *pu* (弗, ‘not’). **Xi’an dialect:** $m^{21}$ (‘no’) // $pu^{21}$ (‘no’), $pu^{34}$ (‘no’), $par^{31}$ (‘no, don’t’) // $f^{31}$ (‘not’). **Danyang dialect:** $n^{31}$ (‘no’), $me^{205}$ (‘no, not’) // $fe^{293}$ (‘no’), $f^{31}$ (‘no’). **Jinhua dialect:** $m^{133}$ (‘no’), $mi^{24}$ (‘no’) // $fa^{26}$ (‘no’), $fau^{55}$ (don’t), $fo^{15}$ (don’t). **Wenzhou dialect:** $n^{31}$ (‘no’), $nau^{55}$ (‘no’) // $v^{33}$ (‘no’) (morpheme), $fu^{35}$ (‘no’). **Cantonese:** $m^{14}$ (‘no, don’t, not’), $me^{27}$ (‘not, not yet, no’), $mae^{34}$ (‘not, not yet, no’), $mar^{31}$ (‘don’t’) // $pt^{35}$ (‘no’) (morpheme). **Changsha dialect:** $mo^{24}$ (‘don’t’), $ma^{21}$ (‘not’) // $pi^{24}$ (‘no’) // $ue^{25}$ (‘no’) (morpheme).

Accordingly, [b-] in “bǎu^{35} (‘no, not’)”, [b-] in “ta^{53} (‘no, not’)” of Li Language may be the variation of [m-] and [n-] (negation). And the interrogative words “náa^{55} (‘where’), dáa^{55} (‘where’)” in Dai language could also prove a variation relationship between [n-] and [d-] (interrogation).

Breaking the visual barrier of characters, there is a reason to believe that there exist a
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etymological sound-meaning relationship in archaic Chinese words (PAC) “*mu* (母, with initial the same as “明(Ming)” in archaic Chinese. ‘mother, female’), *bua* (婦, with initial the same as “井(Bing)” in archaic Chines. ‘adult women’), *baas* (哺, with initial the same as “井(Bing)” in archaic Chinese. ‘to feed, to suck’)”. Firstly, the final of “明(Ming)”is the same as “井(Bing)”, and characters with initials the same as “明(Ming)” and “井(Bing)” always share the same pictophonetic characters, for example, “馬(mǎ) – 馮(fēng), 憑(píng); 綿(mián) – 吊(bó); 陌(mò) – 泊(bó)”. Secondly, the pronunciation of Chinese characters (C.) with initials the same as “明(Ming)” is [b-] in Japanese language (J.), for example:

馬(C. mǎ, J. ba), 梅(C. méi, J. bai), 麦(C. mài, J. baku), 美(C. měi, J. bǐ), 秒(C. miǎo, J. byō), 敏(C. mín, J. bun), 来(C. lái, J. bei), 勉(C. miǎn, J. ben), 母(C. mǔ, J. boku), 晚(C. wǎn /PAC. ‘mon’, J. ban), 天(C. wān /PAC. ‘ma’, J. ba), 物(C. wù /PAC. ‘mud, J. butsu), 文(C. wén /PAC. ‘mun, J. bun), 望(C. wàng /PAC. ‘mags, J. boa)

Finally, similar variation also exists in German onomatemes, for example:

German: [m-] (sound of gulping when being breast-fed) (→[p/p‘]): mamilla (‘nipple’) ~ papille (‘papilliform’); mampfen (‘to swobble’) ~ päppeln (‘to feed (kid, patients carefully)’), pappen (‘sticky’). [n-] (→[l-]): mutschen (‘to suck’) ~ lutschen (‘to suck’)

5.2 The effect of selectivity and versatility of onomatemes

Regardless of variability, the versatility and selectivity (see 3.2) of onomatemes alone could lead to the diversity of language expression. Although realized possibilities may restrict the unrealized ones, since the restriction of language is quite weak in the primitive stage (Ma Qinghua, 2011b), plus the need of synonymous expression and the update of motivations, there might be several inter-related possibilities consist of multiple onomatemes with equivalent effects in a language. For example, the sound of gulping can be expressed with [n-] and breathy sound originated from breathy consonants, and hence emerge the multiplying of word meaning/items that are similar from [m-] (sound of gulping). Provided that A=[m-], b=[n-], C=[*ts‘*,-’sc‘*,-’c‘*,-’h‘*,-’], for example:

Archaic Chinese (PAC): [A] *mu* (母, ‘mother, female’). [B] *nii* (汝, ‘Guangyun: breast, mother’), *na* (女, ‘girl’), *nay* (娘, ‘girl, young woman’), *njo* (乳, ‘breast, milk’), *njoo* (凑, ‘to soak’), *nia* (醈, ‘to eat’), *nias* (醮, ‘be like’), *njos* (薑, ‘small, little’), *njion* (荏, ‘soft’), *nouns* (黍(稈,稕), glutinous rice, ‘glutinous rice’). [C] *zlon* (吮, ‘to suck’), *zegs* (臘, ‘stain’), *shroads* (嚥, ‘to suck’), *zhaub* (呷, ‘to sip’), *zhrug* (啜, ‘to lean’), *zhiod* (飲, ‘to suck, to drink’), *qhraub* (呷, ‘to suck’), *qhraub* (嚥, ‘to suck, to inhale’).

The selectivity, versatility and the variability of onomatemes not always take effect simultaneously, instead they form a tangled strength stirring the form-meaning relationship. A group of meanings with one onomateme might be blended in with other phonemes. Onomateme is a kind of motivation, and along with the expansion of meaning, the whole
lexical motivation system becomes increasingly complex. Furthermore, other phonetic factors are continually adjusting themselves under the influence of sound and meaning, making the form-meaning relationship renew from time to time, hence the lexical motivation system turns more complicated and chaotic.

6. The onomatopoetic meme of language

6.1 The formation of two basic figurative form-meaning multiplying memes

Onomatopoeia originates from similarity, promoting the emergence of linguistic metaphor. It then expands to non-onomatopoeic meanings and words, namely to express the actions, properties, results, contents or other related feelings and events as regard to the speaker based on onomatopoeia, and metonymy based on relativity hence emerges for the first time. Therefore, onomatopoeia and its development respectively lead to the meme (He Ziran, 2005) of metaphor and metonymy.

6.2 Reduplications and their roles in ideographical expression based on memetics

Onomatopoeic reduplications exist in almost all the languages. “Infants, regardless of their language, tend to used reduplications when learning to speak.” (I. Goldberg, 2003: 144). This is not only attributable to the expression object, but also to the primitive feature of this kind of words. Either continuous or incontinuous sound can serve as the object of simulation. Full reduplication is used when simulating continuous sound, and partial reduplication is employed when simulating incontinuous ones. Partial reduplication can not only express short, continuous sounds, but also single, incontinuous sounds, for example, we often say (3a) in mandarin, but never say (3b). This is similar to monosyllable onomatopoeias such as (4a), yet different from full reduplications. We never say (4b) in mandarin, but we can say (4c).

(3) a. bādā /cǐliū /gāzhī /gēdēng  yi  shēng (叭哒/刺溜/嘎吱/咯噔一声)
   click /whistle /creak /click  a  voice
   (‘a click /whistle /creak /click’)
   b. * kāchā /gābēng  liǎng  shēng (咔嚓/嘎嘣两声)
   click /click  two  voice
   (‘two clicks’)
(4) a. āo /mōu /sōu /wēng  de  yi  shēng (嗷/哞/嗖/嗡的一声)
   ouch /moo /whoosh /hum  PART  a  voice
   (‘a ouch /moo /whoosh /hum’)
   b. * āōāō /gēgē /jiūjiū  yì  shēng (嗷嗷/格格/啾啾一声)
   scream /chuckle /chirp  a  voice
   (‘a scream /chuckle /chirp’)

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c. āoāo /gēgē /jiūjiū
liăng  shēng (嗷嗷 / 格格 / 啾啾两声)
scream / chuckle / chirp  two  voice
('two screams / chuckles / chirps')

Partial reduplications could be transferred into full ones to express continuous sounds, such as “bādā bādā (叭哒叭哒, 'click click'), hōnglōng hōnglōng (轰隆轰隆, 'rumble rumble').”

Full reduplications gain acoustic figurativeness when expressing an expansion in their meanings. Such pattern of form-meaning relationship is analogized by other syntactic structures, and hence its influence spreads out beyond onomatopoeias. And evidence of this can be found in the tonal modification of BB which is in the ABB form of mandarin adjectives. The origin tone of the onomatopoeic BB is level tone, while that of the non-onomatopoeic BB, although isn’t level tone, can be pronounced with level one, which is originated from the tone of onomatopoeias in the same place. Try to compare the following examples.

**Onomatopoeic BB:** luānhōnghōng (乱哄哄, ‘in noisy disorder’); xiāngdāngdāng (响当当, ‘very good, beyond the general (← loud)’); xiāohāhā (笑哈哈, ‘laughingly’); qīhěnghěng (气哼哼, ‘panting with rage’).

**Non-onomatopoeic BB:** lǎnyōuyōu (←lǎnyōuyōu) (绿油油, ‘glossy and green’); ruānmiānniān (←ruānmiānniān) (软绵绵, ‘soft’); gānbìbì (←gānbìbì) (干瘪瘪, ‘wizened’); shǐlālā (←shǐlālā) (湿漉漉, ‘wet’)

In addition, compared with its original partial form (such as “hóng (红, ‘red’)”), reduplicative adjectives (such as “hōnghōng (红红, ‘red’)”) possess two extra connotations, namely a deeper extent and figurativeness (Zhu Dexi, 1985:5-6, 37-41). Geminate state adjectives (such as “mángmáng (茫茫, ‘vast’)”), although have no original form, also possess these two connotations. The connotation of a deeper extent can be explained with the theory of iconicity, while the figurativeness can only be illustrated with the analogy of onomatopoeia iterative mode.

7. Conclusion

From the analysis above, a conclusion can be made that: Onomatopoeia is an important sign of quasi-language evolving into real language. As a primitive word class, it still maintains their deeper nature beyond the linguistic system. Substantial non-onomatopoeias come from onomatopoeias either directly or indirectly, including nouns, verbs and adjectives, consist of the majority of lexis. In addition, the model of onomatopoeia structures can be deemed as an imitative target or a structural meme of other models of non-onomatopoeia structures. Many non-onomatopoeias still carry onomatemes to various degree and manners, among which the imitation of all human sounds and some sounds of external world possess a linguistic universality. The weakening, obscuring and disappear-

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ance of onomatemes proceed simultaneously with the systematization of language. The form-meaning production and derivation based on onomatopoeias exist in the lexical system under the influence of general knowledge and existing language foundations.

**Abbreviations**

| Abbreviation | Description |
|--------------|-------------|
| ONOMAT       | onomatopoeia |
| PAC          | pronunciation in archaic Chinese reconstructed by S. Zhengzhang (2003) |
| PART         | particle |
| SAMK         | a language belongs to the South-Asian Mon-Khmer languages |
| STHM         | a language belongs to the Sino-Tibetan Hmong-Mien languages |
| STKT         | a language belongs to the Sino-Tibetan Kam-Tai languages |
| STTB         | a language belongs to the Sino-Tibetan Tibeto-Burman languages |

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