



Linguistic Ecological Interpretation of Onomatopoeic Motivation of the Kam Language Vocabulary: A Comparative Study with English and Chinese

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Abstract

The ecological characteristics of a language are shaped by its linguistic ecological environment. Historically, the Kam language had no writing system for a long time. From the perspective of language ecology, the writing system created with Latin letters in the 1950s is equivalent to a prosthetic leg for the "naturally handicapped" Kam language. The long-term absence of writing means that the Kam language vocabulary cannot rely on the shape of characters to express meaning like the Chinese language, and can only "find another way out" in the direction of "expressing meaning through sound". Therefore, similar to English, there are a large number of secondary onomatopoeic words in the Kam language vocabulary. "Onomatopoeia", based on iconicity, can be regarded as a significant ecological feature of the Kam language vocabulary. This feature helps to reduce the memory burden of its users. Ultimately, this reflects the economic principle of human language. This research broadens the perspective of Kam language research, provides new ideas for in-depth understanding of the formation and development of the Kam language vocabulary system. At the same time, it also provides new cases and materials for the development of language ecology theory. At the practical level, this study helps us better understand and protect the Kam language and culture, promotes the development and utilization of language resources in ethnic minority areas, provides a reference for building a harmonious language ecological environment, and also provides a language view from a different perspective for our language teaching.

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1. Introduction

Language, as a carrier of human thoughts and an important tool for cultural inheritance, never exists in isolation. It is deeply rooted in a specific natural, social, and cultural context, interacting with and influencing the surrounding environment. The discipline of language ecology focuses on exploring the complex relationships between language and the environment, regarding language as an ecosystem and studying the dynamic balance and interaction among its internal elements and with the external environment.

The Kam language, a unique language created and passed down by the Kam people throughout their long history, embodies the rich cultural connotations of the Kam ethnic group and their distinctive way of perceiving the world. In the vocabulary system of the Kam language, onomatopoeic words hold a significant position. In other words, the Kam language vocabulary shows a remarkable reliance on onomatopoeic motivation. These words vividly reflect the close connection between the Kam people and

Their surrounding environment by imitating various sounds in nature and human society. The onomatopoeic motivation behind these words implies profound eco-cultural significance. Conducting an in-depth study of the onomatopoeic motivation of Kam language vocabulary helps to reveal the internal laws of the formation and development of Kam language vocabulary, and also provides insights into the traditional ecological wisdom and cultural concepts of the Kam people. At the same time, English and Chinese, as languages with a large number of speakers and wide-spread influence in the world, have equally diverse vocabulary systems, with their onomatopoeic words each having unique characteristics. A comparative study of the onomatopoeic motivation of the Kam language, English, and Chinese can not only more clearly highlight the uniqueness of Kam language onomatopoeic words but also enable a deeper understanding of the universal connections and differences between language and the ecological environment from a cross-linguistic perspective. However, although there has been some research on the Kam language, and much more on English, and Chinese in the academic community, research that systematically interprets the onomatopoeic motivation of Kam language vocabulary from the perspective of language ecology and makes a comparison with English and Chinese is still insufficient. This study aims to fill this gap. By applying the theories and methods of language ecology, it deeply analyzes the onomatopoeic motivation of Kam language vocabulary and compares it with English and Chinese onomatopoeic words. It is expected to open up new perspectives for the study of the Kam language, provide diverse empirical support for the development of language ecology, and also contribute to enhancing mutual understanding and communication among different language cultures.

2. Thoughts on the ecological characteristics of the Kam language

Language ecology and ecological linguistics overlap and are closely related. However, their research perspectives and emphases still differ, which will not be elaborated here. Our current research is defined within the scope of language ecology. Language ecology studies language from an ecological perspective. It not only focuses on the internal ecology of language and the unique ecological characteristics of language formed in a specific ecological environment but also involves aspects such as the interaction between language and the entire external environment in which it is located, as well as language diversity and language ecological balance. The environment mentioned in language ecology includes both the natural environment and humanistic environments such as social, cultural, and political environments. Research in language ecology aims to reveal the laws of language's survival, development, and evolution in different environments, as well as the counter-effects of language on the environment. In addition, it also involves the competition and symbiosis among languages, similar to the relationships between biological species. For example, experts in this field focus their researches on how different language groups, in multilingual environments, maintain the vitality of their own languages and the impact of language policies on language ecological balance. The Kam people have lived in the mountainous areas of southwest China for a long time. During the long historical development process,

due to the limitations of inconvenient transportation and communication, the society of the Kam people remained relatively closed and backward for a long time. They failed to develop their own indigenous writing system, so they relied more on onomatopoeia, a more intuitive and easy-to-inherit way, in vocabulary expression. This unique ecological characteristic also reflects the adaptability of this language to its ecological environment. The richness of vocabulary relying on onomatopoeic motivation may make this ethnic group more sensitive to ecological phenomena related to sounds, and their cultural and artistic creations may also more often reflect the imitation and interpretation of natural sounds. In fact, the Kam people are a nation good at singing but not so proficient in dancing. There are various types of Kam songs, some of which require accompaniment, while many do not. Among them, the "Grand Choirs of the Kam People", a form of folk chorus with multiple voices, no conductor, no accompaniment, and natural harmony, has always enjoyed the reputation of "heavenly voices", meaning that it is just like "sounds of nature". A mature language usually has a well-developed phonetic system (audible) and writing system (visible). "The absence of a writing system" is the current ecological situation of the Kam language, which is caused by the ecological environment in which the Kam language has been situated for a long time in history. From the perspective of language ecology, the writing system created with Latin letters in the 1950s is only equivalent to a prosthetic leg for the "naturally handicapped" Kam language. The long-term absence of a written script means that Kam language vocabulary cannot rely on the shape of characters to express meaning like the Chinese language. Instead, it has to "find another way out" in the direction of "expressing meaning through sound". Therefore, similar to English, there are a large number of what Stephen Ullmann called secondary onomatopoeic words in the Kam language vocabulary ^[1]. "Onomatopoeia" can be regarded as a significant ecological characteristic of the Kam language vocabulary based on phonetic iconicity. Iconicity is an important concept emphasized by the functionalist school of linguistics in the late 20th century. It refers to the direct connection or similarity between the form of a symbol and its meaning. After the rise of cognitive linguistics, language iconicity is regarded as the embodiment of human cognitive patterns in language and has become an important research field of cognitive linguistics. Xu Hong'e (2016) ^[2] pointed out that iconicity exists at all levels of language, such as phonetics, vocabulary, syntax, and discourse. The iconicity principle is conducive to achieving language economy and is a manifestation of language economy ^[2]. For any language, under normal circumstances, words have three basic aspects: sound, form, and meaning. The memory of words is related to the memory of the connections between sound-form, form-meaning, and sound-meaning. For languages like the Kam language that lack an indigenous writing system, it was not until the writing system created with Latin letters emerged that there was a simple connection between sound and form. However, the connection between form and meaning still cannot be established because the "form" of Kam language words lacks both basic meaning-expressing units like Chinese character radicals, and morphemes like English word roots and affixes. This makes the connection between sound and meaning the only aspect that the Kam language vocabulary can rely on and continuously strengthen in its

construction. In the case where oral communication and inheritance are the only options, onomatopoeic words are, of course, easier to remember and spread than non-onomatopoeic words, and they are more conducive to the shaping and continuation of the language system. The onomatopoeia referred to here includes primary onomatopoeia and secondary onomatopoeia, and even encompasses mimetic words (although mimetic words are considered to have a broader conceptual scope than onomatopoeia), words expressing emotions, color mimetic words, and shape mimetic words. There has been relatively little research conducted by predecessors on the motivation of word formation in the Kam language vocabulary. Moreover, the contents, perspectives, and scopes discussed in their studies are all different from those of this paper. Ma Xiaoling (2014)^[3] analyzed the cognitive motivations of the vocabulary of the names of animals and plants in the Kam language from the perspective of metonymy, pointing out that the Kam people often name animals and plants by combining aspects such as their appearance, color, gender, living environment, and growth characteristics. She also found that there are certain commonalities in the thinking patterns of the Han, Kam, and English-speaking peoples in naming animals and plants. Peng Jing (2016)^[4] believed that the naming motivations of the animal words in the Kam language mainly stem from the imitation of animal sounds, the perception of their physical appearance, and the observation of the living environment, and considered that this reflects the thinking habits and cognitive modes of the Kam people. Zhang Yunfeng (2016)^[5] explored the functional roles of compound nouns in the Tai-Kadai languages and found that the semantic motivations of compound nouns in many languages of the Tai-Kadai language family have both some commonalities and slight differences. There has been no research specifically focused on the onomatopoeia in the Kam language in the existing literature, let alone research conducted from the perspective of linguistic ecology. In what follows, as a native speaker of the Kam language, I intend to sort out and analyze the onomatopoeic words in the Kam language dialect with which I am familiar, and attempt to interpret the motivations behind them from the perspective of linguistic ecology.

3. Analysis of the ecological characteristics of the kam language at the lexical level

First of all, we have to admit that every language contains not only many primary onomatopoeic words but also a large number of secondary onomatopoeic words. It's the case even in a language like Chinese, where the form-meaning connection is quite prominent, for example, words like "扭 (niǔ)", "穿 (chuān)", "脱 (tuō)", "拖 (tuō)", "插 (chā)", "光 (guāng)", "广 (guǎng)", "刺 (cì)", "停顿 (tíng dùn)", "轰炸 (hōng zhà)", "粘 (nián/zhān, when pronounced as nián, it is an adjective referring to the property of substances like glue or paste that can make one object adhere to another; when pronounced as zhān, it is a verb meaning that sticky things connect to each other or attach to other things)", "松 (sōng)", "严 (yán)", "紧 (jǐn)", "窄 (zhǎi)", "弯 (wān)", "圆 (yuán)", "绕 (rào)", "滑 (huá)", "坚硬 (jiān yìng)", "柔软 (róu ruǎn)", "凹凸 (āo tū, apart from the character form being ideographic,

the pronunciation also has the characteristics of secondary onomatopoeic words: āo, with the mouth wide open; tū, with the mouth protruding)" and so on. The pronunciation of these words and phrases can easily make people (especially Chinese people) associate with their meanings. However, the fact that there are too many homophones in Chinese has weakened the weight and persuasiveness of the onomatopoeic motivation to a certain extent. At the same time, there is an undeniable fact that different ethnic groups have different perceptions of "sound expressing meaning". For example, Han people (the majority ethnic group in China) may feel that the pronunciation of "掐 (qiā, approximately [tʃiɑ:])" can generate a good phonetic synesthesia, and it is easy to associate with the action it refers to. But with the same sound and tone, in the Kam language, it is an adjective meaning "light". In English, the word for "掐" is "nip", which is somewhat similar in pronunciation (both have the sound [n]) and meaning to the Kam word "nyadl" (in some contexts, it means "掐"; note: the writing symbol of the Kam language is composed of "initial + final + tone mark". For this word, the initial is "ny", the final is "ad", and the letter "l" is the tone mark). Thus, it can be seen that there are also many examples of the same or similar sound-meaning connections between two languages. For example, in Chinese, people have "凹凹 (āo tū, phonetically transcribed as [au] and [tu:] respectively in the International Phonetic Alphabet. The meaning of the Chinese character "凹" is "lower than the surroundings" or "to sink inwards", and the dictionary definition of "凸" is "higher than the surroundings"). In the Kam language, there are also words with similar or related sounds and meanings, such as "gkax" (inside, within)", "aop (reach out to take in)", and "lah" (enter), which all contain the vowel [au]. However, contrary to Chinese and the Kam language, English words like "shout", "out", "sprout", "spout", "pout" that contain the [au] sound basically all have the meaning of "outwards", only it can also be understood as "come out from the inside". In the process of constructing the vocabulary of the Kam language, onomatopoeia serves as a rationale, and this ecological feature is manifested in various ways, including but not limited to the following aspects:

(1) Most of the Kam words that denote meanings such as "to cover, to enclose, to press down, to submerge, to hide something, to stack, to sink, to hide oneself, to close, to end, to gather, to close up, to merge, to fill to the full or to have a dome-like shape" mostly carry the bilabial nasal sound [m] in their pronunciation (the pronunciation characteristic of this sound is the closing of the upper and lower lips), for example: *gkumx* (v. to cover, enclose; n. hat), *gkump* (a bamboo tool for drying diapers or for fishing, shaped like a domed cover), *gkumc* (a round object, or a round and plump form, sometimes referring to a round whole), *kguml* (to drill a hole, to poke a hole), *gkumv* (beetle), *guamh* (scar, which covers the normal skin), *lumv* (meaning "collapse", which implies being covered by surrounding things), *yump* (to accidentally immerse), *uumh* (to hug), *juump* (to gather things, to sweep them into a pile or pile up), *duumx* (full, satisfied), *zuumv* (a cluster), *liuumc* (to hastily gather), *wuumv* (thin; note: this implies a state similar to "shrinkage" as opposed to "expansion".), *daemh* (to close, imprison), *daeml* (to shrink downward, to lower the head), *jaemp* (to hide something secretly), *jaemx* (continuous, one after another; close

together), *kaemp* (to quietly hide something), *kaeml* (the fire weakens), *jaemc* (to press down from top to bottom, or to close the door tightly), *jaemv* (to stamp the foot), *aeml* (to carry on the back, one on top of another), *aemp* (to hold in the mouth), *guaemp* (to stew), *saemh* (to lean forward with the body and press the arms on something, like a railing), *ngaemv* (to press down branches, etc. with both hands and even the whole body), *nyaemx* (to press), *nyaemp* (to hold, grasp with the hand), *gaemp* (to cover with branches, etc.), *gaemx* (to pounce), *gaeml* (to extinguish), *biaemp* (to hatch eggs), *laemx* (to hit from top to bottom with a stick), *maemc* (to eat something like corn cob or leg bones, etc.), *raemc* (to get caught in the rain; note: conceptually similar to "being covered by the rain curtain"), *raemp* (to submerge, sink), *yaemp* (adj. meaning "the water is deep"), *yaemh* (to soak, dye), *liaemc* (to reach into a hole or pocket to grab or search), *hliaemh* (to cover, to block), *laemp* (to rush in recklessly), *waeml* (shady place, where sunlight is blocked), *taeml* (short, low place), *saemp* (early; note: in time dimension, similar to "low" concept), *iml* (to block, to close), *giml* (silent, taciturn), *dimp* (bamboo hat), *jimc* (to fill in), *yimp* (the water in the pool is full, and it will overflow if more is added), *ziml* (to soak), *domp* (pig bladder, shaped like a balloon), *domx* (water puddle), *koml* (dent), *kamh* (to over-protect out of doting), *lamc* (to forget; note: this can be metaphorically understood as "the window of memory closes"), *aml* (to collide; to sew), *qamh* (to walk, to take a step, to open and then close the legs), *himp* (to blend in, join), *qimp* (to add), *nyenx* (to press with the hand, stuff in), *saenx* (to press with both hands or press with the knee), *liuml* (dent), *duml* (to squat still in a certain place), *uml* (to cover, to muffle, to suffocate), *sumh* (sour; note: when eating something sour, the oral muscles contract), *qump* (to itch; note: the muscles contract when itchy; in addition, this word has the same initial consonant as *qudh* "to scratch an itch"), *dump* (to encounter, to meet, with the meaning of "to gather", "to come together"), *gkamp* (cave, mountain cave; note: the space is relatively closed, hollow inside, with a small entrance), *wumx* (to hold a bowl and drink; note: after the drink enters the mouth, the mouth is closed), *bamx* (to tilt so as to cover), *liamx* (to stretch so as to cover). There are also quite a few words that don't show the [m] sound literally, but when phonetically transcribed, the [m] sound will appear, for example, *guabh* (phonetically approximated as [gwɔlm] in the International Phonetic Alphabet, meaning cockroach, which is somewhat similar in shape to a beetle). This is the case for other Kam words in this section that do not show the nasal sounds [m] or [n] literally and the quantity is considerable, for example, *gkubc* (to cover), *gkubl* (v. to cover up one's shame; n. the lining of a cotton-padded coat), *gkubh* (to cup one's hands like a ladle to scoop things), *dubl* (to fold), *mubl* (mouth; note: it is usually closed, except when one is eating or speaking), *mubh* (dent left after an object collides), *lubl* (to hide oneself quietly; to stick out the head and then retract it), *yubl* (to hide oneself), *yubc* (to dip or immerse), *jubh* (to round the mouth or the muscles around the mouth contract), *jubc* (to squat curled up), *hubl* (to overturn or capsize), *labl* (to turn off the light), *jabc* (to smash), *dabx* (to kick; note: in the course of this action, the contact surface is the whole sole of the foot, while *qigh* means "to kick with the toes"), *jabx* (to hold), *nyabl* (to hide something privately, to clamp), *hnyabl* (to close one's eyes), *habl* (v. to close or shut up; n. a bamboo tool with a cover, often used to hold food, especially

glutinous rice), *sabl* (to grab or catch), *zabl* (to insert a wedge into a crack), *xabl* (to randomly insert into a crack), *labc* (to join with a tenon; to insert the tenon into the mortise), *guabl* (box, especially a small and delicate one), *yabh* (to stride across; the action of opening and then closing the legs), *xabh* (a simple bamboo carrying tool, with a pair at each end of the carrying pole, triangular in shape, similar to the leg shape of the Kam word "yabh" or the Chinese word "跨"), *dabh* (to carry on a pole, i.e. to take two scattered objects away together with a carrying pole), *gabl* (to stack), *abv* (baby talk, meaning "to eat in one bite"), *babh* (baby talk, meaning "to eat"), *abh* (to swim), *ngabx* (upper jaw), *gkabh* (to blend in; to join), *sabh* (to connect), *liabh* (to quickly grab), *jibx* (to build a wall), *jibl* (to pick up; note: it implies that the thing returns to the person, with the meaning of "combining two into one"), *jibh* (to sew), *nyadl* (to pinch with two fingertips), *ebh* (to bend forcefully), *nyebh* (to pinch or clamp), *xebh* (to insert), *sebh* (to speak in a low voice, to whisper), *khuibl* (the feeling of discomfort in the teeth when holding cold food in the mouth, ending with the mouth closed when pronouncing this sound), *zibh* (to catch, to catch up, to connect; note: it implies that the gap between the two is closed.), etc. Of course, the vocabulary-building process of every language is complex, and the rationale cannot be singular. For example, in this category of vocabulary, there are individual exceptions. For instance, the meanings of words like *dabl* (liver) and *jimx* (to throw), although their pronunciations [dɔlm] and [dʒi:m] also contain the bilabial nasal sound [m], have no obvious connection with "to cover, to enclose, to press down, to submerge, to hide something, to stack, to sink, to hide oneself, to close, to end, to gather, to close up, to merge, to fill to the full or to have a dome-like shape". Moreover, the Kam word *zap* means "to cover", but its pronunciation [dza:] does not contain elements of "closing the mouth" or "closing the lips" at all.

(2) In the Kam language, words that mean "to protrude, to stick out, to extend, to stretch" all have the sounds [u:], [u] or [ɔ:], [ɔ]. Remember that when pronouncing these sounds, the mouth is rounded and protrudes outward. Relevant examples that can be found are *duv* (to hand over, to hand outwards), *duh* (belly), *dup* (to pout one's lips), *bup* (to swell, to bulge), *buc* (n. pumpkin; v. to hold or embrace with both hands), *kgup* (plump, slightly swollen), *liup* (the inner side of one end of a hose to turn outwards; the wound on the swollen part to turn outwards), *hup* (to deliberately give an opponent some advantages or conveniences in a competition, which also implies "beyond, exceeding"), and *gkuc* (a tripod-shaped pot for cooking rice, like half a ball), etc. In English, words like *tumour*, *protrude*, *extrude*, which are all somewhat related to the concept of "sticking out" or "projecting", also contain the [u:] sound. Moreover, in English, the common word "to [tu]", whether used as a preposition or a sign of the infinitive, has such meanings as "towards a certain place", "in the direction of...", which are naturally related to "towards the outside" or "oriented towards the outside", indicating an outward trend. There is also a similar word in the Kam language, *doh*. Besides meanings like "to fuck; to exert force outwards; to sow; to provide", it has another meaning that is completely equivalent to the English preposition "to". For example:

English: Give it *to* me.

Kam language: Geel jal *doh* yaoc.

There are also many other Kam words that contain the [ɔ:] sound and are related to "to stretch, to move outward, to swell", such as *joh* (adj. 1. taking a long time; 2. elastic; note: as an interjection, it means "as expected"), *jol* (adj. that is difficult to tear off or tough to chew), *loh* (oval), *moh* (tomorrow), *noh* (to stick out one's head), *xoh* (tilted), *yoh* (to reach out to get), *boc gkoc seep* (goiter, commonly known as "puffy neck" or "big-neck disease"), *xox* (a primary onomatopoeic word used to describe water flowing down from the air relatively fast), *xol* (a small water-diversion trough inserted into the water source, with water flowing out and having a drop), *bov* (a primary onomatopoeic word, indicating speaking loudly without restraint, often used in repetition), *bol* (gallbladder), *doc* (the top of a tree or building), *lox* (bridge), *lov* (tied-up and in-good-order things to loosen naturally; the tied-up things to scatter), *xol lov* (uneven), *xop* (spoon; note: the spoon handle is generally relatively long), *sop* (relatively large; larger grains of rice or larger fruits), *jox* (a demonstrative word. Note: When someone is looking for something not far away and you see it, you say this word while pointing at the thing), *zov* (chopsticks, breath), *liov* (to burn with an open fire, which can also be regarded as exerting force outwards), *gkoc* (neck), *nyov* (rice field eel, with a long rope-shaped body); *nyol* (filamentous algae), etc. However, there are still some words in this category that I, as a native speaker of the Kam language, fail to see an obvious connection between sound and meaning for the moment, such as *xup* (v. 1. to lose; 2. to tidy up); *gkup* (aunt), *mol* (shriveled grain), *dop* (door; note: with a pronunciation and meaning almost identical to the English "door"), *dov* (bean), *soh* (dry), *hop* (adj. clean), *pioh* (a word used to describe a nose that is not delicate, used to describe a snub-nose type), *lioh* (crooked, ruined), *liox* (silver carp), *gkop* (skilled), *gkox* (to simply wash in water), *kgol* (no, not).

(3) When the above *o* and *u* are combined, they form the Kam language vowel *ou*. This sound has similar counterparts in both English and Chinese. In British English, it is written as [əʊ], in American English as [oʊ], and in Chinese it is also *ou*. Its pronunciation feature is that the muscles around the mouth contract without closing and the mouth shape changes from large to small, and finally takes on the shape of a round hole, slightly protruding. Therefore, in the Kam language, most words containing the *ou* sound express meanings such as "to gather, to contract, to bend, to form a ball", for example, *bouc* (scrotum or female external genitalia), *boup* (lump; protruding shape), *boux* (to bump into, to get bruised; note: during this process, the force-receiving area is a small mass), *poul* (to pat, to pat off; to suddenly and quickly pat a certain part of someone's body downward with the hand; note: the direction of the whole action process has a turn, similar to the transition from *o* to *u*, first reaching out the hand forward and then patting downward), *wouc* (chicken coop), *douh* (nest), *doul* (n. rice steamer; v. to put or place in a specific position; v. to stop), *loup* (to dig; note: the direction of force is also first forward and then downward), *loul* (river snail), *jouc* (the hand to freeze and naturally contract into a loose fist shape, unable to stretch out), *joup* (n. a small hoe; v. to hoe the ground; note: both the noun and the verb contain elements of bending), *joul* (a kind of toad), *qoup* (the appearance of being unable to straighten the back in old age; the body to bend forward due to old age), *nyoup* (v. to pick

up with fingers or chopsticks, to pick up food; adj. wrinkled), *youp* (to squat down), *youh* (a bamboo tool used to hold steamed glutinous rice, etc.), *youl* (v. to pour out liquid or a pile of small-granule solids), *goup* (to reach out the hand to beg; note: at this time, the outstretched hand is generally ladle-shaped), *gouc* (measure word "flower"; a flower or something similar), *koul* (to shake out; note: the action characteristics are similar to *poul*), *lioup* (to curl up, to huddle up), *gkoup* (v. to bend over, to bend down; adj. bent; n. hook, eagle; note: the upper beak of an eagle is sharp and curved, like a sharp hook) and *ngoux* (phlegm; note: the thick yellowish substance that is spat out often takes on a clumpy shape). Of course, there are also quite a few exceptional words or words for which I temporarily fail to interpret the sound-meaning connection, such as *joup* (to drive away), *noup* (a kind of plant), *oul* (stuffy), *poup* (a section), *moux* (a naturally-formed section), *soup* (lukewarm), *toul* (to arrive or reach), *xoul* (to peck or to use the tip of a sickle to cause damage or attack), *bouv* (a kind of plant), *doup* (n. long-filamentous water algae; v. to provoke, to tease), *foul* (a dirty and dark drainage ditch under the eaves), *douv* (to one's taste; must, have to), *jouv*, *goul* (both mean "a pair"), *miouh* (a kind of small-grained wild fruit with a slightly sweet taste), *gkouh* (rice, starchy staple food), *kgouh* (a measure word for buildings), *kgoup* (wrist), and *kouc* (stubborn-tempered), etc. In addition, although the tongue position of [ɔ] or [ə] is lower than that of [u], during the combination of the two sounds, the opening of the mouth changes from large to small, giving a sense of "from high to low". Therefore, sometimes this sound may have meanings such as "to fall, to lower down, or to be in a low position", for example, *bioup* (to scatter or sow), *piouh* (to flatter or praise; note: nice words are like being thrown towards the praised object), *miouv* (easy to fall off due to being over-ripe or old), *doul* (to lose, misplace or drop), *louv* (to leak; note: liquid flows out through a small hole at the bottom), *xoup* (to lift up, to grab something with both hands and raise it, implying that the object was originally in a low place), *foup* (to look for, containing the meaning of lowering the body position); as well as quite a number of examples mentioned above, such as *poul*, *douh*, *loup*, *joup*, *qoup*, *youp*, *youl*, *goup*, *koul*, *lioup*, *gkoup*, all to some extent have this kind of meaning. It is not possible to categorically state whether this is a coincidence or that there are necessarily some commonalities among humans of different ethnic groups and races. Nevertheless, in both English and Chinese, it is not arduous to identify words that possess this sound-meaning connections (not necessarily in perfect correspondence, yet with similar semantic prosodies), for example, in English, *low*, *lowly*, *slow* (note: being slow denotes being dull, which means not highly vigilant or sensitive), *crow* (note: representing bad luck, ill-omen, depression or horror in English culture) and *throw* (note: which also implies the meaning of "downward"). In Chinese, words like "臭 (chòu; xiù), 愁 (chóu), 沟 (gōu), 狗 (gǒu), 诟 (gòu), 旧 (jiù), 抠 (kōu), 扣 (kòu), 蝼 (lóu), 漏 (lòu), 陋 (lòu), 怏 (yàng), 馊 (sōu), 瘦 (shòu), 偷 (tōu), 朽 (xiǔ), 锈 (xiù)", etc.

(4) Now, let's take a look at the sound-meaning connection of the sounds *-ong* or *-oong* in the Kam Language. In English, the word "long" means "a great length or distance; or a great amount of time". Words derived from it, such as "prolong"

and "prolongate", are also related to the meaning of "long". It is said that the reason why the word "long" is related to "length" is mainly "attributed to" the pictographic meaning of the initial letter "l", which had a crowbar or goad shape.^[6] Nevertheless, it is my modest opinion that the phonetic element of "-ong" also contributes to some extent to the semantic connotation of the word "long". I notice that opponents often use "song" and "strong" as counter-examples, but aren't songs usually relatively long? Also, if a living being is "strong", it often means a long lifespan. Another word, "throng", meaning "to crowd; to flock; to be crowded with", has the implication of "a spectacular scene". It's not difficult to imagine that the line of people in such a scene is very long. Coincidentally, there are quite a few words in the Kam language that contain "-ong" or "-oong" (one of a few symbols I coined since there is no vowel in the Kam language vowel chart I saw that can describe this sound, which is subtly different from "-ong". Its pronunciation is exactly the same as the "-ong" in the British English word "long", while the mouth-shape for pronouncing "-ong" in the Kam language is relatively small and its pronunciation is relatively short and abrupt) whose semantic connotations are predominantly associated with the concepts of "length" or actions such as "lengthening, releasing, and loosening", for example, *bongp* (landslide; note: the sediment slides down a relatively long distance), *xongp* (gun; note: the guns seen in the Kam community are long-barreled fowling pieces. In addition, the bullets fired from a gun can of course fly a long distance), *hlongp* (to pay out a line, to untie; a beehive to disperse. Note: The writing and pronunciation of this word cannot be found in the so-called standard Kam language. The writing symbol is coined by me. The first meaning has the strongest connection with its pronunciation), *songl* (to let go, to release downward, to let alone; note: these three actions may all lead to the result of "becoming longer"), *gkongl* (to slide down), *jongl* (bent; winding and twisting; note: a rope or road can only be considered bent or winding and twisting when it is relatively long), *nyongv* (to stick to someone, to hold someone's shoulder or arm and let them drag you along), *loongv* (loose, released), *goongv* (to carry a person or something large, soft or loose on the head and shoulders to a nearby place), *qioongp* (to carry away, especially referring to temporary and time-rushed transportation), *gkoongp* (to drill into the forest and search around). Even *logc* (to pay out a line), which has a similar pronunciation, has the meaning of "to make longer". Of course, there are also exceptions: *bongh* (a pile), *bongc* (n. shed, cattle shed; v. to float; such insects as bees to go out in all directions for activities), *bongx* (a primary onomatopoeic word, describing a huge noise), *bongv* (to lean against), *pongh* (energetic and highly aggressive), *mongp* (v. flowers to bloom; n. a deep pit in a stream), *dongp* (kiwifruit), *longh* (winnowing basket), *longc* (n. belly, especially referring to the belly of horses, cows, sheep, etc.; v. to put a quilt into a quilt cover), *songh* (a large wooden tub; a tub 2-3 times larger than a water-carrying bucket), *qongh* (young and frivolous), *nyongc* (to have a strong interest; to have a big appetite), *xongx* (to reprimand or retort someone in a head-on way), *gongl* (a fluffy grove formed by the interweaving of shrubs and thorny vines), *liongh* (to bulge), *liongx* (to urge; to increase the firepower in a stove), *kgongl* (empty, free), *boongv* (hillock, a protruding hill), *noongh* (especially referring to the flirtatious behavior of young women), *hoongl* (bucket), *lioongh lioongx* (to wander around

doing nothing). However, if we not only understand it in terms of the meaning of "length", but also associate "ong" or "oong" with "big, strong, robust, fluffy", then these "exceptional" words can also be well understood. But words like *liongv* (the term of address for one's mother's elder brother), *moongl* (to be pricked by a needle or awn), *joongv* (bracelet), *joongl* (to grasp or seize) may be real exceptions.

(5) From the perspective of a native Kam-language speaker like me, the sound-meaning connections in the following cases are also relatively strong. *-ag*: The pronunciation of "-ag" is close to [ʌŋ], but it is shorter in duration. The mouth shape starts with being open and concludes with the back of the tongue rapidly rising to press against the back of the upper palate, creating an internal obstruction. Accordingly, the semantic meaning of the word is also related to "opening the mouth, being open, being large or becoming larger; setting up an obstacle". Examples include *bagh* (a mouthful, the amount of a mouthful), *ngagx* (to prize or pry open), *bagc* (v. to surround; to block; n. radish), *dagh* (n. vomit, the related verb phrase is "*ugh dagh*"; when used as a verb, it has two meanings: 1. to drive in piles, to nail, to knock; 2. to encounter an obstacle and find the way blocked), *dagl* (to break, i.e. to crack in the middle), *yagh* (adj. hungry; v. to tear something), *magh* (big), *magl* (to chop repeatedly; to cut a notch on the trunk of a big tree with an axe), *agh* (difficult), *lagl* (to choke on water, that is, to be unable to breathe because the passage to your lungs is blocked), *sagl* (to build a fence or wall to intercept, to cut off), *biagh* (banana, with broad leaves), *zagh* (the fire to gradually get stronger), *zagx* (square), *biagl* (to slap; to lash with a palm or a leafy branch; to throw mud, etc. onto the wall), *guagc* (adv. used to describe a large number of tadpoles, etc.), *guagh* (to roll; note: it indicates a large contact surface), *kgagh* (to expectorate, with the mouth open). However, there are again quite a few examples where I fail to see the sound-meaning connection, such as *jagh* (slippers), *jagl* (v. to put in the pocket; to chop; n. locust), *magc* (ink), *bagx* (white), *bagl* (pod; a small wooden tool tied around the waist to hold a firewood knife), *magx* (soil), *dagc* (male cattle or sheep), *dagx* (to compare), *nagl* (to instruct repeatedly), *lagh* (bone), *lagx* (young of animals or plants), *sagh* (to pound), *jagc* (measure word: piece, grain), *qagh* (a three-legged pot support), *nyagh* (v. a chicken to scratch for food), *nyagc* (to insert a wooden stick, etc. into the ground to make it firm; to wedge in), *ragl* (wet), *zagl* (v. to wash clothes; adj. steep), *piagl* (to hold something soft with one or both hands to make it into a ball), *kuagl* (a wooden stick inserted into the ground, a wooden stake, often used as the framework of a fence), *gkagh* (alone; other), etc. But this doesn't deny the existence of this sound-meaning connection. Just like the same type of plant, some plants can bloom and bear fruit, while others can't be seen doing so, yet we can still conclude that "this type of plant can bloom and bear fruit", right? Furthermore, the Kam language has inherently lacked a formal written script since its inception. When it comes to the underlying motivations and semantic origins of the words that were coined by the ancestors in ancient times, our understanding is largely confined to speculative interpretations grounded in intuitive perceptions. Given the passage of an extensive historical timeline, it is inevitable that the original semantic rationales and etymological significance of certain words within the Kam language have undergone a process of attrition and

alteration, gradually losing some of their initial clarity and precision. *-ai*: It can be transcribed in the International Phonetic Alphabet as [aɪ]. Its pronunciation begins with an open back unrounded vowel similar to [ɑː] in English in many cases, and glides towards a near-close near-front unrounded lax vowel [ɪ]. As it transitions to [ɪ], the mouth gradually closes, the corners of the mouth stretch slightly, and the tongue moves forward and upward in the mouth. Correspondingly, this sound implies meanings such as "to stretch, to extend, to be long", for example, *baic* (a long scratch or wound), *baip* (to walk, to set out), *paih* (a long row of things or people), *qaih* (to scratch with fingernails; to pull towards oneself with fingers to take possession), *xaip* (to sieve; note: when sieving things, powdery small particles fall in a long strip), *nyaih* (a sickly facial expression with many wrinkles), *gaic* (to pull, drag or tow), *gaiv* (to take away conveniently), *raih* (far, long), *raiv* (sharp; note: The cutting edge forms a line), *liaip* (distant; far), *waic* (to fan, the movement trajectory of which is in a fan-shape, the top edge of which forms a curved line), *wail* (to wave; note: the waving action is similar to that of "waic"), *zaih* (intestines), *zaip* (a cylindrical bamboo fishing tool about one meter long), *kail* (to harrow the field; note: when harrowing the field, long water ripples are left behind), etc. Words that do not support or for which I can't temporarily see support for the sound-meaning connection hypothesis include *naiv* (here), *baiv* (wild pheasant), *bail* (weeds growing in the open space of a village), *maih* (listless, sickly), *maix* (wife), *laic* (back), *laip* (good), *laiv* (to select), *lail* (wild boar), *saip* (to give), *sail* (cooled), *jaip* (dirt on the body), *jaix* (elder brother or sister), *gail* (no, not), *nyaih* (mantis), *ngaiv* (mugwort), *waiv* (out of shape, suspected of coming from the Chinese character "歪" meaning "crooked"), *zaih* (to ask or inquire), *piaix* (used to describe a wide face with flat features), *miail* (ladle, soup spoon), *liail* (to adopt a child), *gkaih* (to castrate), *gkail* (chicken), *kgaih* (to sympathize, to feel someone is pitiful). In English, words containing the [aɪ] sound are also related to the meaning of "long": wide (the so-called width means the long distance between two sides); slide (to move easily over a smooth or wet surface); glide (to move smoothly and quietly); kind (friendly and generous; note: "narrow-minded" can be seen as its antonym). *-og*: The pronunciation feature is that it starts with [ɔ], and the air flow rushes back to the larynx rapidly and stops at this pocket-shaped "corner". It represents a blunt and round protrusion or indentation in shape or space: *bogh* (to peel or peel off), *bogc* (docile; note: The phonetic synesthesia generated by this word is in the appearance of meekness), *bogl* (to paste mud on, especially on a slightly protruding surface), *pogh* (bald head or a similar appearance), *pogv* (note: a primary onomatopoeic word, describing small round wild fruits jumping out of a tube rapidly), *mogl* (to bury, to fill a pit with earth and stones, often forming a small round mound), *wogl* (swollen), *dogv* (note: a primary onomatopoeic word, describing the sound when knocking on a door or someone's head with a bent knuckle), *dogx* (note: a primary onomatopoeic word, describing the sound when a hard and small object hits a hard and flat ground), *togx* (note: a primary onomatopoeic word, describing the sound when a hard and light small object hits a hard and flat wall), *logh* (note: referring to the appearance of protruding eyeballs), *logl* (to stare; note: the eyeballs are spherical; to remind or hint at someone), *sogl* (narrow, cramped, indicating a small space,

like a corner), *jogc* (to kneel down; note: when kneeling, the knee is like one end of a wax gourd, blunt and round), *jogl* (corner), *nyogx* (tired, weary, losing one's edge), *gogh* (to bend the fingers and hit the head with the knuckle; note: at this time, the knuckle is like a miniature version of the knee when kneeling), *kogh* (a bamboo fishing tool with a slightly hemispherical tail), *kogl* (to giggle exaggeratedly and continuously, as if the air flow keeps flowing back and hitting the "pocket" in the throat), *zogc* (n. pus in a swollen part; adj. ripe), *zogl* (to pound; note: one end of a fist or a wooden stick used in this process is blunt and round), *gkogh* (rice grains; note: they are olive-shaped), *gkogc* (to roll), *gkogx* (egg), *gkogl* (to move close to someone or something; note: during this process, only two slightly convex sides can complete the action). Words for which the sound-meaning connection cannot be clearly explained for the time being are: *pogl* (to pour out solid particles or liquid), *mogc* (bird), *wolc* (the appearance of lush weeds; referring to the ground full of odds and ends and not clean), *dogl* (to lose or drop), *logc* (to talk nonstop; to continuously pull out a coiled thread or rope), *togl* (an olive-shaped object formed by winding cotton thread around a small bamboo tube a few centimeters long; as a verb, it means to wind the cotton thread from one *togl* onto another *togl*, combining them into one), *xogh* (to poke with a stick or a wooden strip), *xogc* (to bail someone out, to spend money to release someone from prison), *xogl* (to one's taste), *yogh* (note: a primary onomatopoeic word, describing the way a person with long legs or a two-legged animal walks), *liogc* (six), *liogl* (to speak with a different and strange accent), *hliogl* (insane; mentally abnormal), *dogc* (v. to read; adj. lonely). *-aeng*: It is pronounced close to [aɛŋ]. When pronouncing, it quickly slides from [a] to [ɛ] and ends with the nasal sound [ŋ]. Different from the [ŋ] in English, when pronouncing this sound in the Kam language, the air flow seems to be blocked deep in the mouth. According to our observation, this sound indicates "blocked", or means "solid, tight". Example words are: *aengl* (blocked; stupid, inflexible, obtuse), *daengc* (adv. meaning "all; for real"; n. altar), *daengp* (note: small-grained fruits growing on a parasitic plant on a tree, the pulp of which is very sticky, and children often use it to catch dragonflies. This word refers to this very sticky pulp. When separating sticky things, silk like that of a rubber band can be seen), *daengx* (rope to be broken or cloth to be torn), *daengv* (to match, to pair; note: implying that the two have equal weight), *naengl* (salty; note: the phonetic synesthesia generated by this word gives people a sense of solidity), *laengc* (adj. used to describe a thick and straight tree trunk), *laengx* (often; note: indicating tightness), *jaengp* (a long time, a long period of time; note: If time were tangible, the meaning of this word would be a large chunk of time), *jaengl* (full), *piaengl* (broken; note: it is the result of having endured a downward force), *nyaengc* (solid, real; serious; earnest), *xaengp* (to hang; note: under the influence of earth's gravity, the hung object is pulled tight downward), *xaengx* (adj. used to describe a solemn facial expression, such as when unhappy), *yaengc* (to pretend to hit; note: the threat actually exists, but the person hitting controls it), *kaengp* (elastic), *kaengl* (to pull, especially with difficulty because of being blocked), *zaengc* (straight), *zaengp* (to hate), *zaengv* (to precipitate), *biaengx* (adv. used to describe the chubby appearance of a person or an animal), *biaengv* (sediment at the bottom), *gkaengv* (blocked), *raengv* (to carry something

heavy, especially feces, firewood; note: it mostly refers to going up a steep and narrow path), *hraengh* (healthy; in good physical condition; note: just like a rope, it is taut, not slack). Words for which no clues of the sound-meaning connection can be found for the time being are: *daengl* (bench; note: suspected of being borrowed from Chinese), *daengh* (kind, type), *naengp* (nose), *Xaengl* (place name), *Yaengx* (place name), *haengh* (to like, to love), *biaengh* (a kind of herbaceous plant with certain toxicity, which gives a numbing feeling after being eaten), *miaengc* (the state of rice almost ripe; grains or clothes that have just dried a little during airing), *liaengp* (to look). However, although the pronunciation of *naengp* (nose) is not obviously related to meanings such as "blocked", "solid, tight", etc., with a small nasal sound [n] at the beginning and a big nasal sound [ŋ] at the end, it just resembles the shape of a nose, which is small at the top and big at the bottom, and can be regarded as a typical secondary onomatopoeic word. The Kam language, like Chinese, is a tonal language, but it, unlike Chinese, has no native writing system. In this case, it is not feasible to attach too many semantic items to one sound, otherwise it

will bring a burden to the memory and use of words. Chinese has had a native writing system for a long time, so it is no problem for more than a dozen characters to have the same pronunciation. The various meanings of a sound can be well "diverted" by different character forms.^[7] In order to adapt to the reality of its congenital "disability" (lack of writing system), since there are no character forms to rely on, the Kam language seeks solutions in terms of "sound". I notice that the number of tones, initials, and finals in the Kam language is larger than that in Chinese. This is a means of diversion that the Kam language can adopt at the quantitative level in terms of the division of the total meaning repository, while the onomatopoeic rationale discussed in this paper is a means to ensure a distinct enough sound-meaning connection at the qualitative level.

In fact, if we continue to explore examples of the same or similar sound-meaning connections between any two of the English, Chinese, and Kam languages, the list can be very long, as shown in the following three tables. These are just a small part of the words with the same phonemes and sememes among them.

Table 1: the Kam and English Words with the Same or Similar Phonemes and Sememes

Kam Words	English Words	Explanation of the Same Phonemes	Explanation of the Same Sememes
dop	door	Both are pronounced almost as [dɔ:(r)]	"dop" means "door"
deip	die	Both start with the consonant [d]	Both mean "to pass away"
biedl	beat	Both start with the consonant [b] and have the [i:] sound in the vowel	Both mean "to hit sb/sth"
jaenx	adjacent	Both contain the consonant [dʒ]	Both mean "nearby"
moh	tomorrow	Both have the [mɒ] sound	Both refer to "the day after today"
munc	mist	Both have the [m] sound	Both refer to "fog"
keep	comb	Both have the [k] sound	"keep" means "comb"
xaenl	shake off	Both have the [ʃ] sound	"xaenl" means "to shake off"
sedl	seven	Both have the [s] sound	"sedl" means "seven"
mubl	mouth	Both have the [m] sound and are related to the two lips	"mubl" means "mouth"
wail	wave	Both contain the consonant [w]	"wail" means "wave"

Table 2: the Kam and Chinese Words with the Same or Similar Phonemes and Sememes

Kam Words	Chinese Words	Explanation of the Same Phonemes	Explanation of the Same Sememes
nyadl	捏 (niē)	Both have the [n] sound	Both mean to pinch with the thumb and index finger
nil	细 (xì)	Both have the [i] sound	Both mean "tiny"
jaenh	紧 (jǐn)	Both contain the [dʒ] sound	Both are opposite to "loose"
kuangh	宽 (kuān)	Both have the [k] sound	Both are opposite to "narrow"
judh	犟 (jiàng)	Both contain the [dʒ] sound	Both mean "stubborn; not willing to be persuaded"

Table 3: Chinese and English Words with the Same or Similar Phonemes and Sememes

Chinese Words	English Words	Explanation of the Same Phonemes	Explanation of the Same Sememes
飞 (fēi)	fly	Both have the [f] sound	to move through the air, using wings
躲 (duǒ)	dodge	Both have the [dɒ] sound	to move quickly and suddenly to one side in order to avoid sb/sth
炖 (dùn)	stew	Both have the [d] sound	to cook sth slowly, or allow sth to cook slowly, in liquid in a closed dish
恨 (hèn)	hate; hatred	Both have the [h] sound	to dislike sb/sth very much
排 (pái) 出	dispel	Both have the [p] sound	to force air or water out of a part of the body or from a container
白 (bái)	blank	Both have the [b] sound	an empty space on a printed form or document
绕 (rào)	round	Both have the [rao] sound	moving in a circle
色 (sè)	sexy	Both have the [se] sound	marked by or tending to arouse sexual desire or interest;

There are even cases where the same phonemes and sememes are reflected in all three languages. For example, for the first one in Table 2, there is "nip" in English; for the second one, there are words like "little", "tiny", etc. Moreover, the [u:] sound mentioned in the previous text also conveys meanings such as "to protrude" and "to bulge" in English, Chinese, and the Kam language. In addition, as discussed above, the [ou] sound also has common or similar meanings in the three languages. People may say these are coincidences, but is there some underlying logic behind so many coincidences? I hold the view that there are certain commonalities in the ways of human perception and cognition. The arbitrariness proposed by Ferdinand de Saussure is regarded as a universal fundamental principle in linguistics, but iconicity, on the other hand, is a local principle applicable to specific languages within the framework of the principle of arbitrariness. That is to say, various ethnic groups on the earth all "feel" that a certain unit in their language has a strong iconicity with its referent, but these "iconicities" are so different that ultimately it still reflects arbitrariness. However, there are still some overlaps or similarities in the "feelings" arbitrarily established by these ethnic groups, or in other words, the sound-meaning "iconicities" they have respectively discovered. The many identical or similar sound-meaning connections between English, Chinese, and Kam languages discussed above are clear evidence of this, which, in turn, weakens the absoluteness of the principle of arbitrariness to a certain extent.

4. Conclusion

The iconicity of language symbols is a natural ecological feature that gradually develops during the process of language taking root, germinating, and growing in its ecological environment. Chinese characters are pictographic characters, and their iconicity is mainly reflected in the connection between form and meaning. In this regard, Chinese has unique advantages. Many characters evolved from pictorial symbols, and by looking at the characters, one can understand their meanings. Although the English writing system has become highly developed today, in terms of the iconicity at the vocabulary-writing level, at most, only the words "eye" and "bed" exhibit such characteristics. Of course, according to David Sacks' research, English letters do have certain pictographic meanings [6]. However, the connection between form and meaning at the word level is still not very intuitive. Nevertheless, English has its own strengths, that is, it has a strong iconicity in the sound-meaning connection, and secondary onomatopoeic words are everywhere (primary onomatopoeic words exist in every language). The Kam language not only lacks pictographic characters but also has no native alphabetic writing system. When exploring the iconicity of its words, we can only delve into the sound-meaning connection. "Onomatopoeia" can be regarded as a significant ecological feature of Kam language vocabulary based on iconicity. This feature helps to reduce the memory burden of its users, ultimately reflecting the economic principle of human language. Xu Hong'e (2016) [2] also believes that "the iconicity principle is most conducive to achieving economy, because iconicity uses the similarity between language symbols and concepts to recognize things, which obviously reduces the difficulty of language understanding and reflects the economy of language." [2] The onomatopoeic words in the Kam language vocabulary are the

language wealth created by the Kam people in their long-term production and life practices. They carry the Kam people's cognition and understanding of nature, and also reflect the wisdom of the Kam people in living in harmony with the ecological environment. This research broadens the perspective of Kam language research and provides new ideas for in-depth understanding of the formation and development of the Kam language vocabulary system. At the same time, it also offers new cases and materials for the development of language ecology theory. At the practical level, this research helps us better understand and protect the Kam language and culture, promotes the development and utilization of language resources in ethnic minority areas, provides a reference for building a harmonious language ecological environment, and also offers a different perspective on language for our language teaching.

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***Note:** In China, names such as "the Dong ethnic group" and "the Dong language" are commonly used. However, in the international academic community, there is a greater tendency to use "the Kam ethnic group" and "the Kam language" instead.