



Onomatopoeia in Balinese Fauna Themed Fairy Tales 5th Grade Students of SD N 2 Melaya, Bali

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Abstract*

While oral traditions heavily influence children's cognitive development, transitioning these auditory memories into structured written forms often presents phonological challenges. This study aims to investigate the phonotactic and structural characteristics of fauna-themed onomatopoeia spontaneously produced by 5th-grade students at SD N 2 Melaya, Jembrana, Bali, within creative fairy tale writing tasks. Employing a qualitative descriptive research design, data were elicited through controlled chained images depicting Balinese endemic fauna and complemented by unstructured interviews. The results reveal that the student-generated texts exhibit four distinct categories of sound imitation: object sounds, animal sounds, human sounds, and expressions of human feelings. Structurally, these onomatopoeic forms are systematically mapped into monosyllabic, bisyllabic, and multisyllabic syllable patterns. These findings demonstrate how children navigate language constraints to map environmental acoustics into orthographic strings (auditory to orthographic mapping). This study offers crucial theoretical insights into child cognitive linguistics and contributes to the written documentation of environmental-based local wisdom.

1. Introduction

Onomatopoeia is a unique lingual phenomenon that bridges the auditory reality of the universe with the human linguistic cognitive system. Within the realms of cognitive linguistics and child language development, onomatopoeia is not merely an arbitrary form of sound imitation; rather, it is a phonosemantic representation that reflects how sensory perception is processed into phonotactic structures. In communal societies, onomatopoeia serves as a vital instrument for inheriting cultural collective memory, particularly through oral narratives, folklore, and introducing the environmental ecosystem (endemic fauna and flora) to the younger generation.

However, the dynamics of transmitting oral culture into written forms often undergo reduction, especially among elementary school aged children in suburban or border regions, such as the Melaya area in Jembrana, Bali. The characteristics of this region, where sociocultural diversity intersects, influence how children perceive the sounds of local fauna around them. When children are required to transform oral auditory memories of fauna behavior into written fairy tale texts, a complex process of phonological adaptation occurs. The lack of written documentation regarding children's onomatopoeic typologies raises concerns over the potential loss of local ecological cognitive sensitivity (Balinese local wisdom) within their written language structures.

Extensive research on onomatopoeia has been conducted by previous linguists. The majority of these studies have focused on the morphosemantic structures of onomatopoeia in comic books, contrastive comparisons of onomatopoeia between two languages, or the analysis of onomatopoeia within formal dictionaries. Several studies have also examined the role of onomatopoeia in early childhood language acquisition.

Nevertheless, studies specifically examining how phonotactic structures, syllable characteristics, and onomatopoeic reduplication variations are spontaneously produced by elementary school students within the context of local wisdom-based creative narrative (fairy tale) writing remain exceptionally rare. Most prior research positions children merely as passive recipients of onomatopoeia (e.g., through pre-existing storybooks) rather than active subjects who produce and transcribe environmental sounds (auditory to orthographic mapping). Consequently, a theoretical void exists regarding how the phonotactic constraints of Indonesian and local languages influence the phonosemantic variations of fauna onomatopoeia created by children.

To address this gap, the present study aims to dissect the phonotactic characteristics, syllable structures, and reduplication mechanisms of fauna onomatopoeia within fairy tales written by elementary school students in Melaya, Jembrana. Through a descriptive linguistic approach focusing on phonosemantic aspects, this research is expected to provide a novel theoretical contribution to the development of cognitive child linguistics, while simultaneously serving as a linguistic documentation effort toward preserving environment based local wisdom in Bali.

2. Research Methods

This study employs a qualitative descriptive design with a structural and cognitive linguistic approach. Although frequency distribution and percentages are utilized to map the occurrence of certain onomatopoeic forms, the core analysis strictly focuses on the phonotactic characteristics, syllable structures, and phonosemantic variations produced by the subjects. This method is selected to provide a meticulous and deep description of how auditory to orthographic mapping occurs in children's creative writing.

The data in this study consist of lingual units in the form of onomatopoeic words or phrases representing fauna sounds found in fairy tales written by elementary school students. The data source for this research is a collection of creative short stories/fairy tales composed by 5th grade students at SD N 2 Melaya, Jembrana, Bali, Indonesia. The students were selected using a purposive sampling technique based on their age range (9-11 years old), which represents a critical period in orthographic and phonological development.

Data were collected through the elicitation method via a controlled writing task. The primary instrument used was a set of chained images depicting various local and endemic fauna behaviors. Students were instructed to write a short fairy tale based on the images and spontaneously transcribe the sounds produced by the animals. Additionally, unstructured interviews were conducted with selected students to verify the cognitive and auditory reasons behind their specific orthographic choices, ensuring the validity of the transcribed onomatopoeia.

The data were analyzed using the distributive and translational equivalent methods following Sudaryanto's (2015) linguistic frameworks. The analysis proceeded through the following systematic steps: (1) data identification and codification: extracting all animal onomatopoeia from the students' texts and coding them (e.g., Data 1a, Data 1b) for consistency, (2) structural and phonotactic mapping: categorizing the onomatopoeia based on syllable structures (CVC, CV, VC), vowel/consonant distribution, and reduplication mechanisms (full or partial reduplication), (3) phonosemantic interpretation: analyzing how the phonetic components

correspond to the actual physical sounds of the fauna and interpreting them within the framework of cognitive child linguistics.

3. Discussions

Based on the results of data analysis on Balinese fauna-themed fairy tales written by 5th grade students of SD N 2 Melaya, findings were obtained in the form of 19 words containing onomatopoeia which were then classified based on their type and structure. Viewed from the type, the most dominant onomatopoeia appearing was the typical sound of objects with 10 data, followed by typical animal sounds with 5 data, character feelings (human) with 3 data, and typical human sounds with the least number of data, namely 1 data. Meanwhile, if viewed from the onomatopoeic structure, the formation of the sound imitation words was dominated by one-syllable structures with 9 data. The two syllable structures, three syllable and multi syllable structures each had the same distribution, namely 5 data.

3.1 Types of Onomatopoeia Found in Fairy Tales 5th Grade Students of SD N 2 Melaya

3.1.1 Sound Characteristics of Objects

The characteristic sound of an object is a depiction of a particular event involving an object that imitates the sound of an inanimate object or natural phenomenon that experiences a collision, damage, or certain movements. Based on the results of the analysis of fairy tales written by 5th grade students of SD N 2 Melaya, 10 data were found that represent this type of onomatopoeia. To avoid repetition, the data are classified into three sub categories of contextual meaning, namely: (1) the sound of an object falling or hitting the ground, (2) the sound of an object falling in water or bubbles, and (3) the sound of damage or cracking of an object.

3.1.1.1 Sound Characteristics of Falling Objects and Impacts

Most of the onomatopoeia data found represents sounds resulting from hard impacts, either from figures falling or objects hitting the ground. The variations in onomatopoeic forms can be seen in the following data context:

(1a) *Bruk! Bruk!* Suddenly the turtle fell.

(4a) While on the way, Jalak's rambutan fruit fell, *brak!*

(7a) ...they fought in the park *bluuuk!* The sound of birds falling because of squirrels.

(11a) While on the journey, the pangolin fell, *braaaaakk!*

(12a) While on the way, the pangolin fell *brakk!*

(14a) ...while he was busy playing, he slipped, *bruuukkkk.*

(15a) One day, the pangolin accidentally knocked over the ants' nest, causing damage to the house, *Braakk!!*

(16a) And finally the contest began, in the middle of the road the deer fell, *gduprak!*

Data (1a), (7a), and (14a) show phonetic variations of the imitation of heavy falling sounds (*bruk*, *bluuuk*, *bruuukkkk*). The dominant use of the vowel /u/ and the lengthening of the grapheme in the words *bruuukkkk* and *bluuuk* express the intensity of the character's fall, which is considered quite loud or dramatic by students.

Meanwhile, data (4a), (11a), (12a), and (15a) use variations of the onomatopoeia *brak*, *brakk!* or *braaaaakk!* to describe a hard impact that tends to be dry or has the potential to damage surrounding objects. In data (15a), the use of the form *braakk!* contextually chosen by students to associate the destruction of the physical structure of the ants' nest due to the effect of the pangolin rolling with the sound of massive material breaking or cracking. Different characteristics are seen

in data (16a) through the form *gduprak!* which combines the initial stop/pop sounds /g/ and /d/ to provide a stronger jolt or shock effect when the deer character falls.

3.1.1.2 Sound Characteristics of Water and Bubble Projections

Onomatopoeia is also used by students to describe the interaction of objects with the water element. The visual representation of these sounds is manifested in the data below:

(8a) The next day Tito recovered and Kio invited Tito to play with sea bubbles, *blubup-blubup!*

Data (8a) in the form of *blubup-blubup!* phonosemantically represents the sound of air trapped in water (bubbles). At the phonological level, the choice of bilabial pop consonants /b/ and /p/ combined with the high back vowel /u/ accurately imitates the acoustic effect of a small-scale pop or spray of water.

3.1.1.3 Sound Characteristics of Structural Damage or Fractures

Apart from impacts and water interactions, the study also found specific onomatopoeias depicting small scale physical damage caused by pressure or compression, as demonstrated in the following data:

(5a) *Kretek! Kretek!* The pangolin accidentally stepped on the ants' nest, and the ants became annoyed

Data (5a) through the form *kretek! kretek!* successfully describes the sound of a fracture or crack from a fragile material (in this case, the structure of an ants' nest). The repetition of this onomatopoeia emphasizes the continuity of the damage process that occurs when the structure is stepped on by the pangolin character.

3.1.2 Characteristic Animal Sounds

Animal sounds are a form of sound imitation (onomatopoeia) produced by animals' natural articulation to represent their presence in an event. Based on an analysis of Balinese-fauna themed fairy tales written by 5th grade students of SD N 2 Melaya, five data points representing this type of onomatopoeia were identified. Linguistically, the students tended to utilize sound reduplication (repetition) and vowel symbolism to emphasize the identity and acoustic characteristics of each animal. These data are presented as follows:

(3a) *kwek kwek* is the characteristic sound of a duck.

(9a) *uu aa uu aa* is the characteristic sound of a monkey.

(10a) *Cuit cuit cuit!* is the characteristic sound of a bird.

(13a) *Cit cit!* is the characteristic sound of a squirrel.

(18b) *Kok! Kok!* is the characteristic sound of a chicken.

When viewed from the morphological structure, all onomatopoeic data of animal sounds produced by students undergo a reduplication process. In data (3a) *kwek kwek*, data (13a) *cit cit!* and data (18b) *Kok! Kok!* Students apply full reduplication twice to imitate the constant rhythm of sounds from ducks, squirrels, and chickens. Phonosemantically, the choice of the high front vowel /i/ in the form *cit cit!* represents a shrill, small, and fast sound, which accurately imitates the

character of a squirrel's sound. In contrast, the choice of the half closed back vowel /o/ in *Kok! Kok!* gives the impression of a shorter and more broken sound typical of adult birds.

Unique characteristics are found in data (9a) *uu aa uu aa* and data (10a) *cuit cuit cuit*. In data (9a), students do not only repeat one syllable, but form variations in sound symbolism through the alternation of the back vowel /u/ and the front vowel /a/. This *uu aa uu aa* structure has strong auditory iconicity to express the dynamic and repetitive intensity of the monkey's voice. Meanwhile, in data (10a) *cuit cuit cuit*, the use of three reduplications accompanied by exclamation marks serves as graphic affirmation (graphemes) to describe the impression of the continuity of the loud bird chirping in the fairy tale setting written by the students.

3.1.3 Characteristic Human Sounds

The distinctive human voice is a manifestation of sound imitation (onomatopoeia) produced by biological activity, nonverbal articulation, or physical movements produced by the human body. In the context of a fairy tale with the theme of typical Balinese fauna by a 5th grade student of SD N 2 Melaya, this type of onomatopoeia appears in the most efficient number, namely 1 data. The presence of this data serves to provide auditory emphasis on the kinetic activity or movement carried out by the characters in the story. The representation of this data is presented as follows:

(11b) Soon after, the rabbit saw the pangolin and the rabbit ran away *plak plak plak*

Data (11b) through the form *plak plak plak* is an onomatopoeia that represents kinetic activity in the form of footsteps or the act of stamping the feet quickly while running. Linguistically, the use of three repeated reduplications (*plak plak plak*) indicates the existence of a durative aspect and continuity of movement.

Although conventionally the sound “*plak*” is often associated with the sound of slapping or the collision of two flat surfaces, students creatively contextualize it as the sound of a rabbit's hurried footsteps on the ground. The phonosemantic structure that utilizes the stop consonants /p/ and /k/ flanking the front vowel /a/ successfully creates the impression of a short, firm, and fast rhythmic thumping sound, thus strengthening the characterization of the rabbit who is actively moving in the narrative.

3.1.4 Onomatopoeia of Human Emotional Expressions

Onomatopoeia of a character's feelings is a form of imitation of sounds or nonverbal vocalizations produced by humans to express emotional states, psychological conditions, or certain mental activities in a situation. Based on the results of the analysis of fairy tales written by 5th grade students of SD N 2 Melaya, three data were found that represent the expression of the character's feelings. These three data show how students utilize onomatopoeic interjections to bring the character's inner mood to life in the narrative, which are explained as follows:

(6a) he said “*hahaha* i will be rich”, he sold it to the lion and paid him with peanuts.

(12b) Rio fell, and screamed for help “*aaauh!*”

(14b) He thought while saying “*Hmm*, how can I help the ant?”

In data (6a), the form *hahaha* is an onomatopoeia of laughter that represents an outburst of joy or material satisfaction (the character's greed). Phonosemantically, this sound is dominated by

a combination of the glottal fricative consonant /h/ and the open-front vowel /a/. The form *hahaha* is an onomatopoeia of laughter that universally represents an expression of happiness, satisfaction, or an overflowing sense of joy due to a pleasant event (in this context, the character's expectation of becoming rich). The repetition of the syllable /ha/ in succession provides an auditory effect regarding the intensity of the laughter.

In data (12b), the form “*aaauh!*” used to express the pain (pain expression) experienced by the character Rio due to falling. Phonosemantically, there is a transition from the open front vowel /a/ to the closed back vowel /u/, which forms a glide (diphthongoid) followed by a glottal stop /h/.

The initial long vowel /a:/ symbolizes surprise and an uncontrolled, spontaneous response to a physical impact. The drastic reduction in articulation space toward the vowel /u/ (which involves rounding the lips) reflects the effect of “shrinking” or containing intense pain. The symbolism of the vowel /u/ in this context is universally associated with distress, pressure, or internal discomfort.

In contrast to the previous two expressive data sets, data (14b), in the form of “*hemmm*”, represents mental activity or the process of thinking. Phonosemantically, this onomatopoeia relies on the lengthened bilabial nasal consonant /m/.

The nasal sound /m/ is produced by completely closing the mouth and completely expelling air through the nasal cavity. In terms of phonosemantics, this closure of the oral tract symbolizes the internalization of the process of turning attention inward. The buzzing effect produced by the lengthening of the phoneme /m/ acoustically aptly projects the pause, hesitation, and theoretical concentration required by the character when searching for a solution to help the ants.

3.2 Onomatopoeic Syllable Structure and Pattern

An analysis of onomatopoeic structures was conducted to map the phonotactic characteristics and syllable formations produced by students in writing fairy tales. Based on the collected data, the onomatopoeic lingual units were classified into three main categories: monosyllabic (one syllable), disyllabic (two syllables), and multisyllabic (three or more syllables).

3.2.1 Monosyllabic Onomatopoeia (Single Syllable)

Monosyllabic Onomatopoeia (Single Syllable) Basic Phonotactic Structure (CCVC Pattern) Found in data (1a) *Brak!* (4a) *Brak!* and (12a) *Brakk!* This CCVC pattern is a basic phonotactic structure that is common in hard impact onomatopoeia. The syllable begins with a consonant cluster /br/ as the onset and ends with a voiceless plosive velar consonant /k/ as the coda. Acoustically, the presence of this plosive coda functions to suddenly cut off the articulatory air flow (abrupt cessation) to produce a complete impact sound effect.

Standard Nasal Ending Phonotactic Structure (CVC and CCVC Patterns) Found in data (14b) *hemmm* and (15a) *Braakk!* In standard phonotactic terms, data (14b) refers to the basic CVC pattern with a coda in the form of a nasal bilabial consonant /m/. In contrast to the stop consonant, the nasal articulation of /m/ flows air through the nasal cavity, thus projecting a nasal humming effect. This continuous resonance characteristic is phonosemantically in line with its narrative function to express the sound retention of the character's cognitive activity or thought process. Meanwhile, data (15a) *Braakk!* theoretically still refers to the basic CVC pattern.

Orthographic Variations of Graphemic Lengthening (Visual Iconicity) Found in data (7a) *Bluuuk!* (11a) *Braaaakk!* (14a) *bruuukkkk*, and (12b) *aaauh*. From a theoretical phonotactic perspective, the student redundancy or stacking of vowel and consonant graphemes does not change the structural nature of data (7a), (11a), and (14a) from the CCVC basic pattern, as well as data (12b) from the VC diphthong basic pattern.

3.2.2 Bisyllabic Onomatopoeia (Two Syllables)

The bisyllabic category includes sound imitation patterns formed by two syllables with a total distribution of 5 data points. This structure is formed through two morphophonemic mechanisms:

Pure Basic Words (Monomorphemic Bisyllabic) Found in data (5a) *Kretrek!* with phonotactic pattern CCV-CVC and data (16a) *Gduprak!* with CCV-CCVC pattern. The prominent linguistic phenomenon is found in data (16a). The presence of the non-standard consonant cluster /gd/ at the onset position of the first syllable is an intuitive attempt by students to imitate two phases of impact sound at once namely the damped initial impact phase (pre-impact) and the loud main sequence phase in one very short time sequence.

Full Reduplication Results (Polymorphemic Bisyllabic) Found in data (3a) *kwek-kwek* (CCVC-CCVC), (13a) *cit-cit!* (CVC-CVC), and (18b) *kok! kok!* (CVC-CVC). Formation through full reduplication is functionally semantically used to represent the aspect of the aspectuality of sound acts, namely indicating that the sound manifestation is produced periodically, regularly, or repeatedly by the natural activities of fauna (ducks, squirrels, and chickens).

3.2.3 Multisyllabic Onomatopoeia (Three or More Syllables)

The final group in this typology of structures is the multisyllabic group, consisting of three or more syllables with a distribution of 5 data points. This structure is dominated by grammatical reduplication to depict the continuity of events intensively and rhythmically.

Trisyllabic Pattern (Three Syllables) Found in data (6a) *hahaha* with an open phonotactic structure of CVCVCV which projects auditory continuity of laughter expression (euphoria). Furthermore, data (10a) *cuit cuit cuit!* with a CVC-CVC-CVC pattern (the sound /c/ is a single affricate phoneme and /ui/ is a monolithic diphthong unit) and data (11b) *plak plak plak* with a pattern of CVC-CVC-CVC. This expressive repetition of up to three syllable beats syntactically confirms that the kinetic activity (footsteps) and fauna articulation (bird chirping) take place consecutively in a fairly long duration (duration elongation).

Polysyllabic Pattern (Four or More Syllables) Found in data (8a) *blubup blubup* with standard syllable formation CCV-CVC-CCV-CVC and data (9a) *uu aa uu aa* with independent vowel pattern V-V-V-V. Massive repetition of up to four syllable beats in this type of data is very adaptive in describing the dynamic effects of natural objects that are constant and rhythmic, such as the bursting of water bubbles that come out repeatedly or the vocal characteristics of mammals (monkeys) that respond to each other in the forest.

4. Novelities

The novelty of this research lies in the interdisciplinary analysis that positions onomatopoeia not merely as a decorative element of the story, but as a linguistic cognitive instrument for elementary school students to reconstruct the narrative. This research establishes the writing of fairy tales with the theme of Balinese endemic fauna by 5th grade students of SD N 2 Melaya as a specific object of study, whose design process is assisted by visual stimuli in the form of chained image media. The choice of the theme of Balinese endemic fauna opens up a rich space for lingual analysis, considering that the vocalization and auditory characteristics of local fauna require specific phonetic sensitivity and graphic representation from students.

5. Conclusion

Based on the phonotactic and structural analysis of onomatopoeia produced by 5th grade students of SD N 2 Melaya, this study concludes that syllable configurations are not arbitrary

orthographic choices; rather, they are systematically aligned with the physical and acoustic properties of the real-world sounds they imitate. Monosyllabic forms dominated by closed syllables ending in plosive consonants (such as CCVC patterns in *Brak!* and *Bruk!*) are structurally engineered to deliver a sharp, definitive, and instantaneous auditory impact (abrupt cessation). Conversely, disyllabic and multisyllabic configurations predominantly rely on morphophonemic reduplication to depict the aspectual, cyclical, and continuous nature of natural phenomena and animal vocalizations (such as *kwek-kwek* and *blubup blubup*). Furthermore, structural subversions through vowel and consonant lengthening do not alter the underlying baseline syllable matrices; instead, they serve as intentional, creative visual representations that project suprasegmental prosody such as volume, distance, duration, and emotional depth within a static, written text.

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