



P-ISSN 2355-2794
E-ISSN 2461-0275

Ecological Metaphors in the *Lontar* Manuscript of the *Megantaka* Folklore: An Ecolinguistics Analysis

Muhammad Azwar Assiddiq^{1,2*}
Sri Hariati Mustari^{1,3}
Reski Pilu^{1,4}
Mustakim^{1,5}

¹Study Program of English Language, Postgraduate Program, Universitas Negeri Makassar, Makassar 90222, INDONESIA

²Study Program of English Language Education, Faculty of Teacher Training and Education, Universitas Khairun, Ternate 97719, INDONESIA

³Study Program of Safety Engineering, Institut Teknologi dan Kesehatan Tri Tunas Nasional, Makassar 90222, INDONESIA

⁴Study Program of Elementary School Teacher Education, Faculty of Teacher Training and Education, Universitas Cokroaminoto Palopo, Palopo 91911, INDONESIA

⁵Study Program of Primary Education, Postgraduate Program, Universitas Muhammadiyah Enrekang, Enrekang 91712, INDONESIA

Abstract

This study investigates the ecological metaphors used in the lontar manuscript of the Megantaka folklore of the Sasak tribe in Indonesia. Using an ecolinguistic approach and referring to Halley's ecological metaphor categories, the data were collected from the Lontar manuscript and analysed using the Metaphor Identification Method (MIP). The findings revealed that the metaphors belong to several categories: 1) the 'being' category used in Tembang Sinom and Tembang Dandang, 2) the 'cosmos' category appearing in Tembang Durma, Tembang Pangkur, and Tembang Dandang, 3) the 'energy' category in Tembang Asmaradana, Tembang Durma, and Tembang Pangkur, 4) the 'substance' category in Tembang Durma, 5) the 'terrestrial' category in Tembang Durma, Tembang Pangkur, and Tembang Dandang, 6) the 'object' category in Tembang Sinom, Tembang Asmaradana, Tembang Pangkur, and Tembang Dandang, 7) the 'living' category in Tembang Durma, Tembang Pangkur, and Tembang Dandang, and 8) the 'animate' category in Tembang Durma, Tembang Pangkur, and Tembang Dandang. This study is essential for preserving local wisdom, providing an overview of social and cultural life in the past, and serving as material for community reflection in strengthening the national character.

* Corresponding author, email: azwarassiddiq@unkhair.ac.id

Citation in APA style: Assiddiq, M. A., Mustari, S. H., Pilu, R., & Mustakim. (2025). Ecological Metaphors in the *Lontar* manuscript of the *Megantaka* folklore: An ecolinguistics analysis. *Studies in English Language and Education*, 12(3), 1597-1611.

Received May 8, 2024; Revised December 5, 2024; Accepted August 6, 2025; Published Online September 30, 2025

<https://doi.org/10.24815/siele.v12i3.38537>

Copyright © 2025 by Authors, published by *Studies in English Language and Education*. This is an open-access article distributed under the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>)

This study reflects the ecological conditions of language users and provides insights into the social and cultural lives of the Sasak people.

Keywords: Ecolinguistics, ecological metaphor, *lontar* manuscript, *Megantaka* folklore, Sasak tribe.

1. INTRODUCTION

A language user's choice of vocabulary is highly influenced by their topography, climate, and natural environment (Fill & Mühlhäusler, 2001). Isti'anah (2020) argued that human language is shaped and simultaneously influenced by the environment. This reciprocal relationship is often expressed through ecological concepts as metaphors. Human relationships with metaphors are very close, allowing humans to think and talk differently about one domain in terms of another, contributing to new ways of perceiving and articulating experience (Oerlemans et al., 2023; Yung, 2021).

Aristotle described metaphors as the transfer of meaning from one entity to another (Zaini et al., 2020). They stimulate the inferential process, allowing the receivers to construct a meaning that extends beyond the literal expression (Luporini, 2021; Silvestre-López, 2020). They also reflect how humans understand certain aspects of their lives and act in the present time or in the future. They not only explain a phenomenon but also signal the origin of their users, including social, cultural, and ecological origins (Carraro, 2023; Garcia et al., 2022; Semino et al., 2018).

In folklore, ecological concepts such as metaphors often function symbolically and are entwined with other cultural aspects (Babič, 2020; Naithani, 2024). This can be observed in the *lontar* (palm leaves) manuscript of the *Megantaka* folklore, where ecological metaphors reflect the Sasak people's relationship with their natural, social, and cultural environments. The Sasak tribe refers to the indigenous inhabitants of Lombok Island, West Nusa Tenggara, Indonesia. Their culture, including literature, is diverse and extensive, demonstrating strong influences from Balinese and Javanese traditions, as Lombok was historically linked to Majapahit (Negarakertagama, 1365 AD, as cited in Marrison, 1997), and later fell under Karangasem Bali's control in the 17th century (Yaqin & Shanmuganathan, 2018). Folklore and ancient manuscripts of the Sasak tribe are often imbued with Islamic values (Smith, 2021; van der Meij, 2022), philosophical outlooks on life (Nuryati, 2019; Saharudin, 2016), and ecological wisdom (Hilmiyatun et al., 2020; Koopman, 2023; Suyasa, 2020). These values are expressed not only through the themes, messages, and settings in Sasak folklore, but also through the use of ecological metaphors that describe various phenomena, such as majesty, beauty, destruction, and virtue.

Previous studies of Sasak folklore highlight various dimensions, from ecological wisdom and spirituality of the Sasak people in the Legend of *Otak Aiq Tojang* (Hilmi et al., 2024a), the relationship between humans and nature (Hilmi et al., 2024b), the structure of the Cilinaye story from the Levi-Strauss' Structuralism perspective (Shubhi, 2012), and a mythological analysis of *Dewi Anjani* in Lombok Island (Smith, 2021). Research on ecological metaphors has also been conducted in other contexts, such as music, specifically in the Best of Anji 2020 album (Inawati et al., 2022), the procession of traditional wedding ceremonies in Pengarasan Dukuh Cikamuning, Kebandungan Village, and Ciomas Village, Bogor, Indonesia (Yani & Irma, 2022), sports (Li & Du, 2023), and the novel of Dewi Lestari entitled *Partikel* (Afidah et al., 2022). However, none has investigated the *lontar* manuscript of the *Megantaka* folklore from an ecolinguistics perspective. This study, therefore, offers novelty by examining the ecological metaphors in the *lontar* manuscript of the *Megantaka* folklore. This study contributes to preserving local traditions, particularly the local wisdom of the Sasak people, which is mandated in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 10 of 2014 concerning Guidelines for the Preservation of Traditions. Article 4 states that folklore is among the objects of preservation.

Accordingly, the question raised in this research is:

1. How is the representation of ecological metaphors in the *lontar* manuscript of the *Megantaka*?

Analyzing ancient manuscripts can also reveal aspects of the Sasak's socio-cultural life of the past (Hidayat et al., 2021). In this light, research on Sasak's *lontar* manuscript contributes to cultural preservation, education, and reflection for national character building. Thus, this study is useful for understanding the ecological metaphors in the *lontar* manuscript of the *Megantaka* folklore. It aimed to describe the categories of ecological metaphors and their meanings in the *lontar* manuscript of the *Megantaka* folklore.

2. LITERATURE REVIEW

2.1 The *Lontar* Manuscript of the *Megantaka* Folklore

The literature of the Sasak tribe in Lombok Island has been transmitted both orally and in written form. In written form, palm leaves were used as a medium and inscribed in the Javanese *pasisiran* language, interwoven with Sasak (Lombok), Arabic, Malay, and Balinese terms. This style of writing is called *reramputans* (van der Meij, 2011). Palm leaves have long been a traditional writing medium since ancient times (Doermann & Tombre, 2014). Its use was recorded in Southeast Asia (Paulus et al., 2023), including in Cambodia since Buddhism first appeared in the country, in Thailand for over 500 years (Chamchong et al., 2010), and across the Indonesian archipelago (Kesiman et al., 2018).

One of the manuscripts in this tradition is the *lontar* manuscript of the *Megantaka* folklore, presented in the form of *Tembang Macapat*. Basir dan Marifatulloh (2018) described *tembang* as a traditional Javanese verse, often recited with melodies and used to convey folklore, life experiences, and personal letters. *Macapat* is one of the most popular genres of *tembang*, originating from the Javanese term *maca papat-papat* ('to read in four syllables') (Santosa, 2016; Saputra, 1992). Technically, van der Meij (2011) explained that *Tembang Macapat* is a type of rhyme with a fixed number of lines, syllables, and letters in the last syllable of each line.

Each *Tembang Macapat* has distinctive functions: *Tembang Durma* for war scenes, *Tembang Asmarandana* for romance, *Tembang Sinom* for openings and formal scenes, *Tembang Maskumambang* for sadness, *Tembang Pangkur* for anger, and *Tembang Dandang* for depicting atmosphere (Hadiprayitno, 2009). *Tembang Macapat* is also called *Tembang Cilik*, commonly found in the literary fibres of the New Javanese period and consisting of *Asmaradana*, *Dandang*, *Durma*, *Kinanthi*, *Maskumambang*, *Mijil*, *Pangkur*, *Pucung*, and *Sinom* verses (Sudaryanto & Pranowo, 2001). According to van der Meij (2011), *Tembang Macapat* in Lombok Island generally uses six of the nine rhythms, namely *Sinom*, *Asmarandana*, *Durma*, *Maskumambang*, *Pangkur*, and *Dandang*.

Similar to folklore in general, the *lontar* manuscript of the *Megantaka* folklore embodies traditional community knowledge about life and ecological wisdom (Babič, 2020; Tucker, 2008). Tucker (2008) stated that folklore is a source of traditional knowledge and wisdom about life. They serve as cultural markers, transmitting messages both explicitly and metaphorically through ecological symbols (Bronner, 2016; Garaeva & Nurieva, 2020). Through folklore, people learn the characteristics of a particular cultural group or region as it was constructed and articulated by the community itself (Abidin et al., 2023; Babič, 2020; Mamayev et al., 2021). Bronner (2016) argued that folklore constitutes a manifestation of the process of tradition, which explains the ways in which culture works and shapes human lives.

The *lontar* manuscript of the *Megantaka* folklore, which is housed in the State Museum of West Nusa Tenggara Province, Indonesia (Collection No. 07.205), measures 23.5 cm x 31 cm and consists of 190 plates written in Sasak script (*Jejawen*) by Papuq Jaban. Each plate consists of two pages, four lines of text, and a total of 102,532 stanzas. The manuscript is bound using three holes: two on the left and right for pegs, and one secured with wood clamps carved with vine motifs.



Figure 1. The *lontar* manuscript of the *Megantaka* folklore.

The manuscript includes *Tembang Macapat* with five rhythms: *Tembang Asmaradana*, *Tembang Sinom*, *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*. There are 104 stanzas in *Tembang Sinom*, 102 stanzas in *Tembang Asmaradana*, 198 stanzas in *Tembang Durma*, 96 stanzas in *Tembang Pangkur*, and 136 stanzas in *Tembang Dandang*, which were later transliterated into Indonesian by Purwata (2005). The manuscript recounts the struggle and love story of *Ambara Sari* and *Ambara Pati*, challenged by King *Megantaka*. *Ambara Sari*, born a *dampit* twin (a twin of the opposite sex), was banished to Gili Ratna by her parents, who feared she would bring disaster upon their kingdom, Negeri Nusantara. Her beauty attracted *Megantaka*, described as a powerful, cruel, and unrivalled king of Malaka. *Ambara Pati*, her lover, succeeded in rescuing her from King *Megantaka*'s palace. The subsequent loss of *Ambara Sari* angered King *Megantaka*, who launched an assault on Taman Sari, where the lovers had taken refuge.

2.2 Ecological Metaphor

The concept of environment as a metaphor in language functions as a linguistic code for its language users. This is the premise of the language ecology paradigm introduced by Haugen (1972) in his writing *Ecology of Language*. He said that there is an interaction between language and the environment of language users (Haugen, 1972). This paradigm later developed into ecolinguistics, which focuses on the relationship between the ecosystem and the language of its users (Fill & Mühlhäusler, 2001). Stibbe (2014) defined ecolinguistics as a discipline that explores the role of language in interactions among humans, other species, and the physical environment that sustains life. In this perspective, the concept of environment as a metaphor represents the intimate connection between language and nature. Metaphorical language enables people to conceptualize one entity in terms of another, drawing inspiration from the natural environment for lexical creation and reconstruction (Oktavianus & Revita, 2013).

Metaphors reflect and represent human thoughts, experiences, and feelings that emerge from everyday ecological surroundings (Lakoff & Johnson, 2003). Halley (1980) classified environmental metaphors into nine categories: a) 'being', referring to the abstract human experience with the predication of existence; b) 'cosmos', predicated on spatial aspects of the universe; c) 'energy', predicated on movement or behaviour; d) 'substance', predicated not only on being, space, and behaviour/movement, but also on inert matters; e) 'terrestrial', predicated on earth-bound expanses; f) 'object', predicated of definite form, (g) 'living', predicated on growth as an living entity; (h) 'animate', characterised by animacy and predicated on walking or running, and (i) 'human', predicated on thought.

The close relationship between language and the environment can be observed in the diversity of metaphors used in daily life. During the COVID-19 pandemic in 2020, for instance, El-Kanash and Hamdan (2023) found that the conceptual metaphors dominantly used by the Jordanian government were 'warfare' and 'containers', followed by 'ocean' and 'journey'. Imani (2021) examined Iran's political discourse, revealing frequent use of the word 'war' to represent

sociocultural factors, public cooperation, and national solidarity during the COVID-19 pandemic. Rajandran (2020) identified comparable strategies in how Malaysian and Singaporean governments communicated in March, April, and May 2020. He showed that the 'war' metaphor framed the virus's threat, spread, and responses, illustrating how metaphors describe and construct sociocultural realities.

Literary works, as part of human life, are also inseparable from metaphoric expressions. Metaphors in poetry have been examined from various perspectives. Jaber et al. (2016), for instance, examined the metaphors of mystical love in the poetry of Sohrab Sepehri, a contemporary Persian poet and painter. Their research concluded that Sepehri innovatively utilised conventional cognitive metaphors of love to construct complex symbolic relationships. Beyond literary works, metaphors are also central to religious and philosophical texts. Rajandran (2017), for example, used metaphors of enlightenment in Hinduism's foremost scripture, *Bhagavad-gītā*. According to Huma (2021), metaphors have long been used in technical texts to explain unknown structures, define scientific terms, and express concepts.

In the *lontar* manuscript of the *Megantaka* folklore, the diction similarly reveals frequent use of metaphors related to the environment, such as the metaphors of 'being', 'cosmos', 'energy', 'substance', 'terrestrial', 'object', 'living', 'animate', and 'human'. Each category can be found in each *tembang*, such as in *Tembang Asmaradana*, *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dangdang*. This demonstrates how ecological metaphors were integral to the Sasak people's narrative traditions and cultural worldview.

3. METHODS

This study used a qualitative content analysis approach grounded in ecolinguistics studies. The data for this research were collected from the *lontar* manuscript of the *Megantaka* folklore and its transliteration. Data collection began with intensive reading to identify vocabulary that reflected ecological metaphors in both the manuscript and its transliteration. To identify the metaphors, the Metaphor Identification Procedure (MIP) proposed by the Pragglejaz Group (Jaber et al., 2016) was applied. MIP determines metaphoricality by contrasting the basic meaning of a lexical item with its contextual meaning. Words, whose contextual meanings diverge from their basic meaning yet remain relatable, are classified as metaphorical.

The ecological metaphors identified were then categorised according to Halley's (1980) classification: 'being', 'cosmos', 'energy', 'substance', 'terrestrial', 'object', 'living', 'animate', and 'human'. For the data analysis, the study adopted an interactive analysis model introduced by Miles et al. (2018) consisting of three stages: 1) data reduction, in which linguistic data relevant to ecological metaphors in the *lontar* manuscript of the *Megantaka* folklore were sorted and selected, 2) data display, in which the extracted ecological metaphor data was organised by category and presented systematically for interpretation, and 3) conclusion drawing and verification, in which ecological meanings with reference to theory and research focus were interpreted, followed by verification of the findings to ensure accuracy and consistency.

4. RESULTS AND DISCUSSION

Based on the findings and data analysis, and in reference to Halley's (1980) ecological metaphor categorisation, eight categories of ecological metaphors were identified in the *lontar* manuscript of the *Megantaka* folklore. The categories of 'being', 'cosmos', 'energy', 'substance', 'terrestrial', 'object', 'living', and 'animate', are described in the following subsections

4.1 Ecological Metaphors of the 'Being' Category

Ecological metaphors of 'being' refer to abstract concepts that are nonetheless regarded as real. Halley (1980) explained that this category captures human experiences of existence in an

abstract form. In the *lontar* manuscript of the *Megantaka* folklore, metaphors of ‘being’ were recorded in *Tembang Macapat*, particularly in *Tembang Sinom* and *Tembang Dandang*. Ecological elements were employed as metaphors of ‘being’ in *Tembang Sinom* to describe and express admiration for the good appearance of the character *Tilar Negari*. Through these metaphors, physical qualities were elevated into symbolic expressions that not only highlighted attractiveness but also connected human aesthetics with broader cultural and ecological meanings.

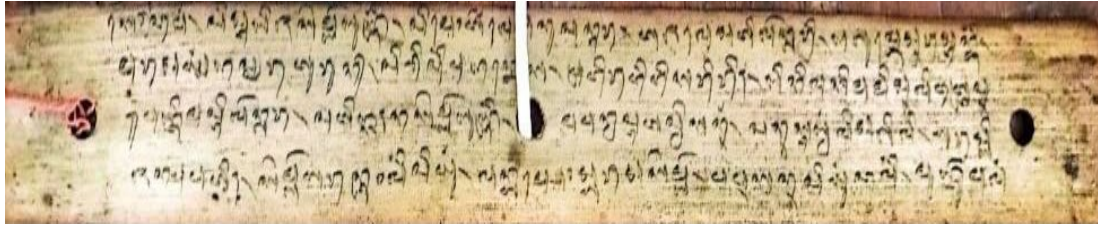


Figure 1. Stanza 445 of *Tembang Sinom*.

- (1) *Nengka lain takocapang, siq tabija kembang buncing, siq moter leq Nusantara, tajaleq Tilar Negari, bagus deq naraq tanding, maraq Hyang Smara turun, sidi ing pangandika, prawira wiwika ririh, bini laki mamiqna liwat trasna.* (Purwata, 2005, p. 141). – Stanza 445

[Now another is told, who was born a *dampit* twin, who ruled in the archipelago, named *Tilar Negari*, unequalled in dashing appearance, like the incarnation of *Hyang Smara*, his speech was auspicious, a smart gallant and officer, and both parents were very affectionate.] (Purwata, 2005, p. 141).

The concept of *Hyang Smara* appears in the second line of stanza 445 of *Tembang Sinom* (p. 141), where it was employed metaphorically. *Hyang Smara* is rooted in Hindu mythology and symbolises love and beauty. According to Zoetmulder and Robson (2006), *smara* means ‘love’, ‘beauty’, ‘the God of Love’, and ‘the God of Beauty’. Further, *Hyang Smara* is described as a deity with flowering arms that serves as the embodiment of beauty itself (Suarka, 2009). The metaphor of ‘being’ in this stanza reveals not only its intrinsic properties but also the subjective perception of selfhood and its relation with the surrounding world. It highlights how language can reflect the construction of individual identity and social power dynamics in a society. From an ecolinguistics perspective, this metaphor illustrates how language reflects and shapes social-power relations, cultural values, and environmental realities (Perangin-Angin & Dewi, 2020; Poole & Micalay-Hurtado, 2022; Riaz et al., 2022).

4.2 Ecological Metaphors of the ‘Cosmos’ Category

The ecological metaphors of the ‘cosmos’ category in the *lontar* manuscript of the *Megantaka* folklore were expressed in three *Tembang Macapat*, namely *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*. In *Tembang Durma*, the ‘cosmos’ category was represented through the ecological elements of the ‘full moon’ concept. In *Tembang Pangkur*, it appeared through the concept of ‘earth’, while in *Tembang Dandang*, the ‘cosmos’ category was represented in the predication of the concepts of ‘full moon’, ‘earth’, and ‘sky’. The concept of ‘earth’ was used in the manuscript as a metaphor that represented fear, while the juxtaposition of ‘earth’ and ‘sky’ symbolised intense longing. Across the three *tembang*, the concept of ‘full moon’ served as a metaphor for the character *Ambara Sari* to emphasise her beauty.

- (2) *Deneq Laki kaliwat bengaq nyarminang, cahyana Deq Bini, tandur maraq bulan, karti (ka) purnama kapaat, Bekul iwa Deneq Bii, Panji Ambara, pati alus si bamanik.* (Purwata, 2005, p. 30). – Stanza 78
[Raden Panji was astonished to see the light emanating from the princess’s face, bright as a fourteen-day full moon. *Bekul* held the princess on his lap; *Panji Ambara Pati* softly spoke.] (Purwata, 2005, p. 30).

The metaphor *purnama* or ‘full moon’ employed in (2) not only described the physical beauty of the princess but also conveyed the grace and glory that surrounded her, akin to the power and blessings of the universe. The stanza was situated in the narrative when *Ambara Sari*, in exile on Gili Ratna, was rediscovered by *Ambara Pati*, who was mesmerised by her beauty.

This metaphor exemplifies a manifestation of the complex relationship between humans and nature. By linking the princess' beauty with the brilliance of the full moon, for example, the manuscript demonstrates the human tendency to relate natural phenomena to emotions, states of mind, and everyday human experiences (Escobedo et al., 2019; Jismulatif et al., 2020; Weaver-Hightower, 2008). The imagery not only creates a vivid aesthetic effect but also highlights the deep connection between humans and the universe.

4.3 Ecological Metaphors of the 'Energy' Category

The ecological metaphor category of 'energy' was used in three *Tembang Macapat* within the *lontar* manuscript of the *Megantaka* folklore, namely *Tembang Asmaradana*, *Tembang Durma*, and *Tembang Pangkur*. This metaphor category not only predicates existence and spatial presence within the universe but also signifies movement and dynamic behaviour (Halley, 1980). In the manuscript, the sound of a *gangs*a was employed as a metaphor to describe the softness and subtlety of a female character's voice in the story, specifically that of *Puteri Kembang Emas*. *Gangs*a is a type of Balinese gamelan instrument with ten keys producing the tones *ndong*, *ndeng*, *ndung*, *ndang*, and *nding* (Brata & Darmawan, 2021; Priyatna et al., 2017; Triguna, 1993).

- (3) *Lekande mbe lala meni, kesasar tengaq alas, deq maraq tau ngaramen, Puteri Kembang Emas no nimbal, manis ling panyunggulang, deqne bina iq madu, suara maraq unin gangs*a. (Purwata, 2005, p. 187). – Stanza 583
[Where did you come from, princess, lost in the middle of the forest? There is no one here. *Puteri Kembang Emas* replied, her voice sweet as honey, her voice is like the sound of a *gangs*a.] (Purwata, 2005, p. 187).

This passage in (3) demonstrates the use of metaphors in an ecolinguistics context, especially in the use of words that describe natural energy. It narrated an experience in the wilderness where *Puteri Kembang Emas* encountered very mysterious circumstances, reflected through the words *lala meni* ('princess') and *kesasar tengaq alas* ('lost in the middle of the forest'). These metaphors created a contrast between gentleness (embodied by the princess) and uncertainty and fear (symbolised by the dark, desolate forest). Such tension illustrates the human relationship with the wild, where people often feel alienated or vulnerable. The description of her voice, *manis ling panyunggulang, deqne bina iq madu* ('sweet as honey') and *suara maraq unin gangs*a ('like the sound of a *gangs*a') drew attention to the sensory aspects of human interaction with the natural environment. The use of this metaphor shows how humans perceive and respond emotionally to nature, associating it with both comfort and awe. The 'sweet as honey' voice and the resonant timbre of the *gangs*a symbolised peace and natural beauty, which is in contrast to the solitude and uncertainty of the wilderness surrounding *Puteri Kembang Emas*.

4.4 Ecological Metaphors of the 'Substance' Category

The *lontar* manuscript of the *Megantaka* folklore contains only a single concept of an ecological metaphor within the 'substance' category. According to Halley (1980), metaphors in this category have a predication of existence, fill the space of the universe, predicate motion behaviour, and at the same time signify inert matters (Halley, 1980). This category was exemplified in *Tembang Durma* through the use of the metaphor 'boiled' to describe the conditions of catastrophic disaster.

- (4) *Tuning mula tuduhna nemu sangsara, Puteri Ambara Sari, andakep urungan, banjur dateng sangkala, umbaq kocak angina tarik, segara bangkal*. (Purwata, 2005, p. 35). – Stanza 97
[Indeed, it was her destiny to be miserable, *Puteri Ambara Sari*, there was no way to avoid it. Soon, there came a disaster; the waves roared the wind, the ocean boiled.] (Purwata, 2005, p. 35).

The phrase *segara bangkal* ('the ocean boiled') in (4) functions as a metaphor for the roaring waves of the sea. The high tide became a disaster for *Ambara Pati* and *Ambara Sari*, creating violent waves that struck their ship after departing from Gili Ratna, the place of *Ambara Sari*'s exile. Their vessel eventually sank, separating the two characters. This imagery reflects a

strong use of the ‘substance’ metaphors, in which elements of nature, such as waves, wind, and ocean, were imbued with symbolic power to amplify the emotional state and poor destiny of the princess. The ‘substance’ metaphors connect human experiences with natural forces, creating rich and immersive imagery (Jismulatif et al., 2020; Riaz et al., 2022; Xiao et al., 2023). Here, natural phenomena were portrayed as manifestations of unavoidable fate, resulting in a dramatic effect and intensifying the atmosphere of sadness and despair surrounding the princess. They further amplified the readers’ emotions about the characters, their experiences in the story, and the complex relationship between humans and nature.

4.5 Ecological Metaphors of the ‘Terrestrial’ Category

Three *Tembang Macapat* used the ecological metaphors from the ‘terrestrial’ category in the *lontar* manuscript of the *Megantaka* folklore. They were *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*. The ecological metaphors of the ‘terrestrial’ category have a predication of existence which occupies the space in the universe, exhibiting motion and being grounded in earth-bound expanses (Halley, 1980). In *Tembang Durma*, the ‘terrestrial’ category was represented by ‘sea sand’, which was metaphorically used to illustrate a large number of *Megantaka*’s soldiers who participated in the war. Another concept employed was ‘rain’ as a metaphor to describe the quantity of arrows released in the battle.

In *Tembang Pangkur*, ‘rain’ and ‘ocean’ were used as ‘terrestrial’ metaphors in the same statement and context within the *lontar* manuscript of the *Megantaka* folklore. Both were employed metaphorically by one of the main characters in the story, namely *Ambara Sari*, to symbolise her devotion, affection, and loyalty to *Ambara Pati*. When juxtaposed, these natural elements emphasised the depth of her emotional commitment. In *Tembang Dandang*, two stanzas use the concept of ‘mountain’ as a metaphor. In stanza 298, ‘mountain’ was used to describe splendour and grandeur, while in stanza 340, it symbolised sorrow.

- (5) *Barumpangan apit lawang, siq daun likong si kuning, batranggana kembang bujak, lawan kembang sangkaguri, punjungan seda giri.* (Purwata, 2005, p. 101). – Stanza 298
[With flowers left and right, yellow candlenut leaves, *temu lawak* flowers in the hair, and *sangkaguri* flowers, the bun is like a mountain.] (Purwata, 2005, p. 101).

The expression *punjungan seda giri* (‘the bun is like a mountain’) in (5) portrays the luxurious hair bun worn by the character *Grumpung Gelang*. The emergence of this metaphor was inseparable from the story setting, in which *Gerumpung Gelang* was adorned in preparation for her marriage to the character *Ambara*. When dressing up, she wore special clothes and a very tall, luxurious, and majestic *punjungan* (‘bun’). Here, the concept of *giri* or ‘mountain’ was used as a metaphor to convey elevation, grandeur, and permanence of the bun. From an ecolinguistics perspective, the use of this metaphor reflects the relationship between humans and their natural environment (Nash & Mühlhäusler, 2014; Nurhayani, 2024). The mention of ‘flowers’ and ‘leaves’ as part of the bun reconnects the human objects with nature, emphasising that language not only reflects but also shapes people’s interaction with their environment. In other words, metaphors of the ‘terrestrial’ category reveal how human cultural expressions are deeply embedded in, and symbolically dependent upon, the natural world.

4.6 Ecological Metaphors of the ‘Object’ Category

According to Halley (1980), metaphors in the ‘object’ category have a definite form of prediction. This category appeared in four *Tembang Macapat* of the *Megantaka* folklore, namely *Tembang Sinom*, *Tembang Asmaradana*, *Tembang Pangkur*, and *Tembang Dandang*. Across these *tembang*, the ecological concepts as metaphorical objects were used in 18 stanzas. In *Tembang Sinom*, the concept of ‘honey’ was used metaphorically to describe the emotions of *Panji Mas Tilar Negara* upon meeting his twin sister, *Ambara Sari*. In *Tembang Asmaradana*, ‘honey’ also appeared as a metaphor to illustrate the clarity and softness of the voice of the *Puteri*

Kembang Emas. In the same *tembang*, the concept of ‘sugar’ was employed to describe the gentle and respectful speech of a child towards his parents, exemplified by the character *Panji Mas Ambara Pati* when asking for permission from his father to travel to Nusantara.

In *Tembang Dandang*, several ecological concepts of the ‘object’ category appeared, including ‘arrows’, ‘gold’, ‘gems’, ‘egg yolks’, and ‘honey’. These metaphors of the ‘object’ category were employed to characterise physical appearance and human behaviour in the *Megantaka* folklore. For instance, a stretch of arrows was invoked to describe the physical beauty of the character *Panji Mas Ambara Pati*. The concept of ‘gold’ metaphorically represented the aura and beauty of the face and body of the female characters, *Ambara Sari* and *Puteri Mas Sekar Kencana*, while ‘gem’ serves as a symbol of physical beauty and expressions of romantic love from a man to a woman. The concept of ‘gem’ was also used in the *Megantaka* folklore to metaphorically describe the beauty of *Panji Tilar Negara*’s body parts. Further, *Panji Tilar Negara* was told to use the concept of ‘jewel’ to figuratively illustrate his feelings to convince *Mas Sekar Kencana* to accompany him in searching for his twin sister, *Ambara Sari*.

- (6) *Manis atur maraq madu gendis, duh mas mirah, nengka silaq lumbar, wewaresan mapan jaoq, ojoqna baret laut.* (Purwata, 2005, p. 151). – Stanza 470
[His words are sweet like honey, duh mas mirah, now let us go, together because it’s far, the direction is southwest.] (Purwata, 2005, p. 151).

The expression *manis atur maraq madu gendis* (‘his words are sweet like honey’) reflects the metaphorical power of ecological objects to convey kindness and gentleness in communication. Beyond simple comparison, this metaphor created an image that brings the sensory experience of speech to life. From an ecolinguistics standpoint, this metaphor reflects the way humans perceive their surrounding world through language (Fernández-Vázquez, 2021; Stibbe, 2014). Language becomes a window for humans to connect personal experiences with natural phenomena, such as the alluring sweetness of honey. Thus, the quote not only conveys a verbal message but also shows how humans understand and interpret their environment through the use of language.

This quote also illustrates the depth of language in representing human relationships with the environment. Metaphors highlight the role of language as a mirror of human interaction with nature. Through the use of language, people not only convey messages but also reflect on their personal experiences around them (Jismulatif et al., 2020; Ponton, 2015; Weaver-Hightower, 2008). In this context, words are not merely a collection of letters but a window into the human understanding of nature. By relating personal experiences to natural phenomena, such as the sweetness of honey, the manuscript illustrates how language can be a powerful means for humans to interpret and experience the surrounding world through language.

4.7 Ecological Metaphors of the ‘Living’ Category

The ecological metaphors in the ‘living’ category were the most widely used in the *lontar* manuscript of the *Megantaka* folklore, which occurred 20 times across the *Tembang Macapat*. Metaphors in the ‘living’ category were primarily expressed in the form of flora. According to Halley (1980), this category is predicated on growth as a living organism. In the manuscript, this category appeared in *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*.

Various living concepts used in the three *Tembang Macapat* included ‘flower’, ‘moss’, ‘leaves’, ‘guava’, ‘mangosteen’, ‘cotton’, ‘rice’, ‘pumpkin’, ‘coconut skin’, ‘ivory coconut’, and ‘logs’. Among these, ‘flower’ was the most dominant concept used as a metaphor from the ‘living’ category. In the manuscript, this metaphor symbolised the physical beauty and behavioural qualities of the female characters across *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*.

- (7) *Pasareyan leq Juli Ratna, puteri lan deneq laki, bareng enjep batang, puteri ande kakembang, masih nyalah tasunting, deq nedeng mekar, warna sapulu balit.* (Purwata, 2005, p. 33). – Stanza 92

[Where they slept on *Juli Ratna*, *Ambara Sari*, and *Ambara Pati* lay together. The princess was like a flower, still too young to be adorned, not yet ready to bloom, ten years old.] (Purwata, 2005, p. 33).

In excerpt (7) from *Tembang Durma*, the concept of ‘flower’ was used as a metaphor to illustrate the physical beauty of *Ambara Sari*, who was still very young to be taken as *Ambara Pati*’s wife. The phrase *sapulu balit* (‘ten years old’) indicates her immature age when *Ambara Pati* attempted to marry her. In *Tembang Pangkur*, the ‘flower’ metaphor shifts in meaning. Here, *Ambara Sari* likened herself to a flower as a gesture of surrender and devotion to *Ambara Pati*, representing the intertwining of love, self-offering, and destiny. Meanwhile, in *Tembang Dandang*, the ‘flower’ metaphor reappeared, this time symbolising *Ambara Sari*’s body and behaviour as she entered married life. This excerpt tells us that *Ambara Pati* and *Ambara Sari* were on their honeymoon, and the ‘flower’ metaphor reflects both physical beauty and emotional intimacy. Through these examples, the ‘living’ metaphors highlight how ecological imagery is embedded in cultural narratives to represent stages of life, beauty, and human relationships. They show how flora serves as a symbolic link between human experience and ecological ideas..

4.8 Ecological Metaphors of the ‘Animate’ Category

The ‘animate’ category of metaphors refers to the use of ecological concepts as metaphors derived from fauna. Halley (1980) defined this category as characterised by being animate, with predications of walking or running. There were seven instances of the ‘animate’ metaphors used in the *lontar* manuscript of the *Megantaka* folklore, particularly in *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*. the ‘grasshopper’ metaphor represents helplessness, especially when homes are burned by *Megantaka*’s army.

- (8) *Bala Malaka sabilang langan bajaran, salapug tasedutin, bilang desa dasan, saparo araq ngandang, maraq balang tipak api.* (Purwata, 2005, p. 130). – Stanza 400
[The *Malaka* warriors, looting along the way, burned everything, every village and hamlet, like grasshoppers exposed to fire.] (Purwata, 2005, p. 130).

In (8), the author figuratively used ‘grasshoppers’ to compare the *Malaka* soldiers of *Megantaka* with locusts consumed by flames. This evoked images of uncontrollable destruction perpetrated by the soldiers. From an ecolinguistics viewpoint, this ‘animate’ metaphor emphasised brutality and devastation by linking human behaviour to animal imagery (Fernández-Vázquez & Sancho-Rodríguez, 2020; Isti’annah, 2020; Stibbe, 2014). This metaphor creates a strong visual image of how the soldiers’ actions, swift, merciless, and all-consuming, mirror locusts set ablaze, ravaging everything in their path. This metaphor not only conveys violence but also situates human conflict within the natural order, showing how metaphors of fauna can reflect ecological realities of destruction and imbalance.

In this quote, the soldiers were also likened to living organisms (‘locusts’), which are connected to nature. However, the use of this metaphor positioned warriors as the bearers of destruction, raising questions about how humans utilise and even destroy the natural environment as part of conflicts and power. The quote also shows that metaphors in language are often used to intensify narrative meanings. Furthermore, the metaphor *maraq balang tipak api* (‘like grasshoppers exposed to fire’) not only described the actions of the soldiers but also gave a deeper emotional dimension to the readers, intensifying their feelings about the destruction and brutality of the *Malaka* soldiers. Overall, this quote reflects the complexity of human relationships with nature and other humans. Using ‘animate’ ecological metaphors, the excerpt highlights the intricate relations among humans, nature, and everyday experience.

5. CONCLUSION

The *lontar* manuscript of the *Megantaka* folklore that belongs to the Sasak people in Lombok Island, Indonesia, reveals that ecological metaphors function not only as representations

of the natural environment but also as cultural, social, and emotional symbols of the characters and events that enrich the narrative. The metaphor category of 'being' in *Tembang Sinom*, exemplified through the concept of *Hyang Smara*, reflects a cultural and social worldview of Hinduism, where *Smara* is revered as the 'God of Love', 'God of Beauty', and a symbol of 'love'. In addition, the metaphors of the 'cosmos' category, such as 'full moon' in *Tembang Durma*, 'earth' in *Tembang Pangkur*, and 'sky' in *Tembang Dandang*, described the profound connection between the universe, the feelings, and events in the story. They emphasized nature's balance and order as a metaphor for the world, whether in war, love, or life.

The 'energy' metaphors in *Tembang Asmaradana*, *Tembang Durma*, and *Tembang Pangkur* highlight the voice of *Puteri Kembang Emas* through the resonance of a gangsa, symbolising emotional strength and harmony. Meanwhile, the metaphors in the 'substance' category appearing in *Tembang Durma*, such as *segara bangkal* ('the ocean boiled') depicted the condition of a major disaster and conflict, intensifying the dramatic effect of the narrative. In the 'terrestrial' category, nature-related metaphors, including 'rain', 'sea sand', and 'mountains' in *Tembang Durma*, *Tembang Pangkur*, and *Tembang Dandang*, were employed to describe many events, soldiers, and fears in the story, creating a sense of depth and space where the battlefield and nature symbolised the grand scale of conflict and feelings. The ecological metaphors within the 'object' and 'living' categories, such as 'honey', 'sugar', and 'flower', embody gentleness, voice clarity, physical beauty, and purity of heart. These present the emotional aspects and interpersonal relationships. All of these ecological metaphors illustrate how language reflects and shapes the Sasak community's interaction with its natural surroundings.

This research has the significance of understanding ecological metaphors in the context of local culture to uncover the cultural, social, and emotional values embedded in literary works. It also enriches perspectives on the procedures of traditional societies, especially the Sasak, in conceptualising, utilising, and interpreting their natural environment through language. However, this research was limited to the ecological metaphors in the *lontar* manuscript of the *Megantaka* folklore. Future studies are encouraged to expand and extend this line of inquiry by examining other forms of oral literature and written traditions, exploring ecological metaphors from different cultural contexts, and investigating their broader social and cultural functions within the Sasak community and beyond.

ACKNOWLEDGMENT

This research was supported by *Pusat Layanan Pembiayaan Pendidikan* (Puslapdik or Center for Education Financial Services) and *Lembaga Pengelola Dana Pendidikan* (LPDP or Indonesia Endowment Funds for Education) through *Beasiswa Pendidikan Indonesia* (BPI or Indonesia Education Scholarship) of *Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi* (Kemendikbudristek or Ministry of Education, Culture, Research, and Technology) of Indonesia.

REFERENCES

- Abidin, Y., Mulyati, T., Yuniarti, Y., & Nurhuda, T. (2023). The effects of integrating folklore and mixed reality toward student's cultural literacy. *International Journal of Society, Culture & Language*, 11(1), 307-319. <https://doi.org/10.22034/ijscel.2023.1995761.2963>
- Afidah, R. L. N., Suyitno, & Suhita, R. (2022). Ecological balance in the metaphor of the novel-partikel by Dewi Lestari (eco-linguistic study). *International Journal of English Literature and Social Sciences*, 7(1), 15-18. <https://doi.org/10.22161/ijels.71.4>
- Babič, S. (2020). Waste and dirt in short folklore forms. *Traditiones*, 49(1), 125-139. <https://doi.org/10.3986/Traditio2020490107>
- Basir, U. P. M., & Marifatulloh, S. (2018). The art Tembang Macapat: Exclusiveness of the forms, value aspects, and learning approach. In S. Anam & E. Rahmawati (Eds.), *Proceedings of the 2nd Social Sciences, Humanities and Education Conference: Establishing Identities*

- through *Language, Culture, and Education* (SOSHEC 2018) (pp. 226-230). Atlantis Press. <https://doi.org/10.2991/soshec-18.2018.49>
- Brata, I. P. B. W., & Darmawan, I. D. M. B. A. (2021). Comparative study of pitch detection algorithm to detect traditional Balinese music tones with various raw materials. *Journal of Physics: Conference Series*, 1722, 012071. <https://doi.org/10.1088/1742-6596/1722/1/012071>
- Bronner, S. J. (2016). *Folklore: The basics*. Routledge. <https://doi.org/10.4324/9781315688381>
- Carraro, V. (2023). Of fixes and glitches: Mixing metaphors for platform urbanism. *Digital Geography and Society*, 4, 100056. <https://doi.org/10.1016/j.diggeo.2023.100056>
- Chamchong, R., Fung, C. C., & Wong, K. W. (2010). Comparing binarisation techniques for the processing of ancient manuscripts. In R. Nakatsu, N. Tosa, F. Naghdy, K. W. Wong, & Codognet (Eds.), *Cultural Computing: Second IFIP TC 14 Entertainment Computing Symposium (ECS 2010)* (pp. 55-64). Springer. https://doi.org/10.1007/978-3-642-15214-6_6
- Doermann, D., & Tombre, K. (Eds.). (2014). *Handbook of document image processing and recognition*. Springer. <https://doi.org/10.1007/978-0-85729-859-1>
- El-Kanash, H. H., & Hamdan, J. M. (2023). COVID-19 conceptual metaphors in Jordanian political discourse: Evidence from a newspaper-based corpus. *GEMA Online: Journal of Language Studies*, 23(1), 93-113. <http://dx.doi.org/10.17576/gema-2023-2301-06>
- Escobedo, F. J., Giannico, V., Jim, C. Y., Sanesi, G., & Laforteza, R. (2019). Urban forests, ecosystem services, green infrastructure and nature-based solutions: Nexus or evolving metaphors? *Urban Forestry & Urban Greening*, 37, 3-12. <https://doi.org/10.1016/j.ufug.2018.02.011>
- Fernández-Vázquez, J. (2021). Analysing the environmental websites of the world's greatest polluters: A multimodal ecolinguistic approach. *Economic Research-Ekonomska Istrazivanja*, 34(1), 2692-2711. <https://doi.org/10.1080/1331677X.2020.1836993>
- Fernández-Vázquez, J., & Sancho-Rodríguez, Á. (2020). Critical discourse analysis of climate change in IBEX 35 companies. *Technological Forecasting & Social Change*, 157, 120063. <https://doi.org/10.1016/j.techfore.2020.120063>
- Fill, A., & Mühlhäusler, P. (Eds.). (2001). *The ecolinguistics reader: Language, ecology, and environment*. Continuum.
- Garaeva, L. M., & Nurieva, G. R. (2020). Verbal aggression of interprofessional communication: On the material of Russian and English languages. *International Journal of Society, Culture & Language*, 8(3), 28-36. https://www.ijscsl.com/article_242941.html
- Garcia, M. J. M., Mendez, A. L., & Kirsch, W. (2022). Novel metaphors for a novel school: Narratives, voices and experiences from pre-service teachers engaged in service-learning in Spain. *Teaching and Teacher Education*, 119(2), 103840. <https://doi.org/10.1016/j.tate.2022.103840>
- Hadiprayitno, K. (2009). *Filsafat keindahan Suluk Wayang Kulit Purwa Gaya Yogyakarta: Pemahaman konsep suluk sebagai jalan ke arah keluhuran budi dan moralitas bangsa* [The aesthetic philosophy of Suluk Wayang Kulit Purwa Gaya Yogyakarta: Understanding the concept of suluk as a path toward nobility of character and national morality]. Bagaskara.
- Halley, M. C. (1980). Concrete abstraction: The linguistic universe of metaphors. In M. K. L. Ching, M. C. Halley, & R. F. Lonsford (Eds.), *Linguistic perspective on literature* (pp. 139-154). Routledge.
- Haugen, E. (1972). *The ecology of language*. Stanford University Press.
- Hidayat, A., A., Purwandaria, K., Cenggoro, T. W., & Pardamean, B. (2021). A convolutional neural network-based ancient character classifier with data augmentation. *Procedia Computer Science*, 179, 195-201. <https://doi.org/10.1016/j.procs.2020.12.025>
- Hilmi, H. S., Andayani, A., & Wardani, N. E. (2024a). Ecological wisdom in the legend of Otak Aiq Tojang: An ecocritical analysis. *Studies in English Language and Education*, 11(2), 1193-1212. <https://doi.org/10.24815/siele.v11i2.35428>

- Hilmi, H. S., Andayani, & Wardani, N. E. (2024b). Human and nature relations in Hooykaas Christiaan's Enige Sasakse Volksvertelsels (Lombok): An ecocritical study. *Research Journal in Advanced Humanities*, 5(1), 45-62. <https://doi.org/10.58256/5k4q1x70>
- Hilmiyatun, H., Suwandi, S., Waluyo, H., & Wardani, N. (2020). Cilinaya (the ecocritic analysis of literature in the folklore of Sasak people in Lombok). In *Proceedings of the 1st Conference of Visual Art, Design, and Social Humanities by Faculty of Art and Design (CONVASH 2019)*. European Alliance for Innovation. <https://doi.org/10.4108/eai.2-11-2019.2294776>
- Humar, M. (2021). Metaphors as models: Towards a typology of metaphor in ancient science. *History and Philosophy of the Life Sciences*, 43(3), 101. <https://doi.org/10.1007/s40656-021-00450-2>
- Imani, A. (2021). What 'Corona War' metaphor means in Iranian political discourse. *GEMA Online: Journal of Language Studies*, 21(4), 329-341. <https://doi.org/10.17576/gema-2021-2104-17>
- Inawati, I., Agustina, A., & Sukirman, S. (2022). Analisis metafora berdasarkan sudut pandang ekologi album lagu Best of Anji tahun 2020 [An analysis of metaphors from an ecological perspective in the 2020 album Best of Anji]. *Jurnal Bindo Sastra*, 6(2), 105-117. <https://doi.org/10.32502/jbs.v6i2.3754>
- Isti'anah, A. (2020). (Re)evaluating language attitudes on Indonesian tourism website: A study on ecolinguistics. *Studies in English Language and Education*, 7(2), 622-641. <https://doi.org/10.24815/siele.v7i2.16683>
- Jaberi, S., Abdullah, I. H., & Vengadasamy, R. (2016). Mystical love metaphors: A cognitive analysis of Sohrab Sepehri's poetry. *GEMA Online: Journal of Language Studies*, 16(1), 143-156. <https://ejournal.ukm.my/gema/article/view/9414>
- Jismulatif, Dahnilisyah, & Sinaga, M. (2020). An ecolinguistics analysis of Indonesian pop music lyrics on environment: A review of two nature songs. *Journal of Physics: Conference Series*, 1655, 012129. <https://doi.org/10.1088/1742-6596/1655/1/012129>
- Kesiman, M. W. A., Valy, D., Burie, J.-C., Paulus, E., Suryani, M., Hadi, S., Verleysen, M., Chhun, S., & Ogier, J.-M. (2018). Benchmarking of document image analysis tasks for palm leaf manuscripts from Southeast Asia. *Journal of Imaging*, 4(2), 43. <https://doi.org/10.3390/jimaging4020043>
- Koopman, J. (2023). Subawe, traditional knowledge, and faith-based organisations Indonesia case study promoting social capital and disaster preparedness: A Lombok, Indonesia case study. *International Journal of Disaster Risk Reduction*, 94, 103837. <https://doi.org/10.1016/j.ijdr.2023.103837>
- Lakoff, G., & Johnson, M. (2003). *Metaphors we live by*. The University of Chicago Press.
- Li, D.-L., & Du, G.-S. (2023). A study of school sport ecological metaphor generation. *Journal of Namibian Studies: History Politics Culture*, 33(Special Issue 2), 4523-4544. <https://doi.org/10.59670/jns.v33i.1158>
- Luporini, A. (2021). Metaphor, nominalization, appraisal: Analyzing coronavirus-related headlines and subheadings in China Daily and The Wall Street Journal. *GEMA Online: Journal of Language Studies*, 21(1), 253-273. <http://dx.doi.org/10.17576/gema-2021-2101-15>
- Mamayev, Z. B., Boranbayev, S. R., Karabayeva, K. A., Issayeva, Z. I., & Mamayeva, G. B. (2021). Kazakh-Uzbek literary relations: History and specificity of literary translation. *International Journal of Society, Culture & Language*, 9(2), 114-122. https://www.ijscel.com/article_245185.html
- Marrison, G. E. (1997). The literature of Lombok: Sasak, Balinese, and Javanese. *Indonesia and the Malay World*, 25(73), 221-234. <https://doi.org/10.1080/13639819708729901>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2018). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications. Inc.
- Naithani, S. (2024). When humans, animals, and plants talk to each other. *Folklore*, 135(2), 147-158. <https://doi.org/10.1080/0015587X.2024.2320492>

- Nash, J., & Mühlhäusler, P. (2014). Linking language and the environment: The case of Norfolk and Norfolk Island. *Language Sciences*, 41(A), 26-33. <https://doi.org/10.1016/j.langsci.2013.08.004>
- Nurhayani, I. (2024). Humans and animal welfare in the Adventures of the Mouse-deer: An ecological discourse analysis. *Cogent Arts and Humanities*, 11(1), 2316412. <https://doi.org/10.1080/23311983.2024.2316412>
- Nuryati, N. (2019). Kearifan lokal etnis Sasak dalam cerita rakyat Monyeh [Local wisdom of the Sasak ethnic group in the folktale Monyeh]. *Mabasan*, 5(1), 102-115. <https://doi.org/10.26499/mab.v5i1.202>
- Oerlemans, A. J. M., Dorst, A. G., Knippenberg, M. L., & Olthuis, G. J. (2023). Dementia in metaphors: A qualitative study among informal caregivers of people with dementia from migrant and ethnic minority groups. *SSM - Qualitative Research in Health*, 3, 100266. <https://doi.org/10.1016/j.ssmqr.2023.100266>
- Oktavianus, & Revita, I. (2013). *Kesantunan dalam bahasa Minangkabau* [Politeness in the Minangkabau language]. Minangkabau Press.
- Paulus, E., Burie, J., & Verbeek, F. J. (2023). Text line extraction strategy for palm leaf manuscripts. *Pattern Recognition Letters*, 174, 10-16. <https://doi.org/10.1016/j.patrec.2023.08.007>
- Perangin-Angin, D. M., & Dewi, N. (2020). An ecolinguistic analysis of folksongs in endangered Pagu language. *SKASE Journal of Theoretical Linguistics*, 17(5), 175-191.
- Ponton, D. M. (2015). The natural choice? Metaphors for nature in a UK government white paper. *Language and Text*, 2(3), 97-120. <https://doi.org/10.17759/langt.2015020312>
- Poole, R., & Micalay-Hurtado, M. A. (2022). A corpus-assisted ecolinguistic analysis of the representations of tree/s and forest/s in US discourse from 1820-2019. *Applied Corpus Linguistics*, 2(3), 100036. <https://doi.org/10.1016/j.acorp.2022.100036>
- Priyatna, I. M. A., Yani, L. P. I., Trisnanto, S. R., Bagus, Darmaputra, I. G. B. N. E., Maldini, A. A. K. R., & Mantoro, T. (2017). The potential implementation of 'DEGALANTIL' using fuzzy logic analysis. In *International Conference on Computing, Engineering, and Design (ICCED)* (pp. 1-5). IEEE. <https://doi.org/10.1109/CED.2017.8308093>
- Purwata, L. (Ed.). (2005). *Transliterasi dan terjemahan naskah lontar Megantaka* [Transliteration and translation of the Megantaka lontar manuscript]. Dinas Kebudayaan dan Pariwisata Provinsi Nusa Tenggara Barat.
- Rajandran, K. (2017). From matter to spirit: Metaphors of enlightenment in Bhagavad-gītā. *GEMA Online: Journal of Language Studies*, 17(2), 163-176. <http://dx.doi.org/10.17576/gema-2017-1702-10>
- Rajandran, K. (2020). 'A long battle ahead': Malaysian and Singaporean Prime Ministers employ war metaphors for COVID-19. *GEMA Online: Journal of Language Studies*, 20(3), 261-267. <http://dx.doi.org/10.17576/gema-2020-2003-15>
- Riaz, S., Mehmood, R., & Shah, A. H. (2022). The language of cultural ecopoetics: A linguistic articulation of ecological framing in The Arrival of Monsoon. *3L: Language, Linguistics, Literature*, 28(3), 52-68. <https://doi.org/10.17576/3L-2022-2803-04>
- Saharudin, S. (2016). Perilaku liminal masyarakat Sasak-Lombok dalam Bêkayaq Bau Nyalé dan Pataq Paré [The behavioral threshold of the Sasak-Lombok community in Bêkayaq Bau Nyalé and Pataq Paré]. *SASDAYA: Gadjah Mada Journal of Humanities*, 1(1), 87-112. <https://doi.org/10.22146/sasdayajournal.17036>
- Santosa, P. (2016). Fungsi sosial kemasyarakatan Tembang Macapat [The social function of Tembang Macapat]. *Widyaparwa*, 44(2), 97-109. <https://widyaparwa.kemendikdasmen.go.id/index.php/widyaparwa/article/view/131>
- Saputra, K. H. (1992). *Pengantar Sekar Macapat* [Introduction to Sekar Macapat]. Fakultas Sastra Universitas Indonesia.
- Semino, E., Demjén, Z., & Demmen, J. (2018). An integrated approach to metaphor and framing in cognition, discourse, and practice, with an application to metaphors for cancer. *Applied Linguistics*, 39(5), 625-645. <https://doi.org/10.1093/applin/amw028>

- Shubhi, M. (2012). Analisis struktural cerita Cilinaye: Upaya mengungkap kearifan lokal masyarakat Sasak [Structural analysis of the story Cilinaye: An effort to reveal the local wisdom of the Sasak community]. *Mabasan*, 6(2), 69-84. <https://doi.org/10.26499/mab.v6i2.231>
- Silvestre-López, A.-J. (2020). Conceptual metaphor in meditation discourse: An analysis of the spiritual perspective. *GEMA Online: Journal of Language Studies*, 20(1), 35-53. <http://dx.doi.org/10.17576/gema-2020-2001-03>
- Smith, B. J. (2021). Sufism and the sacred feminine in Lombok, Indonesia: Situating spirit queen Dewi Anjani and female saints in Nahdlatul Wathan. *Religions*, 12(8), 563. <https://doi.org/10.3390/rel12080563>
- Stibbe, A. (2014). An ecolinguistic approach to critical discourse studies. *Critical Discourse Studies*, 11(1), 117-128. <https://doi.org/10.1080/17405904.2013.845789>
- Suarka, I. N. (2009). *Telaah sastra Kakawin* [A study of Kakawin literature]. Pustaka Larasan.
- Sudaryanto, & Pranowo. (2001). *Kamus pepak Basa Jawa* [Comprehensive dictionary of the Javanese language]. Badan Pekerja Kongres Bahasa Jawa.
- Suyasa, I. M. (2020). *Sastra pariwisata* [Tourism literature]. Kanisius.
- Triguna, Y. I. B. G. (1993). *Peralatan hiburan dan kesenian tradisional Bali* [Traditional entertainment and art equipment of Bali]. Direktorat Jenderal Kebudayaan.
- Tucker, E. (2008). *Children's folklore*. Greenwood Press.
- van der Meij, D. (2011). Satra Sasak selayang pandang [An overview of Sasak literature]. *Jurnal Manassa Manuskripta*, 1(1), 17-45.
- van der Meij, D. (2022). Islamic palm-leaf manuscripts from Lombok. *Journal of Islamic Manuscripts*, 13(3), 265-290. <https://doi.org/10.1163/1878464X-01302003>
- Weaver-Hightower, M. B. (2008). An ecology metaphor for educational policy analysis: A call to complexity. *Educational Researcher*, 37(3), 153-167. <https://doi.org/10.3102/0013189X08318050>
- Xiao, H.-Z., Zhang, W., & Mo, R. (2023). A multidimensional alignment sustainability model for language development: Evidence from L1 and L2 semio- semantic and semio-pragmatic markers. *Language & Communication*, 100, 101572. <https://doi.org/10.1016/j.langsci.2023.101572>
- Yani, T. A., & Irma, C. N. (2022). Kajian ekolinguistik metaforis pada upacara adat pernikahan di Kecamatan Bantarkawung [A metaphorical ecolinguistic study of traditional wedding ceremonies in Bantarkawung District]. *Dialektika: Pendidikan Bahasa Indonesia*, 2(1), 132-156. <https://journal.peradaban.ac.id/index.php/jdpbsi/article/view/1204>
- Yaqin, L. N., & Shanmuganathan, T. (2018). The non-observance of Grice's maxims in Sasak. *3L: Language, Linguistics, Literature*, 24(2), 166-180. <https://doi.org/10.17576/3L-2018-2402-13>
- Yung, V. (2021). A visual approach to interpreting the career of the network metaphor. *Poetics*, 88, 101566. <https://doi.org/10.1016/j.poetic.2021.101566>
- Zaini, M. F. Z., Sarudin, A., Muhammad, M. M., & Bakar, S. S. A. (2020). Representatif leksikal Ukuran sebagai metafora linguistik berdasarkan teks klasik Melayu [Representatives of lexical Ukuran as linguistics metaphors based on Malay classic text]. *GEMA Online: Journal of Language Studies*, 20(2), 168-187. <http://dx.doi.org/10.17576/gema-2020-2002-10>
- Zoetmulder, P. J., & Robson, S. O. (2006). *Kamus Jawa kuno Indonesia* [Proto Javanese–Indonesian dictionary] (Darusuprpta & S. Suprayitno, Trans.). Gramedia Pustaka Utama.