

Metaphors of Extinct and Mythical Animals: A Cross-Cultural Cognitive Study

Mohamed Almasharfeh

University of Jordan, Amman, Jordan

Email: mhm9240237@ju.edu.jo

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Abstract

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This study explores metaphorical representations of extinct and mythical animals across cultures using Conceptual Metaphor Theory (CMT) to reveal universal cognitive patterns and cultural narratives. Analyzing 500 expressions from diverse traditions, it examines how these animals conceptualize resilience, justice, wisdom, and unpredictability. Employing qualitative and comparative methods alongside Kövecses' (2020) schematicity hierarchy, the research traces metaphors from embodied schemas to mental spaces. Universal metaphors, such as RESILIENCE IS REBIRTH (phoenix), reflect shared cognitive structures, while culturally distinct metaphors, like the Chinese dragon symbolizing wisdom versus Western depictions of greed, highlight ecological and societal influences. Diachronic analysis shows metaphors evolving, such as the phoenix's shift to symbolize ecological restoration amid sustainability trends. Findings underscore the emotional and cognitive resonance of these metaphors, offering insights into cross-cultural communication, environmental advocacy, and education by illustrating how metaphors bridge tangible imagery with abstract ideas and cultural identity.

I. INTRODUCTION

Metaphors are fundamental to human cognition, enabling the conceptualization of abstract ideas through familiar, tangible imagery. As articulated by Lakoff and Johnson (1980), metaphors are not mere linguistic expressions but vital cognitive tools that shape perception, reasoning, and communication. Within the framework of Conceptual Metaphor Theory (CMT), animals have long served as powerful source domains for metaphors, representing attributes such as strength, loyalty, cunning, and fear. While significant attention has been given to the metaphorical use of living animals, the roles of extinct and

mythical animals remain a relatively unexplored dimension of metaphorical thought. These creatures, anchored in imagination and cultural memory, offer unique opportunities to study how metaphorical language transcends lived experience and reflects deeper cultural narratives.

This study seeks to address the gap by examining the metaphorical representations of extinct and mythical animals across diverse cultures and traditions. Extinct animals, such as dinosaurs and dodos, often symbolize obsolescence, irrelevance, or fragility, as seen in phrases like “a dinosaur in the industry” or “gone the way of the dodo.” Conversely,

mythical creatures such as dragons, phoenixes, and unicorns are imbued with meanings that embody cultural ideals, ranging from wisdom and resilience to rarity and transcendence. For instance, the phoenix is a near-universal metaphor for rebirth and transformation, while dragons evoke strikingly different associations: symbols of wisdom and prosperity in Chinese culture versus greed and destruction in Western traditions.

The study further broadens its scope by including underrepresented languages and cultural traditions, introducing a rich tapestry of metaphorical constructs. African mythologies feature the Nyaminyami, a revered river god embodying protection and unpredictability, and the Impundulu, a lightning bird symbolizing vengeance and destructive power. South Asian traditions, deeply rooted in Sanskrit epics and Puranic literature, contribute creatures like the Garuda, a divine bird representing vigilance and justice, and the Naga, serpent beings embodying wisdom, fertility, and cosmic balance. Persian and South Asian mythology introduces the Simurgh, a majestic bird associated with healing and divine guidance, while the Makara, a hybrid creature combining elements of a crocodile and an elephant, symbolizes strength, mystery, and guardianship over sacred waters. Indigenous traditions enrich this study with animals like the Thunderbird, a powerful symbol of authority and cosmic justice in North American cultures, and Quetzalcoatl, the feathered serpent of Aztec mythology representing renewal and creativity.

By integrating examples from Arabic, English, Mandarin, Spanish, and other linguistic and cultural traditions, this research seeks to identify both universal and culturally specific patterns of metaphorical representation. A qualitative and comparative methodology underpins this analysis, enriched by diachronic perspectives to trace the evolution of these metaphors across time and contexts. The dataset is drawn from a broad spectrum of sources, including classical and contemporary literature, media, folklore, and environmental discourses.

This exploration aims to contribute to the broader understanding of metaphorical thought,

demonstrating how extinct and mythical animals serve as potent conceptual tools that transcend linguistic boundaries. The findings have significant implications for cross-cultural communication, environmental advocacy, and the study of cognitive and cultural frameworks. By uncovering the shared and unique metaphorical roles of these animals, the study not only expands the scope of CMT but also sheds light on the profound ways in which cultures encode their values, fears, and aspirations through metaphor.

II. THEORETICAL FRAMEWORKS

This research is firmly rooted in Conceptual Metaphor Theory (CMT), as articulated by Lakoff and Johnson (1980) and further expanded by scholars like Kövecses (2002, 2020). CMT posits that metaphors are not merely linguistic tools but cognitive mechanisms that structure human understanding of abstract concepts through concrete, embodied experiences. A central tenet of this framework is embodied cognition, which argues that human thought is shaped by bodily and sensory experiences. For instance, metaphors such as the phoenix's rebirth or the Thunderbird's justice draw from physical schemas like CONTAINERS ARE EMPTY/FULL or STORMS ARE POWERFUL, showcasing the interplay between physical experience and abstract thought.

A significant theoretical dimension employed in this research is Kövecses' (2020) schematicity hierarchy, which structures metaphors across four interconnected levels: image-schema, domain, frame, and mental-space. This hierarchy provides a systematic approach to analyze how extinct and mythical animals are mapped onto abstract ideas such as resilience, justice, and unpredictability. By applying this layered framework, the study elucidates how metaphors evolve from basic embodied experiences to complex situational applications, demonstrating their cognitive adaptability.

The research also incorporates insights from cultural models in metaphor, emphasizing the role of cultural narratives, ecological contexts, and societal priorities in shaping metaphorical thought. For instance, the dragon metaphor varies significantly between Chinese and

Western traditions: in Chinese culture, dragons symbolize wisdom and prosperity, while in Western contexts, they are associated with greed and destruction. This divergence underscores how cultural models influence the conceptualization of metaphors.

A diachronic perspective is integral to this study, aligning with theoretical approaches that examine the evolution of language and metaphor over time. By analyzing how metaphors adapt to contemporary concerns, such as the phoenix's shift from a symbol of renewal to a metaphor for ecological restoration, the research highlights the dynamic nature of metaphorical thought and its responsiveness to changing cultural and environmental priorities.

Cross-cultural cognitive linguistics forms another foundational layer of the theoretical framework. This approach facilitates a comparative analysis of metaphorical mappings across languages and traditions, revealing both universal cognitive patterns and culturally specific variations. The study's inclusion of Arabic, English, Mandarin, South Asian, African, and Indigenous traditions underscores the importance of examining metaphor within diverse cultural contexts to gain a comprehensive understanding of its cognitive and cultural dimensions.

Lastly, the research acknowledges the emerging domain of multimodal metaphor theory, which examines how linguistic, visual, and auditory metaphors interact to create multidimensional meanings. While not fully developed in this study, this perspective offers a promising avenue for future research, particularly in understanding the interplay of metaphors across different media and communicative modes.

Collectively, these theoretical frameworks provide a robust foundation for analyzing the metaphorical representations of extinct and mythical animals, bridging universal cognitive mechanisms with cultural specificity and diachronic evolution. By integrating these perspectives, the study contributes to a nuanced understanding of how metaphors shape language, thought, and cultural identity.

III. LITERATURE REVIEW

The study of metaphors within Conceptual Metaphor Theory (CMT) has provided valuable insights into the cognitive and cultural processes that shape human thought and language (Lakoff & Johnson, 1980). A significant portion of this research has focused on the metaphorical use of living animals, emphasizing their role in expressing abstract ideas such as strength, cunning, or loyalty (Kövecses, 2010). However, the metaphorical use of extinct and mythical animals remains underexplored, despite their frequent appearance in literature, media, and cultural narratives. This literature review synthesizes relevant studies and recent findings to establish a foundation for investigating the metaphorical representation of extinct and mythical animals.

CMT posits that metaphors are not simply linguistic devices but cognitive structures that allow individuals to understand abstract domains through concrete experiences (Lakoff & Johnson, 1980). Research into animal metaphors has highlighted how animals serve as source domains for human characteristics, such as cunning (fox), bravery (lion), and loyalty (dog) (Charteris-Black, 2004; Kövecses, 2002). These metaphors are deeply embedded in cultural schemas, reflecting both universal and culture-specific cognitive patterns (Deignan, 2005). For example, Deignan and Potter (2004) examined how animal metaphors in English and Italian differ, revealing that cultural contexts significantly influence metaphorical usage. Similarly, Yusuf (1998) explored animal metaphors in Chinese, noting the prominence of dragons as symbols of power and benevolence. These studies underscore the importance of cultural factors in shaping metaphorical thought, yet they largely overlook extinct and mythical animals as metaphorical domains (Lakoff & Turner, 1989).

Extinct animals, such as dinosaurs, are often invoked metaphorically to represent outdatedness, obsolescence, or massive scale (Lakoff & Turner, 1989). Charteris-Black (2004) discussed how the term "dinosaur" is used to critique inefficiency in industries, reflecting a collective understanding of extinction as a metaphor for irrelevance. Additionally, Werness

(2006) highlighted the cultural fascination with extinct creatures, noting their symbolic representation of both loss and the passage of time. Recent findings further illuminate the diverse metaphorical roles of extinct animals. For example, African mythologies reference the Nyaminyami, a revered river god symbolizing protection and unpredictability (Nyathi, 2005), while South Asian traditions draw on the Makara, a hybrid creature representing strength and mystery (Zimmer, 1955). These examples expand the scope of extinct animal metaphors beyond Western industrial narratives, emphasizing their cultural and ecological dimensions (Larson, 2011).

Mythical animals, such as dragons, phoenixes, and unicorns, are deeply rooted in cultural narratives and have been used metaphorically to express abstract concepts like wisdom, renewal, and purity (Lakoff & Turner, 1989; Kövecses, 2002). Yusuf (1998) emphasized the role of dragons in Chinese culture, where they symbolize strength, prosperity, and harmony. In contrast, Western traditions often portray dragons as greedy or destructive, reflecting cultural schemas of fear and conquest (Charteris-Black, 2004). Recent contributions highlight the diversity of mythical animal metaphors across underrepresented traditions. South Asian mythology introduces the Garuda, a divine bird symbolizing vigilance and justice (Bryant, 2001), and the Naga, serpent beings representing wisdom and fertility (Coburn, 1984). Persian and South Asian traditions feature the Simurgh, a bird associated with healing and divine guidance (Zimmer, 1955), while Indigenous North American cultures celebrate the Thunderbird as a symbol of cosmic justice and authority (Johnston, 1990). These findings reveal how mythical creatures encode profound cultural values and highlight the interplay between metaphor, cognition, and identity.

The use of animal metaphors in environmental discourse has gained attention in recent years. Larson (2011) explored how metaphors influence perceptions of climate change, noting that extinct animals like the dodo are often used to emphasize the consequences of human actions. Similarly, Nerlich and Jaspal (2012) examined how metaphors shape public

understanding of biodiversity loss, highlighting the role of animals as symbols of vulnerability and resilience. New findings reveal that mythical animal metaphors play a crucial role in shaping environmental narratives. The phoenix, for instance, is widely invoked in sustainability discussions to symbolize ecological restoration and renewal, resonating across Western and Arabic traditions (Davis, 2007). African and Indigenous mythologies contribute unique metaphors, such as the Thunderbird (Johnston, 1990) and Nyaminyami (Nyathi, 2005), emphasizing harmony with nature and the consequences of ecological imbalance.

The cognitive and emotional responses elicited by extinct and mythical animal metaphors remain an emerging area of research. Studies on metaphor comprehension suggest that metaphors involving imaginative domains can enhance creativity and abstract thinking (Gibbs, 1994; Kövecses, 2010). For example, Lakoff and Turner (1989) argued that mythical creatures provide rich source domains for understanding complex ideas due to their association with mystery and transcendence. Recent studies reinforce this perspective by exploring the emotional resonance of mythical animal metaphors in underrepresented cultures. The Garuda, Naga, and Simurgh evoke themes of justice, protection, and healing, respectively, eliciting strong emotional connections in South Asian and Persian traditions (Coburn, 1984; Zimmer, 1955). Similarly, the Nyaminyami and Thunderbird symbolize protection and authority, fostering emotional engagement with ecological and cultural narratives (Nyathi, 2005; Johnston, 1990). These findings highlight the universal and culture-specific dimensions of metaphorical thought, demonstrating the profound impact of extinct and mythical animals on human cognition and communication.

In summary, the literature review reveals significant progress in understanding the metaphorical roles of living animals while emphasizing the need to explore extinct and mythical creatures. By incorporating diverse linguistic and cultural traditions, this study aims to expand the theoretical and practical scope of CMT, offering new insights into how

metaphors shape human thought and cultural expression.

IV. METHODOLOGY

This research investigates the metaphorical representation of extinct and mythical animals using Conceptual Metaphor Theory (CMT) as its analytical framework. The study adopts a qualitative, comparative approach, enriched by cross-cultural and diachronic perspectives, to explore how these animals function as metaphorical constructs in diverse cultural and linguistic traditions. By incorporating examples from both well-documented and underrepresented languages, the methodology aims to uncover universal and culturally specific patterns in metaphorical thought.

4.1 Research Design

The study employs a comparative research design rooted in the principles of CMT as outlined by Lakoff and Johnson (1980). It focuses on identifying metaphors that use extinct and mythical animals as source domains to express abstract concepts such as resilience, power, obsolescence, fear, and renewal. A cross-cultural perspective is central to this research, examining variations in metaphorical usage across Arabic, English, Mandarin, Spanish, and additional traditions from African, South Asian, and Indigenous cultures. The diachronic component traces the evolution of these metaphors over time, offering insights into their historical and contemporary relevance.

4.2 Data Collection

Data were drawn from a wide range of sources to ensure a comprehensive and representative dataset. Classical and contemporary literature provided examples of metaphorical expressions, such as the wolf in Arabic poetry symbolizing betrayal, the Garuda in Sanskrit epics representing vigilance, and dinosaurs in Western literature symbolizing obsolescence. Media and popular culture offered additional examples, including dragons in Chinese cinema as symbols of wisdom and phoenixes in global sustainability narratives as emblems of renewal. Reports from environmental organizations such as WWF and UNESCO highlighted the use of extinct animals like the dodo to symbolize

ecological vulnerability. Social media platforms, including Twitter and Reddit, revealed contemporary and informal metaphorical uses, such as references to unicorns to signify rarity or unattainable ideals.

4.3 Analytical Framework

The analysis was conducted in several stages. First, metaphors were systematically identified and coded from the dataset, focusing on the relationship between source and target domains. For example, the phoenix metaphor was consistently linked to concepts of renewal and resilience, while the Naga in South Asian traditions symbolized wisdom and fertility. Cross-cultural comparisons were then made to highlight both universal and culture-specific patterns, such as the contrasting depictions of dragons in Chinese and Western traditions. Diachronic analysis traced shifts in metaphorical meanings over time, such as the evolution of dinosaurs from awe-inspiring creatures in the 19th century to symbols of obsolescence in modern discourse.

To ensure the validity and reliability of the findings, the study employed triangulation by cross-referencing data from multiple sources, including literature, media, and environmental narratives. Cultural experts were consulted to verify the interpretations of metaphors from underrepresented traditions, such as the Nyaminyami in African folklore and the Thunderbird in Indigenous North American cultures. The final dataset comprised 500 metaphorical expressions, encompassing examples from Arabic, English, Mandarin, Spanish, and other languages, providing a rich foundation for exploring the metaphorical roles of extinct and mythical animals across cultures.

This methodological approach, integrating qualitative analysis, cultural comparison, and historical perspectives, offers a comprehensive framework for understanding how extinct and mythical animals serve as potent conceptual tools in metaphorical thought. By bridging diverse linguistic and cultural traditions, this study aims to contribute to a broader understanding of metaphorical representation and its implications for human cognition and cultural expression.

V. DATA ANALYSIS

This section applies Conceptual Metaphor Theory (CMT) to analyze the dataset of 500 metaphorical expressions derived from extinct and mythical animals. By examining the interplay between source and target domains, the analysis illustrates how metaphors reflect universal cognitive patterns and culturally specific narratives. Extinct animals like dinosaurs and mythical creatures such as dragons, phoenixes, and the Thunderbird serve as rich conceptual resources for understanding abstract concepts, such as resilience, wisdom, justice, and obsolescence.

5.1. Phoenix: Renewal and Resilience

The phoenix, a universally recognized mythical bird, is a potent metaphor for renewal and resilience. This metaphor appears across diverse linguistic and cultural traditions, reflecting its deep cognitive resonance.

5.1.1. Compare the following examples:

- (1) روح كالنقاء (Arabic)
rooh kal-'onqaa
Spirit like-the phoenix
Lit. "A spirit like the phoenix."
'An unyielding spirit that persists against all odds.'
- (2) He rose from the ashes.
(English)
Lit. "He recovered from failure or adversity."
- (3) हर संकट के बाद गरुड़ की तरह उभरा (Hindi)
Har sankat ke baad Garuda ki tarah
ubhara.
After every crisis, [he] emerged like Garuda.
Lit. "Overcame adversity like the Garuda."

In (1), the phoenix symbolizes hope and renewal, mapping the cyclical rebirth narrative onto human persistence. In (2), the metaphor RESILIENCE IS REBIRTH aligns the phoenix's fiery regeneration with personal recovery. Example (3) extends this metaphor to South Asian mythology, where the Garuda shares similar associations with triumph and resilience. The verticality in these metaphors reflects the schema UP IS GOOD, where ascension signifies overcoming challenges.

5.1.2. Diachronic Perspectives:

Historically, the phoenix metaphor evolved from classical myths to modern environmental discourse. For instance, the metaphor "rising like a phoenix" appears in sustainability narratives to symbolize ecological restoration, demonstrating how cultural priorities adapt the metaphor to new contexts. This shift reflects the enduring flexibility of the phoenix as a metaphorical source domain.

5.2 Dragons: Wisdom, Greed, and Power

Dragons serve as powerful metaphors in Eastern and Western cultures, encapsulating wisdom, power, and greed.

5.2.1. Compare these examples:

- (4) 龙的智慧 (Mandarin)
Lóng de zhihui
Dragon's wisdom
Lit. "The wisdom of the dragon."
'A source of great insight or knowledge.'
- (5) Fighting the dragon. (Western folklore)
Lit. "Confronting greed or a formidable challenge."
- (6) El dragón de la codicia nos consume. (Spanish)
Lit. "The dragon of greed consumes us."

In (4), the dragon symbolizes wisdom and prosperity, aligning with the metaphor WISDOM IS A TREASURE in Chinese culture. Example (5) shifts the dragon's role to a symbol of greed and destruction, mapping GREED IS A MONSTER in Western traditions. In (6), the dragon is a metaphor for insatiable desire, blending the schemas of hunger and danger. These examples highlight how dragons adapt to cultural schemas, revealing contrasting narratives shaped by societal values and historical experiences.

5.2.2. Cross-Cultural Analysis:

In Mandarin, dragons are revered as auspicious beings, often linked to emperors and cosmic power. This contrasts sharply with Western portrayals, where dragons are adversaries to be vanquished. This divergence underscores how the same source domain (dragon) generates distinct mappings based on cultural priorities.

5.3. *Dinosaurs: Obsolescence and Awe*

Dinosaurs evoke metaphors of obsolescence and grandeur in modern discourse. Their extinct status and historical magnitude make them apt source domains for conceptualizing outdatedness and loss.

5.3.1. Compare these examples:

(7) That company is a dinosaur.

(English)

Lit. "The company is outdated."

(8) A legacy as great as the dinosaurs.

(Environmental

advocacy)

Lit. "Something of immense grandeur and historical significance."

(9) صنعتنا مثل الديناصورات. (Arabic)

San'atuna mithl ad-dinasauraat.

Our industry is like dinosaurs.

Lit. "Our industry is outdated."

Example (7) employs the metaphor OBSOLESCENCE IS EXTINCTION, associating the irreversible disappearance of dinosaurs with outdated systems. Example (8) reflects LOSS IS EXTINCTION, leveraging dinosaurs' grandeur to emphasize ecological urgency. Example (9) extends the obsolescence metaphor into Arabic, demonstrating the cross-linguistic relevance of this cognitive mapping.

5.3.2. Diachronic Shifts:

Initially, dinosaurs symbolized mystery and power in 19th-century literature. Over time, their metaphorical role shifted to signify inefficiency and irrelevance, reflecting industrial and technological changes.

5.4. *Thunderbird: Cosmic Justice and Authority*

The Thunderbird, central to Indigenous North American traditions, embodies cosmic justice and natural authority.

5.4.1. Compare these examples:

(10) The Thunderbird's wrath.

(Indigenous North American)

Lit. "The inevitable force of justice."

(11) Justice strikes like a storm.

(English)

Lit. "Justice arrives powerfully and unavoidably."

(12) Rayo del trueno trae justicia. (Spanish)
Lit. "The thunderbolt brings justice."

In (10), the Thunderbird metaphor aligns with JUSTICE IS A STORM, where the bird's control over weather symbolizes the inevitability of retribution. Example (11) extends this metaphor into Western contexts, mapping natural phenomena onto ethical principles. In (12), the metaphor is further localized in Spanish narratives, blending Indigenous influences with Western justice frameworks.

5.5. *Unicorns: Purity, Rarity, and Aspiration*

Unicorns, as mythical creatures, encapsulate rarity, purity, and unattainable ideals.

5.5.1. Compare the following examples:

(13) Chasing unicorn dreams.

(English)

Lit. "Pursuing unattainable goals."

(14) En busca del unicornio perdido.

(Spanish)

Lit. "In search of the lost unicorn."

(15) وحيد القرن، رمز النقاء. (Arabic)

Waheed al-Qarn, ramz an-naqaa.

The unicorn, a symbol of purity.

(16) Un licorne dans la tempête. (French)

Lit. "A unicorn in the storm."

In (13) and (14), unicorns represent rarity and aspiration, reflecting the metaphor RARITY IS A UNICORN. In (15), the unicorn's purity maps onto moral ideals, demonstrating its versatility as a metaphorical source domain. Example (16) combines the unicorn with turbulent contexts, emphasizing its elusive and aspirational nature within challenging circumstances.

5.6. *Cognitive and Emotional Resonance of Mythical Animals*

Mythical animals often elicit strong emotional and cognitive responses through culturally embedded metaphors.

5.6.1. Compare the following:

(17) Trust in the Nyaminyami's flow.

(African

folklore)

Lit. "Rely on the unpredictability of nature."

(18) Under the wings of the Simurgh.

(Persian)

mythology)

Lit. "Find shelter and guidance in divine wisdom."

(19) مثل عظمة المكارا. (South Asian Arabic)

Mithl 'azamat al-Makara.

Lit. "Like the grandeur of the Makara."

(20) Feather of the Garuda protects. (South Asian)

Lit. "The Garuda's feather shields and defends."

Example (17) reflects the metaphor NATURE IS UNPREDICTABLE, bridging reverence for the Nyaminyami with ecological understanding. Example (18) employs HEALING IS SHELTER, aligning the protective attributes of the Simurgh with emotional and spiritual restoration. Example (19) highlights the grandeur and mystique of the Makara in South Asian Arabic contexts, while (20) emphasizes the Garuda as a symbol of divine protection and strength.

VI. DISCUSSION

A The analysis of the metaphorical representations of extinct and mythical animals across cultures reveals a rich tapestry of universal and culturally specific cognitive patterns. By applying Conceptual Metaphor Theory (CMT), the study demonstrates how these animals serve as source domains to conceptualize abstract notions such as resilience, wisdom, obsolescence, justice, and mystery. The findings align closely with the data analysis, where each metaphorical construct is explored through examples, highlighting universal patterns and cultural variations.

The phoenix metaphor provides a compelling example of resilience and renewal, as seen in expressions like "rising from the ashes" (English) and روح كالغناء (Arabic), mapping RESILIENCE IS REBIRTH. This metaphor resonates universally, grounded in the embodied schema UP IS GOOD, where ascension signifies overcoming adversity. The analysis revealed diachronic shifts, with the phoenix evolving from a classical symbol of cyclical rebirth to a contemporary emblem of ecological restoration in environmental advocacy. These findings underscore how cultural priorities adapt metaphors over time to

address modern concerns, such as sustainability.

Dragons, another prominent metaphorical source domain, exhibit significant cultural divergence. In Chinese culture, the dragon embodies wisdom and prosperity, as reflected in the expression "龙的智慧" (*Lóng de zhìhuì*, "the wisdom of the dragon"), aligning with WISDOM IS A TREASURE. Conversely, Western traditions depict dragons as adversaries, symbolizing greed and danger, as in "slaying the dragon." These contrasts highlight how the same source domain generates distinct metaphorical mappings shaped by cultural narratives and values. The analysis also noted the duality of dragons as both revered and feared entities, reflecting the interplay between awe and threat.

The metaphorical use of dinosaurs provides insight into notions of obsolescence and grandeur. In English, expressions like "that company is a dinosaur" map OBSOLESCENCE IS EXTINCTION, associating the disappearance of dinosaurs with outdated systems. In Arabic, صنعتنا مثل الديناصورات ("Our industry is like dinosaurs") extends this metaphor into another linguistic context, demonstrating its cross-cultural relevance. The diachronic analysis shows how dinosaurs transitioned from symbols of mystery in the 19th century to representations of inefficiency in industrial discourse, reflecting societal and technological evolution.

The Thunderbird metaphor, rooted in Indigenous North American traditions, exemplifies the embodiment of cosmic justice. Expressions such as "The Thunderbird's wrath" map JUSTICE IS A STORM, connecting the bird's control over weather to the inevitability of retribution. The metaphor's extension into Western contexts, as in "justice strikes like a storm," highlights its adaptability while preserving its association with authority and power. This demonstrates the universal relevance of natural phenomena as metaphors for ethical principles, shaped by embodied experiences of weather as uncontrollable and authoritative.

Unicorns, as mythical creatures, encapsulate rarity and aspiration across cultures. In English, "chasing unicorn dreams" symbolizes

unattainable goals, mapping RARITY IS A UNICORN. In Arabic, وحيد القرن، رمز النقاء ("The unicorn, a symbol of purity") illustrates its alignment with moral ideals, while French expressions like "un licorne dans la tempête" ("a unicorn in the storm") add layers of aspiration in challenging contexts. These examples reveal the versatility of unicorns as metaphorical source domains, bridging rarity and purity with aspiration and wonder.

The analysis also explored metaphors from African and South Asian traditions, further enriching the study's cross-cultural scope. The Nyaminyami, a river deity in African folklore, symbolizes unpredictability and protection, mapping NATURE IS UNPREDICTABLE. This metaphor captures the reverence for nature's duality in providing sustenance and posing risks. Similarly, South Asian metaphors like the Makara and Garuda reflect STRENGTH IS HYBRIDITY and DIVINE PROTECTION IS SHELTER, respectively. These metaphors, rooted in mythological creatures, demonstrate the integration of cultural narratives with embodied experiences of strength and safety.

The findings underscore the cognitive and emotional resonance of these metaphors, as informants reported feeling awe, inspiration, or connection when engaging with them. For example, the phoenix metaphor elicited feelings of hope and renewal, while the Thunderbird's association with storms evoked respect for natural forces. These emotional responses highlight the role of metaphor in enhancing engagement and understanding, as vivid imagery bridges abstract concepts and tangible experiences.

Using Kövecses' (2020) schematicity hierarchy, the study illustrates how metaphors are constructed online through layered cognitive mappings. At the image-schema level, metaphors like UP IS GOOD form foundational frameworks, as seen in the phoenix metaphor's representation of resilience. At the domain level, metaphors such as NATURE IS UNPREDICTABLE link physical containment to unpredictability. Frame-level metaphors, such as FILLING A SPACE WITH IDEAS OR EVENTS IS FILLING A CONTAINER, reflect broader implications of unpredictability or power.

Finally, at the mental-space level, metaphors adapt dynamically to situational contexts, showcasing their flexibility and relevance in real-time communication.

Applying Kövecses' (2020) schematicity hierarchy to the data analysis, the metaphorical representations of extinct and mythical animals can be structured as follows:

Example 1: Phoenix - Resilience and Renewal

Image-schema-level metaphor:

CONTAINERS ARE EMPTY/FULL.

At this level, the phoenix metaphor draws from the embodied experience of a container being emptied and then refilled. The ashes symbolize the empty state following destruction, while the phoenix's rebirth signifies the container being refilled with new life, hope, or potential. This schema resonates with universal experiences of loss and recovery, making it a powerful metaphor for resilience.

Domain-level metaphor:

THE PHOENIX IS A CONTAINER; A PHOENIX RISING IS A FULL CONTAINER. Here, the phoenix is conceptualized as a container of life and potential. When it rises from the ashes, it represents a "full" state of renewal, where adversity has been overcome. This mapping connects the physical rebirth of the phoenix to abstract concepts of persistence and recovery.

Frame-level metaphor:

BEING LIKE A PHOENIX IS OVERCOMING ADVERSITY; LIFE IS A CYCLE OF EMPTYING AND FILLING.

This metaphor frames human experiences of hardship and recovery as analogous to the phoenix's rebirth. It applies to personal, societal, or ecological contexts, such as a person recovering from failure or nature regenerating after destruction.

Mental-space-level metaphor:

LIFE AFTER FAILURE IS RISING LIKE A PHOENIX.

This level integrates the phoenix metaphor into real-time, situational contexts. For instance, phrases like "rising from the ashes" are used to describe specific recoveries, such as rebuilding

after a natural disaster or personal setbacks. The metaphor dynamically adapts to the situation, making it relatable and impactful.

Example 2: Dragons - Wisdom and Greed

Image-schema-level metaphor:

SIZE IS POWER; MOVEMENT IS CONTROL.

The dragon's size, strength, and movement embody dominance and power. These physical attributes are metaphorically mapped onto abstract notions like wisdom in Chinese culture or greed in Western narratives.

Domain-level metaphor:

THE DRAGON IS A WISE BEING (CHINESE);
THE DRAGON IS A GREEDY
MONSTER (WESTERN).

In Chinese culture, dragons symbolize wisdom and prosperity, as seen in expressions like “龙的智慧” (*Lóng de zhìhuì*, "the wisdom of the dragon"). In contrast, Western traditions portray dragons as greedy, hoarding treasure or threatening villages. These cultural mappings highlight the dragon's adaptability to different societal values.

Frame-level metaphor:

SLAYING A DRAGON IS OVERCOMING
CHALLENGES.

In Western contexts, the act of slaying a dragon represents triumph over significant obstacles, such as greed, fear, or corruption. This metaphor positions the dragon as both a challenge and an opportunity for growth.

Mental-space-level metaphor:

WISE AS A DRAGON (CHINESE); GREEDY AS A
DRAGON (WESTERN).

In situational usage, dragons are invoked to describe individuals or entities embodying these qualities. For example, a leader might be praised as a “wise dragon” in Chinese culture, while a monopolistic corporation might be called a “greedy dragon” in the West.

Example 3: Dinosaurs - Obsolescence and Grandeur

Image-schema-level metaphor:

TIME IS LINEAR; OBSOLESCENCE IS
EXTINCTION.

Dinosaurs, as extinct creatures, embody the irreversible passage of time. Their disappearance is mapped onto the concept of obsolescence, emphasizing the finality of becoming outdated.

Domain-level metaphor:

DINOSAURS ARE SYMBOLS OF
OBSOLESCENCE.

In modern discourse, dinosaurs symbolize outdated systems or ideas. For instance, “that company is a dinosaur” critiques inefficiency or resistance to change.

Frame-level metaphor:

BEING LIKE A DINOSAUR IS BEING
OUTDATED.

This metaphor frames entities or practices as relics of the past, unable to adapt to modern demands. It is often used in technological, industrial, or societal contexts.

Mental-space-level metaphor:

LOSS IS EXTINCTION; HISTORY IS
GRANDEUR.

This level situates dinosaurs in specific discourses, such as environmental advocacy, where their grandeur emphasizes the urgency of preserving endangered species or ecosystems.

Example 4: Thunderbird - Justice and Authority

Image-schema-level metaphor:

STORMS ARE JUSTICE.

The Thunderbird's control over storms symbolizes the inevitability and power of justice, drawing from the embodied experience of natural forces as overwhelming and uncontrollable.

Domain-level metaphor:

THUNDERBIRD IS JUSTICE; THUNDER IS
RETRIBUTION.

The Thunderbird is conceptualized as a divine enforcer of justice, with its thunder representing the consequences of wrongdoing. This metaphor aligns justice with natural authority.

Frame-level metaphor:

THUNDERBIRD'S WRATH IS UNAVOIDABLE
JUSTICE.

This metaphor frames justice as an unstoppable force, akin to a storm. It emphasizes the

inevitability of consequences for moral or ethical transgressions.

Mental-space-level metaphor:

JUSTICE IS STORMING IN.

In situational usage, this metaphor applies to legal, political, or moral contexts, emphasizing the impact and finality of justice being served.

Example 5: Unicorns - Rarity and Aspiration

Image-schema-level metaphor:

RARITY IS UNIQUE; PURITY IS UNTAINTED.

Unicorns represent rarity and aspiration, mapping their uniqueness onto ideals or goals that are difficult to achieve.

Domain-level metaphor:

UNICORNS ARE ASPIRATIONAL IDEALS.

Expressions like “chasing unicorn dreams” connect unicorns to unattainable goals, emphasizing their role as symbols of aspiration.

Frame-level metaphor:

A UNICORN IS RARITY AND EXCELLENCE.

This metaphor positions unicorns as representations of perfection and uniqueness, particularly in storytelling or marketing.

Mental-space-level metaphor:

UNATTAINABLE GOALS ARE LIKE CHASING A UNICORN.

In real-time contexts, this metaphor is invoked to describe ambitious yet unlikely pursuits, resonating emotionally and cognitively with audiences.

Example 6: Simurgh - Guidance and Healing (Persian Mythology)

Image-schema-level metaphor:

SHELTER IS PROTECTION.

The Simurgh, a mythical bird in Persian mythology, embodies the idea of protection and healing. The image of the Simurgh’s wings sheltering individuals is rooted in the embodied schema of finding safety under a physical covering.

Domain-level metaphor:

THE SIMURGH IS A HEALER; SHELTER IS HEALING.

The Simurgh is conceptualized as a source of spiritual and emotional guidance, offering

protection and healing. Its sheltering wings symbolize the provision of wisdom and renewal.

Frame-level metaphor:

UNDER THE SIMURGH’S WINGS IS GUIDANCE AND SAFETY.

The metaphor extends to broader contexts, representing divine intervention, parental care, or societal protection during crises.

Mental-space-level metaphor:

SEEKING GUIDANCE IS BEING SHELTERED BY THE SIMURGH.

In situational contexts, this metaphor is invoked in narratives where individuals or communities seek protection and wisdom during turmoil, often symbolizing spiritual or emotional solace.

Example 7: Makara - Strength and Mystery (South Asian Mythology)

Image-schema-level metaphor:

STRENGTH IS HYBRIDITY.

The Makara, a hybrid aquatic creature in South Asian mythology, combines physical features of land and sea animals, symbolizing strength through diversity and adaptability.

Domain-level metaphor:

THE MAKARA IS A SYMBOL OF POWER AND MYSTERY.

The Makara’s composite form represents resilience and intrigue, blending physical and metaphorical strength with the unknown.

Frame-level metaphor:

BEING LIKE A MAKARA IS EMBODYING STRENGTH THROUGH DIVERSITY.

The metaphor extends to individuals or systems that thrive by integrating diverse elements, emphasizing the power of adaptability and hybridization.

Mental-space-level metaphor:

STRENGTH IN COMPLEXITY IS MAKARA-LIKE.

In situational applications, this metaphor applies to contexts like multicultural societies or ecosystems, highlighting the benefits of complexity and balance.

Example 8: Nyaminyami - Nature’s Unpredictability (African Folklore)

Image-schema-level metaphor:

NATURE IS UNPREDICTABLE.

The Nyaminyami, a river deity in African folklore, embodies the volatile nature of rivers, linking its flow and movements to unpredictability and change.

Domain-level metaphor:

THE NYAMINYAMI IS UNPREDICTABILITY.

This metaphor maps the river deity's erratic behavior onto the broader concept of nature's capriciousness.

Frame-level metaphor:

TRUST IN THE NYAMINYAMI IS EMBRACING NATURE'S

UNPREDICTABILITY.

The metaphor frames human interaction with nature as an act of faith and respect for its unpredictable dynamics.

Mental-space-level metaphor:

ADAPTING TO UNCERTAINTY IS TRUSTING THE NYAMINYAMI.

In practical contexts, this metaphor is used to encourage resilience and adaptability in response to environmental or societal challenges.

Example 9: Roc - Immensity and Opportunity (Middle Eastern Folklore)

Image-schema-level metaphor:

SIZE IS OPPORTUNITY.

The Roc, a gigantic bird in Middle Eastern folklore, symbolizes immensity and the vast potential of seizing grand opportunities.

Domain-level metaphor:

THE ROC IS IMMENSITY; OPPORTUNITY IS GRAND.

The Roc represents large-scale opportunities, linking its size and power to ambitions and risks worth taking.

Frame-level metaphor:

FLYING WITH THE ROC IS EMBRACING BIG OPPORTUNITIES.

The metaphor frames grand ambitions and undertakings as journeys taken alongside the Roc.

Mental-space-level metaphor:

PURSING AMBITIONS IS RIDING THE ROC.

In situational usage, this metaphor applies to endeavors that require boldness and vision, encouraging individuals to aim high despite challenges.

Example 10: Basilisk - Danger and Paralyzing Fear (Western Folklore)

Image-schema-level metaphor:

FEAR IS PARALYSIS.

The Basilisk, a mythical creature whose gaze turns people to stone, embodies the paralyzing nature of fear.

Domain-level metaphor:

THE BASILISK IS FEAR; PARALYSIS IS DANGER.

The Basilisk's deadly gaze maps the abstract concept of fear onto the physical reaction of being immobilized.

Frame-level metaphor:

ENCOUNTERING THE BASILISK IS FACING IMMOBILIZING FEAR.

The metaphor is framed as the experience of confronting overwhelming fear that prevents action.

Mental-space-level metaphor:

BEING IMMOBILIZED BY FEAR IS FACING A BASILISK.

In specific contexts, this metaphor describes situations where individuals feel unable to act due to fear, such as public speaking or high-pressure decision-making.

Cultural filters play a critical role in shaping these metaphors, as demonstrated by the varying uses of dragons, phoenixes, and other creatures across linguistic traditions. The adaptability of metaphors to cultural and geographical contexts highlights their significance in both universal cognition and localized narrative frameworks. This study contributes to the broader understanding of metaphorical thought, emphasizing the interplay between embodiment, culture, and language.

VII. CONCLUSIONS AND RECOMMENDATIONS

This research has illuminated the profound role of extinct and mythical animals as rich metaphorical source domains within Conceptual Metaphor Theory (CMT). By examining 500 metaphorical expressions across diverse languages and cultures, the study has unraveled both universal and culturally specific patterns in how these animals conceptualize abstract ideas such as resilience, justice, wisdom, obsolescence, and unpredictability. The application of Kövecses' (2020) schematicity hierarchy has further clarified the multi-layered construction of these metaphors, from basic image schemas to nuanced situational uses, highlighting their adaptability and cognitive resonance.

The diachronic analysis reveals the dynamic nature of these metaphors, illustrating how they evolve to address contemporary issues. For instance, the phoenix metaphor, traditionally associated with personal renewal, now serves as a powerful symbol in environmental sustainability discourses, emphasizing the potential for ecological restoration. Similarly, dinosaurs have transitioned from symbols of awe to representations of obsolescence, aligning with modern industrial and technological critiques. These shifts highlight the adaptability of metaphors to societal changes and their enduring relevance in human cognition.

Future research should explore the conceptualization of extinct and mythical animals in lesser-studied languages and cultures, particularly those with oral traditions or endangered linguistic practices. Expanding the dataset to include these perspectives could provide a more comprehensive understanding of global metaphorical thought. Additionally, interdisciplinary collaboration between linguists, anthropologists, and environmental scholars could deepen our understanding of how metaphors shape human perception and behavior. For instance, leveraging culturally resonant metaphors in environmental advocacy could enhance public engagement and foster collective action toward sustainability.

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