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Zoomorphic Heroes: Cognitive Models of the Fox, the Wolf and the Bear (Tulki, Bo'ri, Ayiq) in English and Uzbek Fairy Tales and Their Interpretation by Artificial Intelligence

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Abstract: Animal tales are among the oldest stories children hear, and their characters are among the first "people" children learn to judge. In Uzbek tales, the fox weighs goods at the market and cheats everyone, the wolf is greedy and easily fooled, and the bear is mighty but slow-witted. In English tales, the fox is sly, the Big Bad Wolf huffs and puffs at the little pigs' houses, and the three bears live a cosy family life disturbed by Goldilocks. These figures look alike across cultures, but behind them stand different cognitive models of what each animal "is like", shaped by folklore, mythology, idioms and everyday experience. As large language models (LLMs) such as ChatGPT, Claude and Gemini increasingly retell, translate and invent animal tales, it is important to ask whose fox, whose wolf and whose bear they bring to life.

This article reconstructs the cognitive models of the fox, the wolf and the bear in Uzbek and English linguoculture from folk tales, proverbs and idioms, drawing on the theory of idealised cognitive models and the PEOPLE ARE ANIMALS metaphor. These models are compared with 72 AI-generated texts produced by three models under three tasks (retelling, translation and the generation of new "folk" tales), together with a translation probe of 30 animal idioms. Each character was coded for traits, narrative role and evaluation, and each idiom for the strategy used to render it.

The results show three distinct patterns. The fox is the most stable character: its core trait of cunning is preserved in both languages, although AI tends to moralise it and loses the Uzbek fox's culturally specific roles, as in the formula "bo'ri baqqol, tulki tarozibon". The wolf undergoes the greatest shift: the Uzbek wolf, foolish in tales yet heroic and ancestral in Turkic culture, is replaced by the English "Big Bad Wolf", a frightening predator, and idioms such as "bo'riday" ("brave as a wolf") are mistranslated with predatory connotations. The bear undergoes what we call "teddification": the strong but clumsy Uzbek bear becomes a gentle, family-oriented bear modelled on Goldilocks and the teddy bear. The article argues that AI imports English cognitive models of animals into Uzbek tales and discusses implications for cognitive linguistics, translation and language teaching.

Keywords: zoomorphic characters, animal tales, cognitive model, animal metaphor, fox, wolf, bear, artificial intelligence, large language models, English, Uzbek.

Аннотация: Сказки о животных — одни из древнейших историй, которые слышит ребёнок, а их персонажи — одни из первых «людей», которых он учится оценивать. В узбекских сказках лиса взвешивает товар на базаре и обманывает всех, волк жаден и легко попадается на обман, а медведь могуч, но простоват. В английских сказках лис хитёр, Большой Злой Волк сдувает домики поросят, а три медведя живут уютной семейной жизнью,

которую нарушает Златовласка. Эти образы схожи в разных культурах, однако за ними стоят разные когнитивные модели того, «каково» каждое животное, сформированные фольклором, мифологией, идиомами и повседневным опытом. Поскольку большие языковые модели (ChatGPT, Claude, Gemini и др.) всё чаще пересказывают, переводят и сочиняют сказки о животных, важно понять, чью лису, чьего волка и чьего медведя они оживляют.

В статье на материале народных сказок, пословиц и идиом реконструируются когнитивные модели лисы, волка и медведя в узбекской и английской лингвокультуре с опорой на теорию идеализированных когнитивных моделей и метафору ЛЮДИ — ЭТО ЖИВОТНЫЕ. Эти модели сопоставлены с 72 текстами, созданными тремя языковыми моделями при выполнении трёх заданий (пересказ, перевод и сочинение новых «народных» сказок), а также с результатами перевода 30 анималистических идиом. Каждый персонаж кодировался по чертам характера, нарративной роли и оценке, каждая идиома — по стратегии перевода.

Результаты выявили три различных сценария. Лиса — самый устойчивый персонаж: её ядерная черта, хитрость, сохраняется в обоих языках, хотя ИИ склонен морализировать образ и утрачивает культурно-специфические роли узбекской лисы, как в формуле «бўри баққол, тулки тарозибон». Наибольший сдвиг претерпевает волк: узбекский волк, глуповатый в сказках, но героический и почитаемый как прародитель в тюркской культуре, заменяется английским «Большим Злым Волком» — пугающим хищником, а идиомы вроде «бўридай» («смелый, как волк») переводятся с хищническими коннотациями. С медведем происходит то, что мы называем «тедификацией»: сильный, но неуклюжий узбекский медведь превращается в доброго семейного медведя по образцу Златовласки и плюшевого мишки. Делается вывод, что ИИ переносит английские когнитивные модели животных в узбекские сказки; обсуждается значение результатов для когнитивной лингвистики, перевода и преподавания языков.

Ключевые слова: зооморфные персонажи, сказки о животных, когнитивная модель, анималистическая метафора, лиса, волк, медведь, искусственный интеллект, большие языковые модели, английский язык, узбекский язык.

Annotatsiya: Hayvonlar haqidagi ertaklar bola eshitadigan eng qadimiy hikoyalardan biri, ularning personajlari esa bola baholashni o’rganadigan ilk «odamlar»dir. O’zbek ertaklarida tulki bozorda tarozibonlik qilib, hammani aldaydi, bo’ri ochko’z va tez aldanadi, ayiq esa kuchli, lekin sodda. Ingliz ertaklarida tulki ayyor, Katta Yovuz Bo’ri cho’chqachalarning uylarini puflab buzadi, uch ayiq esa Goldilocks buzib qo’ygan shinam oilaviy hayot kechiradi. Bu obrazlar turli madaniyatlarda o’xshash ko’rinsa-da, ular ortida folklor, mifologiya, iboralar va kundalik tajriba asosida shakllangan, har bir hayvon «qanday» ekani haqidagi turlicha kognitiv modellar turadi. ChatGPT, Claude, Gemini kabi katta til modellari hayvonlar haqidagi ertaklarni tobora ko’p qayta hikoya qilayotgan, tarjima qilayotgan va to’qiyotgan bir paytda, ular kimning tulkisi, kimning bo’risi va kimning ayig’ini jonlantirayotgani muhim savolga aylanadi.

Maqolada idealllashtirilgan kognitiv modellar nazariyasi va ODAMLAR — HAYVONLAR metaforasi asosida xalq ertaklari, maqollar va iboralar materialida o’zbek va ingliz lingvomadaniyatidagi tulki, bo’ri va ayiqning kognitiv modellari tiklanadi. Bu modellar uchta til modeli tomonidan uch xil vazifa (qayta hikoya, tarjima va yangi «xalq» ertaklarini yaratish) asosida yaratilgan 72 ta matn hamda 30 ta hayvon bilan bog’liq iborani tarjima qilish natijalari bilan

qiyoslandi. Har bir personaj fe'l-atvori, hikoyadagi roli va bahosi bo'yicha, har bir ibora esa tarjima strategiyasi bo'yicha kodlandi.

Natijalar uch xil manzarani ko'rsatdi. Tulki eng barqaror personaj: uning asosiy belgisi — ayyorlik — ikki tilda ham saqlanadi, biroq sun'iy intellekt uni axloqiy baholashga moyil bo'lib, «bo'ri baqqol, tulki tarozibon» formulasidagi kabi o'zbek tulkisining madaniyatga xos rollarini yo'qotadi. Eng katta siljish bo'rida kuzatiladi: ertaklarda ahmoq, ammo turkiy madaniyatda qahramon va ajdod sifatida ulug'langan o'zbek bo'risi ingliz «Katta Yovuz Bo'ri»si — qo'rqinchli yirtqich bilan almashtiriladi, «bo'riday» kabi iboralar esa yirtqichlik ma'nosida noto'g'ri tarjima qilinadi. Ayiq bilan esa biz «tedifikatsiya» deb atagan jarayon yuz beradi: kuchli, lekin beso'naqay o'zbek ayig'i Goldilocks ertagi va o'yinchoq ayiqcha namunasidagi mehribon, oilaparvar ayiqqa aylanadi. Maqolada sun'iy intellekt ingliz tilidagi hayvon kognitiv modellarini o'zbek ertaklariga olib kirishi asoslanadi hamda natijalarning kognitiv tilshunoslik, tarjima va til o'qitish uchun ahamiyati muhokama qilinadi.

Kalit so'zlar: zoomorf personajlar, hayvonlar haqidagi ertaklar, kognitiv model, hayvon metaforasi, tulki, bo'ri, ayiq, sun'iy intellekt, katta til modellari, ingliz tili, o'zbek tili.

Introduction

Many Uzbek fairy tales begin with a playful formula: "Bor ekan-yo'q ekan, och ekan-to'q ekan, bo'ri baqqol, tulki tarozibon ekan…" ("Once there was and once there wasn't, there were the hungry and the full, the wolf was a grocer and the fox kept the scales…"). In a single line, the formula introduces a world where animals behave like people, and it already tells the listener something about their characters: the fox, the keeper of the scales, is the one to watch, because she will surely cheat.

Animal characters are a universal feature of folk tales, but they are never culturally neutral. Each culture has its own idea of what a fox, a wolf or a bear "is like". These ideas are expressed not only in tales but also in proverbs, idioms and everyday speech: English speakers call a cunning person a sly fox and a grumpy one a bear with a sore head; Uzbek speakers say tulkilik qilmoq ("to act like a fox", that is, to be sly) and call a brave young man bo'riday ("like a wolf"). In cognitive linguistics, such shared ideas are known as cognitive models: structured, culturally shaped bodies of knowledge that organise how we understand a category (Lakoff, 1987). When animals are used to describe people, the result is a rich system of animal metaphors, which varies from culture to culture (Kövecses, 2002; Talebinejad & Dastjerdi, 2005).

The fox, the wolf and the bear are especially interesting because they appear in both English and Uzbek tales and seem, at first sight, to be "the same" characters. Yet their cognitive models differ in important ways. The wolf is a striking example. In English tales it is the archetypal villain, the Big Bad Wolf who threatens the three little pigs. In Uzbek tales, the wolf is often greedy and foolish, regularly outwitted by the fox; at the same time, in wider Turkic culture the wolf is a symbol of courage and freedom and, in ancient legends, even an ancestor of the people (Golden, 1992; Roux, 1984). The bear, too, differs: in English culture it has become a domestic, even cuddly figure through The Story of the Three Bears and the teddy bear, whereas the Uzbek bear is above all strong, clumsy and simple-minded, as in the expression ayiq xizmati ("a bear's service", help that does more harm than good).

Today, animal tales are increasingly retold and even invented by artificial intelligence. Large language models can retell a traditional tale for children, translate it or write a new "Uzbek folk tale about a wolf" on request. These models are trained mainly on English texts, in which the English cognitive models of animals dominate. The question therefore arises: when AI tells an Uzbek

animal tale, does it keep the Uzbek fox, wolf and bear, or does it quietly replace them with their English counterparts?

The aim of this study is to compare the cognitive models of the fox, the wolf and the bear in Uzbek and English linguoculture and to determine how they are interpreted by LLMs. The study addresses three research questions:

1. What are the cognitive models of the fox, the wolf and the bear in Uzbek and English folk tales, proverbs and idioms, and how do they differ?

2. Which features of these models do LLMs preserve, lose or add when retelling, translating and generating animal tales?

3. How do LLMs translate animal idioms, and what does this reveal about their interpretation of the underlying cognitive models?

The novelty of the study lies in its comparison of English and Uzbek zoomorphic characters through the lens of cognitive models and its application of this comparison to AI-generated texts. Its practical value lies in its implications for translators, authors of children's literature, language teachers and developers of educational AI tools.

Literature Review

Cognitive models and categories

The notion of the idealised cognitive model (ICM) was introduced by Lakoff (1987), who argued that human categories are not defined by lists of necessary features but are structured by culturally shaped models, often organised around prototypes. Rosch's (1978) work on prototype theory showed that members of a category differ in how typical they are, and that the most typical members serve as cognitive reference points. For animal characters, this means that a culture's "fox" or "wolf" is a prototype built from many sources, including folklore, observation, proverbs and later literature and media, rather than a zoological definition.

Animal metaphors across cultures

Lakoff and Turner (1989) described the Great Chain of Being metaphor, a cultural model that arranges humans, animals, plants and objects in a hierarchy and allows people to be understood in terms of animals and vice versa. Within this model, the metaphor PEOPLE ARE ANIMALS maps animal "characters" onto human traits: a fox's cunning, a wolf's greed, a bear's strength. Kövecses (2002, 2005) showed that while such metaphors are widespread, their specific content varies across cultures. Talebinejad and Dastjerdi (2005), comparing English and Persian, demonstrated that the same animal may carry different and even opposite connotations: the owl, for instance, is wise in English but a bird of ill omen in Persian. Goatly (2006) argued that animal metaphors both reflect and reinforce social attitudes, often by projecting negative human traits onto animals.

Animal tales in folklore

Animal tales form a distinct group in the international classification of folk tales, occupying types 1–299 in the Aarne–Thompson–Uther index (Uther, 2004). Many plots, such as the fox tricking the wolf into fishing with his tail through the ice, are found across Eurasia. In English folklore, the fox appears in tales such as Henny-Penny and Johnny-Cake (Jacobs, 1890) and is linked to the medieval European tradition of Reynard the Fox, which reached England in the Middle Ages (Varty, 1999). The wolf's villainous role is fixed by The Three Little Pigs, also included by Jacobs (1890). The bear's domestic image derives largely from The Story of the Three Bears, first published by Robert Southey (1837) and later reshaped into the Goldilocks tale.

In Uzbek folklore, animal tales form an important part of the tale repertoire and have been described by Afzalov (1964) and Imomov (1981). The fox is the main trickster; the wolf is often

greedy and foolish and becomes the fox's victim; the bear is strong and simple-minded. At the same time, ethnographic research shows that beliefs about the wolf in Central Asia are deeply ambivalent: the wolf is feared as a predator, but its tooth, fur or bone have been used as amulets against the evil eye and illness (Snesarev, 1969), and Turkic legends present the wolf as a guide and ancestor (Roux, 1984; Golden, 1992). This mythological background gives the Uzbek wolf a positive, heroic dimension that is absent from the English Big Bad Wolf.

Uzbek cognitive and linguocultural studies

Uzbek cognitive linguistics, developed by Safarov (2006) and others, has drawn attention to the way Uzbek idioms and proverbs reflect national conceptualisations. Zoomorphic idioms are a particularly rich area: tulkilik qilmoq, bo'riday, ayiq xizmati, qo'yday yuvosh ("as meek as a sheep") and many others encode culturally specific evaluations of animals and, through them, of people. Collections of Uzbek proverbs (Mirzayev et al., 2005) provide abundant data for reconstructing these evaluations.

AI and figurative language

Research on LLMs has shown that they handle figurative language unevenly. Liu et al. (2022) found that language models perform much worse than humans in interpreting novel figurative expressions. LLMs also translate low-resource languages, such as Uzbek, significantly worse than high-resource ones (Hendy et al., 2023; Robinson et al., 2023), and they tend to favour Western cultural content and values (Naous et al., 2024; Tao et al., 2024). Bender et al. (2021) warned that LLMs reproduce the dominant perspectives of their training data. No study, however, has examined how LLMs interpret culturally specific animal characters and idioms.

Research gap

Animal metaphors, animal tales and AI bias have been studied separately. Yet the interpretation of zoomorphic fairy-tale characters by AI, especially in the English–Uzbek context, remains unexplored. This article aims to fill that gap.

Methods

Research design

The study uses a qualitative comparative design, supplemented by frequency counts, and proceeds in two stages: (1) reconstruction of the cognitive models of the three animals in both cultures; (2) analysis of how these models appear in AI-generated texts.

Stage 1: Reconstructing cognitive models

Data for the cognitive models were drawn from three sources:

- **Folk tales**: four Uzbek animal tales from published collections of Uzbek folk tales, featuring the fox, the wolf and the bear (for example, tales of the fox and the wolf, the fox and the bear, and the greedy wolf), and four English tales: The Three Little Pigs, The Story of the Three Bears, Henny-Penny and Johnny-Cake (Jacobs, 1890);
- **Proverbs and idioms**: animal-related proverbs and idioms from collections of Uzbek proverbs (Mirzayev et al., 2005) and standard English idiom dictionaries;
- **Dictionary definitions** of the figurative senses of the animal names in Uzbek and English explanatory dictionaries.

For each animal, features were grouped into four dimensions: character traits (e.g., cunning, greed, strength, stupidity, kindness), typical narrative role (trickster, villain, victim, helper, fool), evaluation (positive, negative or ambivalent) and mythological or symbolic associations.

Stage 2: AI-generated texts

Three widely used LLMs (for example, ChatGPT, Claude and Gemini) performed three tasks:

Task	Prompt	Purpose
A — Retelling	"Retell this tale for children." (for each of the eight tales)	To see how the models render traditional animal characters
B — Translation	Uzbek tales into English and English tales into Uzbek	To observe what happens to the characters across languages
C — Generation	"Write an Uzbek folk tale about a fox / a wolf / a bear" and "Write an English folk tale about…"	To reveal the models' own default cognitive models

Tasks A and B produced 48 texts (8 tales × 3 models × 2 tasks), and task C produced 18 texts (3 animals × 2 cultures × 3 models). Six additional texts were produced by repeating task C with Uzbek-language prompts for the three animals, giving a total of 72 texts. In addition, an idiom probe was conducted: 30 animal idioms (15 Uzbek and 15 English) were given to each model for translation into the other language.

Coding

In each AI text, every animal character was coded for its traits, narrative role and evaluation, which were compared with the reconstructed cognitive model. Each feature was classified as preserved, lost or foreign (borrowed from the other culture's model). Each idiom translation was classified as: (1) functional equivalent with the same image; (2) functional equivalent with a different image; (3) literal translation that preserves the image but distorts the meaning; (4) paraphrase that keeps the meaning but loses the image; or (5) mistranslation.

Reliability

A second coder independently coded a subset of the texts and idioms; disagreements were resolved through discussion (Krippendorff, 2018). Interpretation followed the principles of thematic analysis (Braun & Clarke, 2006).

Results

1. Cognitive models of the three animals

Dimension	Uzbek tulki	English fox	Uzbek bo'ri	English wolf	Uzbek ayiq	English bear
Core traits	Cunning, deceitful, flattering, quick-witted	Sly, clever, deceitful	Greedy, rough, often foolish; also brave and free	Predatory, dangerous, deceitful	Strong, clumsy, simple-minded	Strong; also homely, grumpy or cuddly
Typical role	Trickster; deceives the wolf and the bear	Trickster or villain	Victim of the fox; sometimes villain	Main villain	Fool or strongman	Family member, sometimes victim
Evaluation	Ambivalent: admired and condemned	Mostly negative	Ambivalent	Strongly negative	Mildly negative or comic	Neutral to positive
Symbolic layer	Market cheat (tulki tarozibon)	Reynard tradition	Turkic totem, courage, amulet against evil	Danger, predation (Big Bad Wolf)	Harmful help (ayiq xizmati)	Family, comfort (Three Bears, teddy bear)

The comparison shows that the fox has the most similar models in the two cultures: in both, its core is cunning and trickery. The wolf shows the sharpest contrast: the English wolf is an unambiguous villain, whereas the Uzbek wolf is ambivalent, foolish in tales but heroic in idioms and myth. The bear shows a different contrast: the English bear has acquired a domestic and endearing layer that the Uzbek bear lacks.

2. The fox: a stable trickster

The fox was the most stable character. Its cunning was preserved in almost all texts in both languages. Two changes, however, were observed. First, AI tended to **moralise** the fox: in retellings, the fox's tricks were followed by explicit lessons ("Lying never pays"), and in some generated tales the fox was punished at the end, whereas in traditional Uzbek tales her cleverness is often admired and goes unpunished. Second, the culture-specific roles of the Uzbek fox were lost. The opening formula "bo'ri baqqol, tulki tarozibon" was dropped or replaced with "Once upon a time" in most translations, and with it disappeared the image of the fox as a market cheat.

3.The wolf underwent the greatest transformation. In retellings and translations of Uzbek tales, the wolf's foolishness, central to stories in which the fox tricks him, was often reduced, while his menace was increased. A wolf who in the original is a comic victim became in AI versions a "fierce", "terrible" or "hungry, dangerous" predator with "sharp teeth and glowing eyes", features of the English Big Bad Wolf.

The shift was even clearer in task C. When asked to "write an Uzbek folk tale about a wolf", the models almost always produced a story in which the wolf is a predator threatening sheep, children or smaller animals, often closely following the plot of The Three Little Pigs or Little Red Riding Hood. The positive Turkic image of the wolf, brave, free, loyal to its pack and a protector, appeared only in a small number of texts, and mainly when it was explicitly requested.

4. The bear: "teddification"

The bear underwent a process we call teddification. In AI retellings of Uzbek tales, the strong but clumsy bear, who is easily tricked by the fox, was frequently softened into a "kind", "gentle" or "friendly" bear. In generated "Uzbek" tales, bears often lived in families, with a Papa Bear, Mama Bear and Baby Bear, and cared for lost children, a pattern clearly borrowed from The Story of the Three Bears and the image of the teddy bear. The comic, slightly foolish strongman of Uzbek folklore was rarely preserved.

4. Animal idioms in translation

Idiom	Typical AI translation	Strategy	Accuracy
tulkilik qilmoq	"to act slyly", "to be cunning like a fox"	Functional equivalent, same image	…
bo'riday (of a brave young man)	"like a wolf", "wolf-like"	Literal; predatory connotation	…
ayiq xizmati	"a disservice"; or "a bear's service"	Paraphrase or literal	…
qo'yday yuvosh	"as meek as a lamb"	Functional equivalent, similar image	…
sly as a fox	tulkiday ayyor	Functional equivalent, same image	…
wolf in sheep's clothing	qo'y terisini yopingan bo'ri	Literal, understandable	…

Idiom	Typical AI translation	Strategy	Accuracy
like a bear with a sore head	juda jahldor; literal versions	Paraphrase or literal	…

The idiom probe confirmed the pattern. Fox idioms were translated well in both directions, since the cognitive models largely coincide. Wolf idioms were the most problematic: bo'riday, which in Uzbek praises a young man's courage and strength, was usually translated as like a wolf or wolf-like, which in English suggests aggression, greed or predatory behaviour. The positive evaluation was thus reversed. Ayiq xizmati was either paraphrased as a disservice, keeping the meaning but losing the image, or translated literally as a bear's service, which is meaningless to an English reader. English bear idioms such as like a bear with a sore head were usually paraphrased in Uzbek.

Discussion

Three patterns of transformation

The results reveal that AI does not treat all animal characters in the same way. The degree and type of transformation depend on how far the Uzbek and English cognitive models diverge.

Where the models coincide, as with the fox, AI preserves the character well. Changes are limited to moralisation and the loss of minor culture-specific details.

Where the models conflict, as with the wolf, AI replaces the Uzbek model with the English one. The English Big Bad Wolf is so frequent and prototypical in the training data that it overrides the ambivalent Uzbek wolf. This is a clear case of what Rosch (1978) and Lakoff (1987) would describe as prototype dominance: the most salient member of a category in the data becomes the default.

Where the English model has acquired new layers, as with the domestic and cuddly bear, AI transfers these layers to the Uzbek character. The result, teddification, is not a translation error but a cultural shift: the Uzbek bear is re-imagined according to modern Anglo-American children's culture.

The lost Turkic wolf

The fate of the wolf deserves particular attention. The positive image of the wolf is one of the deepest layers of Turkic culture, rooted in ancient legends of descent and reflected in idioms, names and amulets (Roux, 1984; Golden, 1992; Snesarev, 1969). In AI-generated "Uzbek" tales, this layer almost disappears, and the wolf becomes simply a villain. The mistranslation of bo'riday shows the same process at the level of the idiom: a word of praise becomes a word of reproach. This illustrates Talebinejad and Dastjerdi's (2005) point that animal metaphors cannot be assumed to travel unchanged between cultures. It also shows that AI, by relying on the dominant English model, can reverse the evaluation built into a culture's language.

Moralisation and modern children's culture

The tendency to moralise the fox and to soften the bear reflects broader values in contemporary English-language children's literature: clear moral lessons, gentle characters and the avoidance of frightening or ambiguous content. Traditional animal tales, both Uzbek and English, are often more ambiguous: the trickster is admired, the foolish are punished harshly, and morality is not always explicit. In this sense, AI not only replaces Uzbek models with English ones but also replaces traditional folk models with modern ones, a process consistent with Zipes's (2006) observation that tales are constantly rewritten to suit the values of their time.

Practical implications

Several practical implications follow. Translators and editors should pay special attention to animal idioms whose evaluations differ across cultures, such as bo'riday, and should use explanatory strategies rather than literal translation. Authors and teachers who ask AI to write "Uzbek folk tales" should be aware that the results may follow English models, and should specify the traditional traits of the characters in their prompts. Language teachers can use animal idioms and AI translations to show learners how metaphors encode culture, which is an effective way of developing both linguistic and intercultural competence.

Limitations

The study has several limitations. The corpus is relatively small, and LLMs change quickly, so the results reflect particular model versions. Only three animals were examined; future studies could include others, such as the hare, the snake, the camel or the horse, which have rich and culturally specific roles in Uzbek folklore. Regional variation within Uzbek culture was also not considered. Finally, the study did not examine how children perceive AI-generated animal characters, which would be a valuable direction for future research.

Conclusion

The fox, the wolf and the bear are among the first characters through which children learn to judge human behaviour. Each culture has its own version of them, shaped by centuries of storytelling, belief and language. This study has shown that AI does not simply retell these characters; it often re-imagines them.

The main findings can be summarised as follows:

1. The cognitive models of the fox are similar in Uzbek and English culture, while those of the wolf and the bear differ substantially: the Uzbek wolf is ambivalent and partly heroic, the English wolf is a pure villain; the Uzbek bear is strong and clumsy, the English bear has become domestic and endearing.

2. AI preserves the fox's core trait of cunning but moralises the character and loses its culture-specific roles, such as the market cheat of "tulki tarozibon".

3. AI replaces the Uzbek wolf with the English Big Bad Wolf, losing its foolishness in tales and its heroic Turkic associations.

4. AI "teddifies" the Uzbek bear, turning it into a gentle, family-oriented character modelled on Goldilocks and the teddy bear.

5. Animal idioms are translated well where cognitive models coincide, but where they differ, as with bo'riday, AI may reverse their evaluation.

Thus, AI brings its own animals into other cultures' tales. To keep the Uzbek fox cunning, the Uzbek wolf ambivalent and the Uzbek bear strong and simple, those who use AI to tell stories must know these characters well and guide the models with cultural awareness.

References

1. Afzalov, M. (1964). O'zbek xalq ertaklari haqida [On Uzbek folk tales]. Tashkent: Fan.
2. Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the dangers of stochastic parrots: Can language models be too big? In Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (pp. 610–623). https://doi.org/10.1145/3442188.3445922
3. Goatly, A. (2006). Humans, animals, and metaphors. Society & Animals, 14(1), 15–37.
4. Golden, P. B. (1992). An introduction to the history of the Turkic peoples. Wiesbaden: Harrassowitz.

5. Hendy, A., Abdelrehim, M., Sharaf, A., Raunak, V., Gabr, M., Matsushita, H., Kim, Y. J., Afify, M., & Awadalla, H. H. (2023). How good are GPT models at machine translation? A comprehensive evaluation. arXiv preprint arXiv:2302.09210.
6. Imomov, K. (1981). O'zbek xalq prozasi [Uzbek folk prose]. Tashkent: Fan.
7. Jacobs, J. (1890). English fairy tales. London: David Nutt.
8. Kövecses, Z. (2002). Metaphor: A practical introduction. New York: Oxford University Press.
9. Kövecses, Z. (2005). Metaphor in culture: Universality and variation. Cambridge: Cambridge University Press.
10. Krippendorff, K. (2018). Content analysis: An introduction to its methodology (4th ed.). Thousand Oaks, CA: SAGE.
11. Lakoff, G. (1987). Women, fire, and dangerous things: What categories reveal about the mind. Chicago: University of Chicago Press.
12. Lakoff, G., & Turner, M. (1989). More than cool reason: A field guide to poetic metaphor. Chicago: University of Chicago Press.
13. Liu, E., Cui, C., Zheng, K., & Neubig, G. (2022). Testing the ability of language models to interpret figurative language. In Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics (pp. 4437–4452).
14. Mirzayev, T., Musoqulov, A., & Sarimsoqov, B. (2005). O'zbek xalq maqollari [Uzbek folk proverbs]. Tashkent: Sharq.
15. Naous, T., Ryan, M. J., Ritter, A., & Xu, W. (2024). Having beer after prayer? Measuring cultural bias in large language models. In Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (pp. 16366–16393).
16. Robinson, N. R., Ogayo, P., Mortensen, D. R., & Neubig, G. (2023). ChatGPT MT: Competitive for high- (but not low-) resource languages. In Proceedings of the Eighth Conference on Machine Translation (pp. 392–418).
17. Rosch, E. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), Cognition and categorization (pp. 27–48). Hillsdale, NJ: Lawrence Erlbaum.
18. Roux, J.-P. (1984). La religion des Turcs et des Mongols [The religion of the Turks and Mongols]. Paris: Payot.
19. Safarov, Sh. (2006). Kognitiv tilshunoslik [Cognitive linguistics]. Jizzakh: Sangzor.
20. Snesarev, G. P. (1969). Relikty domusul'manskikh verovaniy i obryadov u uzbekov Khorezma [Relics of pre-Muslim beliefs and rituals among the Uzbeks of Khorezm]. Moscow: Nauka.
21. Southey, R. (1837). The story of the three bears. In The doctor (Vol. 4, pp. 318–326). London: Longman, Rees, Orme, Brown, Green and Longman.
22. Talebinejad, M. R., & Dastjerdi, H. V. (2005). A cross-cultural study of animal metaphors: When owls are not wise! Metaphor and Symbol, 20(2), 133–150.
23. Tao, Y., Viberg, O., Baker, R. S., & Kizilcec, R. F. (2024). Cultural bias and cultural alignment of large language models. PNAS Nexus, 3(9), pgae346. https://doi.org/10.1093/pnasnexus/pgae346
24. Uther, H.-J. (2004). The types of international folktales: A classification and bibliography (FF Communications 284–286). Helsinki: Suomalainen Tiedeakatemia.
25. Varty, K. (1999). Reynard, Renart, Reinaert and other foxes in medieval England: The iconographic evidence. Amsterdam: Amsterdam University Press.

26. Zipes, J. (2006). Why fairy tales stick: The evolution and relevance of a genre. New York: Routledge.