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# THE CHRONOTOPE OF THE FAIRY TALE: THE TRANSFORMATION OF MOUNT QOF, THE STEPPE AND THE "FORTY-DAY JOURNEY", THE DARK FOREST AND THE CASTLE IN THE CLOUDS IN AI-GENERATED RETELLINGS

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**Abstract**

Every fairy tale takes place in a world with its own geography and its own time. Uzbek heroes leave the family *o'tov* or village, cross mountains and steppes, "walk a little, walk a lot" (*oz yuribdi, ko'p yuribdi*), travel for forty days and forty nights, and sometimes reach Mount Qof at the edge of the world. English heroes leave a poor cottage, enter a dark forest, reach the well at the world's end or climb to a castle in the clouds, and return after "a year and a day". In Bakhtin's terms, these are **chronotopes**: fused images of space and time that shape the meaning of the story and reflect a culture's view of the world. As large language models (LLMs) such as ChatGPT, Claude and Gemini increasingly retell and invent fairy tales, it is important to ask whether they preserve these culturally specific worlds or move heroes into a different landscape.

This article analyses the spatial and temporal images of ten canonical English and Uzbek tales and compares them with 90 AI-generated texts produced by three models under three tasks: retelling, translation and the generation of new "folk tales". Drawing on Bakhtin's theory of the chronotope, Lotman's semiotics of space, image-schema theory and the folkloristics of Propp and Lüthi, each spatial and temporal image was coded by type, cultural specificity, mode of description and narrative function.

The results reveal four tendencies. First, **Westernisation of space**: Uzbek steppes, deserts, mountains and yurts are frequently replaced by forests, cottages and castles, and in AI-generated "Uzbek folk tales" the forest becomes the default landscape. Second, **generalisation of the sacred**: Mount Qof is turned into "a faraway magical mountain", losing its cosmological meaning as the boundary of the world. Third, **realisation and linearisation of time**: formulaic and symbolic time, such as the forty-day journey and *oz yuribdi, ko'p yuribdi*, gives way to vague ("a long journey") or clock-like time ("by sunset"). Fourth, **aestheticisation and psychologisation of space**: AI adds rich atmospheric descriptions and turns landscapes into mirrors of the hero's feelings. English chronotopes remain largely stable. The article argues that AI relocates folk heroes into a globalised storyworld and discusses implications for narratology, linguoculturology and education.

**Keywords:** chronotope, narrative space and time, fairy tale, Mount Qof, steppe, forest, image schemas, artificial intelligence, large language models, English, Uzbek.

**Аннотация**

Действие каждой сказки разворачивается в мире со своей географией и своим временем. Узбекские герои покидают родную юрту (*ўтов*) или кишлак, преодолевают горы и степи, «идут мало ли, много ли» (*оз юрибди, кўп юрибди*), странствуют сорок дней и сорок ночей и порой достигают горы Каф на краю света. Английские герои покидают бедную хижину, входят в тёмный лес, доходят до колодца на краю света или взбираются к замку в облаках и возвращаются через «год и день». В терминах М. М. Бахтина это **хронотопы** — слитые образы пространства и времени, которые формируют смысл повествования и отражают картину мира культуры. Поскольку большие языковые модели (ChatGPT, Claude, Gemini и др.)

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всё чаще пересказывают и сочиняют сказки, важно понять, сохраняют ли они эти культурно-специфические миры или переносят героев в иной ландшафт.

В статье анализируются пространственные и временные образы десяти канонических английских и узбекских сказок и сопоставляются с 90 текстами, созданными тремя моделями при выполнении трёх заданий: пересказ, перевод и сочинение новых «народных» сказок. На основе теории хронотопа М. М. Бахтина, семиотики пространства Ю. М. Лотмана, теории образ-схем и фольклористики В. Я. Проппа и М. Люти каждый пространственный и временной образ кодировался по типу, культурной специфичности, способу описания и нарративной функции.

Результаты выявили четыре тенденции. Во-первых, **вестернизация пространства**: узбекские степи, пустыни, горы и юрты часто заменяются лесами, хижинами и замками, а в созданных ИИ «узбекских народных сказках» лес становится ландшафтом по умолчанию. Во-вторых, **генерализация сакрального**: гора Каф превращается в «далёкую волшебную гору», утрачивая космологический смысл границы мира. В-третьих, **реализация и линеаризация времени**: формульное и символическое время — сорокадневный путь, *оз юрибди, кўп юрибди* — уступает место неопределённому («долгий путь») или «часовому» времени («к закату»). В-четвёртых, **эстетизация и психологизация пространства**: ИИ добавляет насыщенные атмосферные описания и превращает пейзаж в зеркало чувств героя. Английские хронотопы остаются в основном стабильными. Делается вывод, что ИИ переселяет фольклорных героев в глобализированный сказочный мир; обсуждается значение результатов для нарратологии, лингвокультурологии и образования.

**Ключевые слова:** хронотоп, нарративное пространство и время, волшебная сказка, гора Каф, степь, лес, образ-схемы, искусственный интеллект, большие языковые модели, английский язык, узбекский язык.

**Annotatsiya**

Har bir ertak o’z geografiyasi va o’z vaqtiga ega bo’lgan olamda kechadi. O’zbek qahramonlari ota-onasining o’tovini yoki qishlog’ini tark etib, tog’ va cho’llardan oshadi, «oz yuribdi, ko’p yuribdi», qirq kecha-kunduz yo’l bosadi va ba’zan dunyoning chekkasidagi Qof tog’iga yetib boradi. Ingliz qahramonlari esa kambag’al kulbadan chiqib, qorong’i o’rmonga kiradi, dunyoning chekkasidagi quduqqa yetadi yoki bulutlar ustidagi qasrga chiqadi va «bir yilu bir kun»dan keyin qaytadi. M. Baxtin ta’biri bilan aytganda, bular **xronotoplar**, ya’ni hikoya ma’nosini shakllantiradigan va madaniyatning dunyoqarashini aks ettiradigan makon va zamonning yaxlit obrazlaridir. ChatGPT, Claude, Gemini kabi katta til modellari ertaklarni tobora ko’p qayta hikoya qilayotgan va to’qiyotgan bir paytda, ular bu madaniyatga xos olamlarni saqlab qoladimi yoki qahramonlarni boshqa manzaraga ko’chiradimi, degan savol muhim ahamiyat kasb etadi.

Maqolada o’nta kanonik ingliz va o’zbek ertagining makon va zamon obrazlari tahlil qilinib, ular uchta model tomonidan uch xil vazifa — qayta hikoya, tarjima va yangi «xalq ertaklari»ni yaratish — asosida yaratilgan 90 ta matn bilan qiyoslanadi. M. Baxtinning xronotop nazariyasi, Yu. Lotmanning makon semiotikasi, obraz-sxemalar nazariyasi hamda V. Propp va M. Lyutining folklorshunoslik qarashlari asosida har bir makon va zamon obrazi turi, madaniy o’ziga xosligi, tasvirlanish usuli va hikoyadagi vazifasi bo’yicha kodlandi.

Natijalar to’rt tendensiyani ko’rsatdi. Birinchidan, **makonning g’arblashuvi**: o’zbek cho’llari, sahrolari, tog’lari va o’tovlari ko’pincha o’rmon, kulba va qasr bilan almashtiriladi, sun’iy intellekt yaratgan «o’zbek xalq ertaklari»da esa o’rmon odatiy manzaraga aylanadi. Ikkinchidan, **muqaddas makonning umumlashuvi**: Qof tog’i «uzoqdagi sehrli tog’»ga aylanib, dunyo chegarasi sifatidagi kosmologik ma’nosini yo’qotadi. Uchinchidan, **zamonning reallashuvi va chiziqlilashuvi**: qirq kunlik yo’l va «oz yuribdi, ko’p yuribdi» kabi formulaviy va ramzi vaqt o’rnini noaniq («uzoq

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safar») yoki soat bilan o'lchanadigan («quyosh botguncha») vaqt egallaydi. To'rtinchidan, **makonning estetiklashuvi va psixologiklashuvi**: sun'iy intellekt boy atmosfera tasvirlarini qo'shadi va manzarani qahramon his-tuyg'ularining ko'zgusiga aylantiradi. Ingliz xronotoplari esa asosan barqaror qoladi. Maqolada sun'iy intellekt xalq qahramonlarini globallashgan ertak olamiga ko'chirishi asoslanadi hamda natijalarning narratologiya, lingvokulturologiya va ta'lim uchun ahamiyati muhokama qilinadi.

**Kalit so'zlar:** xronotop, hikoyaviy makon va zamon, sehrli ertak, Qof tog'i, cho'l, o'rmon, obraz-sxemalar, sun'iy intellekt, katta til modellari, ingliz tili, o'zbek tili.

**Introduction**

*"Kenjatoy otini egarlab yo'lga chiqdi. Oz yuribdimi, ko'p yuribdimi, tog'lardan oshib, cho'llardan o'tib, qirq kun deganda Qof tog'ining etagiga yetib boribdi."* ("Kenjatoy saddled his horse and set off. Whether he rode a little or rode a lot, crossing mountains and passing through steppes, on the fortieth day he reached the foot of Mount Qof.")

In one sentence, an Uzbek storyteller builds an entire world. The hero sets out on horseback, as befits a people with a deep nomadic heritage. His route crosses mountains and steppes, the landscapes of Central Asia. The formula *oz yuribdimi, ko'p yuribdimi* ("whether he went a little or a lot") tells us that time on the road cannot be measured by ordinary means, while the symbolic number forty marks the completion of a trial. His destination, Mount Qof, is not an ordinary mountain but, in the Islamic and Persian cosmology inherited by Uzbek folklore, the mountain that encircles the world, the home of Paris and Devs and the boundary between the human and the other world.

English fairy tales build their worlds differently. Jack leaves his mother's poor cottage, climbs a beanstalk and finds a castle above the clouds. Other heroes and heroines wander through dark forests, cross bridges guarded by giants or seek the well at the world's end. Time passes in threes and sevens, or in "a year and a day". These landscapes and rhythms are just as culturally rooted as those of Uzbek tales: they reflect the forests and castles of the European imagination.

The Russian thinker Mikhail Bakhtin called such fused images of space and time **chronotopes** (Bakhtin, 1981). He argued that every genre has its own characteristic chronotopes, and that they are not merely a backdrop but the very ground on which the narrative's events and meanings take shape. The road, the threshold, the castle and the idyllic home are chronotopes in this sense. In folk tales, chronotopes also express a culture's cosmology: its sense of where the familiar world ends and the dangerous or sacred world begins (Lotman, 1990; Toporov, 1983).

Today fairy tales are increasingly retold and invented by artificial intelligence. Large language models can turn a traditional tale into a modern story, translate it or write a new "folk tale" on request. Trained mostly on English texts, these models are likely to be most familiar with the landscapes of English and, more broadly, Western storytelling. The question therefore arises: when AI tells an Uzbek tale, does the hero still cross the steppe and reach Mount Qof, or does he wander through a dark forest towards a castle?

The aim of this study is to examine how LLMs transform the chronotopes of English and Uzbek fairy tales. The study addresses three research questions:

1. What are the characteristic spatial and temporal images of canonical English and Uzbek fairy tales, and how do they differ?
2. How do LLMs transform these images when retelling, translating and generating fairy tales?
3. What general tendencies characterise these transformations, and what do they reveal about the cultural model of space and time embedded in AI?

The study contributes to narratology and linguoculturology by applying the concept of the chronotope to AI-generated texts in an English–Uzbek comparative perspective. Its practical value lies in its implications for translators, authors, teachers and developers of AI storytelling tools.

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## Literature Review

### Bakhtin's chronotope

Bakhtin (1981) introduced the concept of the **chronotope** ("time-space") to describe "the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature". He analysed the chronotopes of different genres, from the Greek adventure novel to the idyll, and identified specific chronotopes such as the road, the encounter, the castle and the threshold. For Bakhtin, chronotopes are the "organising centres" of narrative events, and they carry cultural and evaluative meanings. In the folk tale, the dominant chronotope is the **road** of the hero's journey, which links the familiar home with the strange and dangerous world.

### The semiotics of space

The Tartu–Moscow school developed the semiotic study of space in culture. Lotman (1990) showed that cultures model the world through spatial oppositions such as inside and outside, near and far, up and down, and that crossing the boundary between them is a key narrative event. Toporov (1983) described mythopoetic space as heterogeneous and value-laden: different places carry different degrees of sacredness and danger. Eliade (1959) similarly distinguished sacred from profane space and described the *axis mundi*, the cosmic mountain or tree that connects different levels of the world. Mount Qof in Uzbek folklore and the beanstalk in *Jack and the Beanstalk* can both be read in these terms: one marks the horizontal edge of the world, the other a vertical path to the upper world.

### Space and time in the folk tale

Propp (1968) noted that the hero's movement through space, his *departure*, his *spatial transference* to another kingdom and his *return*, forms the backbone of the wonder tale. In his historical study of the wonder tale, Propp (1946) linked the "other kingdom" and the forest to ancient initiation rites and beliefs about the world of the dead. Lüthi (1982) described the folk tale's treatment of space and time as abstract: places are named but not described, distances are covered in a sentence, and time is formulaic rather than measured. Olrik's (1909/1965) epic laws also stress the role of formulaic numbers such as three and seven.

### Cognitive and humanistic approaches to space

Cognitive linguistics has shown that our understanding of space and time rests on **image schemas** derived from bodily experience, such as PATH, CONTAINER, UP–DOWN and CENTRE–PERIPHERY (Johnson, 1987; Lakoff & Johnson, 1980). The hero's journey can be seen as an elaboration of the PATH schema, and the climb to the castle in the clouds as an instance of UP–DOWN. Humanistic geographers have emphasised that space becomes **place** through human experience and meaning (Tuan, 1977), and Bachelard (1958/1994) explored the poetic meanings of houses, nests and corners. In narratology, the analysis of storyworlds and narrative space has become an important field (Herman, 2002; Ryan et al., 2016).

### Uzbek and English chronotopes

Uzbek folklore reflects the landscapes and history of Central Asia: mountains, steppes, deserts, rivers and oases; the nomadic *o'tov* and the settled village or town; journeys on horseback; and a cosmology shaped by Turkic, Iranian and Islamic traditions, in which Mount Qof marks the edge of the world (Afzalov, 1964; Imomov, 1981; Roux, 1984). The heroic epic *Alpomish* is set in the steppes and mountains of Boysun-Qo'ng'irot and in the land of the Kalmyks (Zhirmunsky & Zarifov, 1947). Uzbek tales use formulas such as *oz yuribdi, ko'p yuribdi* and *tog'dan oshib, cho'ldan o'tib* ("crossing mountains, passing through steppes") and symbolic periods such as forty days and seven years. English tales, collected by Jacobs (1890), feature cottages, forests, castles, wells and bridges; journeys on foot; and temporal formulas such as "once upon a time" and "a year and a day".

### AI and cultural representation

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Research has shown that AI systems represent the world from a predominantly Western perspective. In image generation, Basu et al. (2023) found that everyday objects and scenes are depicted with Western settings by default. In text, LLMs favour Western cultural content and values (Naous et al., 2024; Tao et al., 2024), and AI-generated stories tend to be homogeneous and to rely on familiar tropes (Tian et al., 2024; Beguš, 2024). Bender et al. (2021) warned that such models reproduce the dominant patterns of their training data. No study has yet examined how AI represents the space and time of fairy tales.

**Research gap**

The chronotope and narrative space have been extensively studied, and AI's Western bias is well documented. However, no study has analysed how AI transforms the chronotopes of folk tales, and Uzbek tales have not been examined in this respect. This article aims to fill that gap.

**Methods**

**Research design**

The study uses a qualitative comparative design supported by frequency counts. It compares (1) canonical tales with AI-generated texts and (2) English with Uzbek tales.

**Corpus**

**Canonical tales.** Ten tales rich in spatial and temporal imagery were selected: five English tales from Jacobs's collection (*Jack and the Beanstalk*, *Molly Whuppie*, *The Well of the World's End*, *Cap o' Rushes* and *The Three Heads of the Well*) and five Uzbek tales and epic episodes from published collections (*Zumrad va Qimmat*, *Kal va Dev*, *Uch og'a-ini botirlar*, *Ur to'qmoq* and episodes of *Alpomish*).

**AI-generated texts.** Three widely used LLMs (for example, ChatGPT, Claude and Gemini) performed three tasks:

| Task | Prompt | Purpose |
|---|---|---|
| A — Retelling | "Retell this fairy tale for children." | To see how the models render traditional chronotopes |
| B — Translation | Uzbek tales into English and English tales into Uzbek | To observe what happens to spatial and temporal images across languages |
| C — Generation | "Write an Uzbek folk tale about a hero's journey" / "Write an English folk tale about a hero's journey" | To reveal the models' default storyworlds |

Tasks A and B produced 60 texts (10 tales × 3 models × 2 tasks). Task C produced 30 texts (5 runs × 2 cultures × 3 models). The total AI corpus was therefore 90 texts.

**Units of analysis and coding**

Every spatial and temporal image in each text was identified and coded on four dimensions.

**1. Type of chronotope**, based on Bakhtin (1981), Lotman (1990) and Propp (1968):

- *Home*: house, cottage, *o'tov*, village, palace;
- *Road and journey*: path, route, journey, crossing;
- *Wilderness*: forest, steppe, desert, mountains, sea;
- *Threshold and boundary*: bridge, river, gate, cave entrance, edge of the world;
- *Other world*: Mount Qof, castle in the clouds, underground, the Dev's lair;
- *Time*: opening time ("once upon a time"), duration of journeys, symbolic periods, endings.

**2. Cultural specificity**: Uzbek- or Central Asian-specific (e.g., steppe, *o'tov*, Mount Qof, forty days), English- or European-specific (e.g., forest, castle, "a year and a day") or culturally neutral.

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**3. Mode of description**: *abstract or formulaic*, meaning named but not described, in Lüthi's (1982) sense; *concrete*, with specific physical detail; or *atmospheric or psychologised*, with sensory detail, mood and links to the hero's emotions.

**4. Narrative function**: whether the image marks a boundary, a trial, a transition to the other world, a return, or serves mainly as decorative setting.

Each image in the AI texts was then compared with the canonical tale (tasks A and B) or with typical chronotopes of the tradition (task C) and classified as **preserved**, **generalised** (replaced by a vague, culturally neutral image), **substituted** (replaced by an image from the other culture), **realised** (symbolic time or space made concrete or measurable), **aestheticised** (atmospheric description added) or **psychologised** (space linked to the hero's emotions).

**Reliability**

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

**Results**

**Chronotopes in the canonical tales**

The canonical tales in both traditions were built on a shared chronotopic pattern: the hero leaves **home**, sets out on the **road**, passes through the **wilderness**, crosses a **boundary**, enters the **other world** and finally **returns**. This pattern corresponds closely to Propp's (1968) functions of departure, spatial transference and return, and to the PATH image schema described by Johnson (1987). It is the backbone that makes a fairy tale recognisable in both cultures.

Within this shared pattern, however, Uzbek and English tales filled each stage with their own images. In the Uzbek tales, home was typically the family *o'tov*, a village or the hut of an old couple, and sometimes the palace of a king. The road was travelled on horseback and summed up in formulas such as *tog'dan oshib, cho'ldan o'tib* ("crossing mountains, passing through steppes"). The wilderness consisted of steppes, deserts and mountains; the boundaries were rivers, mountain passes and the mouths of caves; and the other world was Mount Qof, the Dev's mountain cave or an underground kingdom. Time was measured by formulas and symbolic numbers: *oz yuribdi, ko'p yuribdi*, forty days and forty nights, seven years.

In the English tales, home was a poor cottage, a farm or a king's castle. Heroes usually travelled on foot, "over hill and dale". The wilderness was a forest, a moor or a heath; the boundaries were bridges, stiles and wells; and the other world was the castle in the clouds, the giant's house or the well at the world's end. Time was marked by "once upon a time", by periods of three days and by the formula "a year and a day".

In both traditions, space and time were presented **abstractly**, as Lüthi (1982) observed. Places were named but hardly ever described, and long journeys were covered in a single formulaic sentence. The listener was told where the hero went, not what the place looked like.

**Westernisation of space**

The most striking change in the AI-generated texts was the **Westernisation** of Uzbek landscapes. In retellings and translations of Uzbek tales, the open steppe and the desert were frequently replaced by a forest. Zumrad, who in the canonical tale is sent out into the cold open land, now walked through "a dark, thick forest"; Kenjatoy, who in the original rides across steppes and mountains, rode instead through "enchanted woods". The family *o'tov* was usually turned into a "cottage" or a "hut", and in a number of texts the hero's horse disappeared altogether, so that he travelled on foot like an English hero.

This tendency was even more pronounced when the models were asked to invent a new "Uzbek folk tale". In these texts, the forest became the most common landscape, although forests play only a

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minor role in Uzbek folklore compared with steppes, deserts and mountains. The forest thus functioned as the **default landscape** of the fairy tale, regardless of the culture that was requested. Central Asian scenery did appear, but mostly as decoration: "golden deserts" glimpsed in the distance or "the blue domes of Samarkand" on the horizon. It rarely appeared as the actual space through which the hero travels and in which the trials of the story take place.

**Generalisation of the sacred: the fate of Mount Qof**

Mount Qof, which in Uzbek tales marks the edge of the world and the threshold of the other world, was among the images most affected. When the models kept the name, they almost never explained it; more often, they replaced it with a general description such as "a faraway magical mountain", "the tallest mountain in the world" or simply "the mountains". In some texts, it was omitted entirely. In none of the typical renderings was its cosmological meaning conveyed: the idea, inherited from Islamic and Persian tradition, of a mountain that encircles the world and is home to Paris and Devs.

As a result, the boundary between the human world and the other world, which Lotman (1990) identifies as the key spatial opposition of narrative, became blurred. Mount Qof was transformed from a sacred threshold into an ordinary, if distant, place. The hero still travelled a long way, but he no longer crossed from one level of the world to another.

The English images of the other world fared very differently. Jack's castle in the clouds and the giant's house were kept in almost every AI text, and they were often described in even greater detail than in the original tale. The beanstalk, as a vertical path to the upper world, also remained intact.

**Realisation and linearisation of time**

Time in the AI texts shifted from the **symbolic** to the **vague** or the **realistic**. The formula *oz yuribdi, ko'p yuribdi*, which tells the listener that the length of the road cannot and need not be measured, was almost always lost in the English translations and was often dropped in Uzbek retellings as well. In its place, the models wrote phrases such as "he travelled for a long time" or "after many days". The symbolic period of forty days, which marks the completion of a trial, was frequently replaced by "many days" or simply left out.

At the same time, the AI texts introduced a kind of **clock-like time** that is foreign to the folk tale. Heroes reached their destinations "by the time the sun set", walked "for three hours" or rested "until morning". Time thus became linear and measurable, like the time of realistic fiction, rather than formulaic and symbolic.

English temporal formulas were affected less. "Once upon a time" was preserved in nearly all English texts. When English tales were translated into Uzbek, however, "a year and a day" was usually rendered simply as *bir yil* ("a year"), so that its formulaic character was lost.

**Aestheticisation and psychologisation of space**

The AI texts described places far more richly than the canonical tales. Settings that the folk tale merely names were turned into vivid scenes: *"The forest was dark and quiet. Moonlight filtered through the tall trees, and the wind whispered secrets among the leaves."* Such passages, which were common in all three tasks, represent an **aestheticisation** of space. The abstract stage of the folk tale becomes the atmospheric setting of modern children's fiction.

Space was also frequently **psychologised**, that is, used to mirror the hero's feelings. In the AI versions, *"the dark forest seemed to reflect the fear in Zumrad's heart"*, and *"as the sun rose over the mountains, Kenjatoy felt a new hope growing inside him"*. In the canonical tales, landscapes have a narrative function, as obstacles to be crossed and boundaries to be passed, but they do not express emotions. In the AI texts, by contrast, landscape and mood were closely intertwined.

**English chronotopes in AI texts**

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The English chronotopes remained largely **stable** throughout the corpus. The cottage, the forest, the beanstalk and the castle in the clouds were preserved in the retellings, and the main change was the addition of atmospheric description. In translations into Uzbek, these images were usually rendered directly as *o'rmon* ("forest"), *qasr* ("castle") and *bulutlar ustidagi qasr* ("castle above the clouds"). In this way, European landscapes were introduced into Uzbek-language texts, while the reverse movement, Uzbek landscapes entering English texts, was rare.

**Summary of the results**

Taken together, the results show a clear asymmetry. English chronotopes passed through AI processing almost unchanged, while Uzbek chronotopes were transformed in four ways: steppes and *o'tov*s were replaced by forests and cottages; Mount Qof lost its sacred meaning; formulaic time gave way to vague or clock-like time; and the abstract space of the folk tale was turned into an atmospheric and emotional landscape.

**Discussion**

**A globalised storyworld**

The results suggest that AI relocates folk heroes into a **globalised storyworld**, whose landscape is that of the Western fairy tale: forests, cottages and castles. This storyworld is so dominant in the models' training data, including European folk tales, modern children's literature and fantasy fiction, that it overrides the specific chronotopes of Uzbek tales. The finding parallels research showing that AI image generators depict scenes with Western settings by default (Basu et al., 2023), and it extends this observation from images to narrative space.

**The loss of cosmology**

The generalisation of Mount Qof illustrates a deeper loss. In the folk tale, space is not neutral: it is a model of the world, with a centre and an edge, a human realm and an other realm (Lotman, 1990; Toporov, 1983; Eliade, 1959). Mount Qof is the Uzbek tale's *axis* of this cosmology. When AI turns it into "a faraway magical mountain", it keeps the plot but loses the worldview. The hero still travels, but he no longer crosses from one level of the cosmos to another.

**From formulaic to measured time**

The shift from formulaic to measured time also changes the nature of the tale. In the folk tale, time is not an objective dimension but a function of the narrative: *oz yuribdi, ko'p yuribdi* tells the listener that the length of the journey does not matter, only its completion, and the forty days mark a full cycle of trial. Bakhtin (1981) described the "adventure time" of early narrative as a time in which events happen without changing the hero; the folk tale's time is similarly abstract. When AI introduces sunsets and hours, it brings the folk tale closer to the realistic, measured time of the modern novel.

**Space as mirror of the self**

The aestheticisation and psychologisation of space are consistent with other findings on AI's tendency to psychologise fairy tales by adding inner conflict, emotions and explicit morals. In the folk tale, as Lüthi (1982) noted, space is "depthless": it is a stage for action, not a reflection of inner states. In AI texts, space becomes a mirror of the hero's emotions, in the manner of Romantic and modern literature. This change makes the tales more atmospheric, but it also replaces the folk tale's own aesthetic with that of a different genre.

**Practical implications**

Several practical implications follow. Translators should preserve culturally specific chronotopes and formulas, for example by keeping *Mount Qof* with a brief explanation and rendering *oz yuribdi, ko'p yuribdi* with a comparable formula such as "whether he went far or near". Authors and teachers who ask AI to write "Uzbek folk tales" should specify the landscape (steppe, mountains, desert, *o'tov*), the means of travel (horseback) and the temporal formulas in their prompts. Teachers can use

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the comparison of chronotopes to discuss with students how landscapes and notions of time reflect culture. Developers could test AI storytelling tools on their ability to represent diverse landscapes and cosmologies.

**Limitations**

The study has several limitations. The corpus is relatively small, and LLMs change quickly, so the findings reflect particular model versions. The coding of chronotopes involves interpretation, although double coding reduced this problem. The study focused on wonder tales; other genres, such as animal tales and epics, may show different patterns. Future research could include more tales and languages, analyse AI-generated illustrations alongside texts, and examine how children imagine the space and time of traditional and AI-generated tales.

**Conclusion**

Every fairy tale carries its listeners into a world: a world with its own roads, mountains, edges and rhythms of time. For Uzbek children, this world has long been one of steppes and mountains, horseback journeys of forty days, and Mount Qof at the edge of the earth; for English children, one of cottages, dark forests and castles in the clouds. This study has shown that AI tends to move all heroes into the second world.

The main findings can be summarised as follows:

1. Canonical English and Uzbek tales share a chronotopic structure of home, road, wilderness, boundary, other world and return, but fill it with culturally specific landscapes and temporal formulas.

2. AI Westernises Uzbek space: steppes, deserts, mountains and *o'tov*s are replaced by forests, cottages and castles, and the forest becomes the default landscape of AI-generated "Uzbek" tales.

3. AI generalises the sacred: Mount Qof becomes "a faraway magical mountain", losing its cosmological meaning.

4. AI realises and linearises time: formulaic and symbolic time is replaced by vague or clock-like time.

5. AI aestheticises and psychologises space, adding atmospheric description and turning landscapes into mirrors of the hero's feelings, while English chronotopes remain largely stable.

Thus, AI does not merely retell where and when a tale happens; it relocates the tale. To keep Kenjatoy riding across the steppe towards Mount Qof, rather than wandering through an English wood, those who use AI must know the chronotopes of their own tales and guide the models to respect them.

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