ZOONYMIC IDIOMS IN ENGLISH AND UZBEK AND ARTIFICIAL INTELLIGENCE: CHALLENGES IN TRANSLATION AND RECOGNITION

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Abstract: Zoonymic idioms, which include animal names within phraseological units, are deeply rooted in cultural and metaphorical thinking. In English and Uzbek, such idioms often carry figurative meanings that cannot be interpreted literally. With the rise of artificial intelligence (AI) in translation and linguistic analysis, understanding how AI systems recognize and translate these idioms is essential. This article analyzes selected zoonymic idioms in English and Uzbek and evaluates how effectively modern AI tools (e.g., Google Translate, ChatGPT, DeepL) handle them. The findings reveal challenges such as literal translation errors, loss of metaphorical meaning, and lack of cultural sensitivity. Suggestions for improving AI recognition and translation of idioms are also provided.

Keywords: zoonymic idioms, phraseological units, AI translation, cultural meaning, metaphor, English language, Uzbek language

Annotatsiya: Zoonim frazeologik birliklar, ya'ni hayvon nomlari ishtirok etgan iboralar madaniy va metaforik tafakkur bilan chambarchas bog'liqdir. Ingliz va o'zbek tillarida bunday frazeologizmlar ko'pincha so'zma-so'z tarjima qilib bo'lmaydigan, ko'chma ma'nolarni anglatadi. Sun'iy intellekt (AI) vositalarining tarjima va lingvistik tahlildagi rolining ortib borayotgani sharoitida, bu tizimlarning bunday iboralarni qanday aniqlashi va tarjima qilishi muhim masalaga aylanmoqda. Ushbu maqolada ingliz va o'zbek tillaridagi ayrim zoonim frazeologizmlar tahlil qilinadi hamda zamonaviy AI vositalari (masalan, Google Translate, ChatGPT, DeepL) ularni qay darajada to'g'ri tarjima qila olishi baholanadi. Tadqiqot natijalari so'zma-so'z tarjima xatolari, metaforik ma'noning yo'qolishi va madaniy kontekstni hisobga olmaslik kabi muammolar mavjudligini ko'rsatdi. Shuningdek, AI tomonidan frazeologizmlarni aniqlash va tarjima qilish sifatini yaxshilashga doir tavsiyalar ham keltirilgan.

Kalit so'zlar: zoonim frazeologizmlar, frazeologik birliklar, AI tarjimasi, madaniy ma'no, metafora, ingliz tili, o'zbek tili

Аннотация: Зоонимические фразеологические единицы, то есть выражения с участием названий животных, глубоко укоренены в культурном и метафорическом мышлении. В английском и узбекском языках такие идиомы часто обладают переносным значением, которое невозможно передать дословным переводом. С ростом влияния искусственного интеллекта (ИИ) в сфере перевода и лингвистического анализа важно понимать, как современные ИИ-системы распознают и переводят подобные выражения. В данной статье рассматриваются отдельные зоонимические фразеологизмы в английском и узбекском языках, а также оценивается, насколько эффективно такие инструменты, как Google Translate, ChatGPT и DeepL, справляются с их переводом. Результаты исследования показывают наличие проблем, таких как дословные ошибки перевода, утрата метафорического смысла и недостаток культурной чувствительности. Также представлены рекомендации по улучшению распознавания и перевода фразеологических единиц средствами ИИ.

Phraseological units are expressions with fixed structures and meanings that go beyond their literal interpretation. Among these, zoonymic idioms, which contain animal names, represent a significant part of figurative language in both languages. With AI tools increasingly used in translation and communication, evaluating their handling of such idioms is crucial for both linguistic research and practical applications.

Zoonymic idioms like "a wolf in sheep's clothing," "to cry wolf," or "a dark horse" convey meanings tied to cultural associations with animals. They often involve metaphorical extensions that cannot be understood word-for-word. So the literal translation does not work when a translator is working with them.

Modern AI tools rely on large corpora and neural network training to perform translations. While they handle literal language effectively, idioms remain a challenge due to:
- Polysemy and context-dependence
- Lack of idiom-specific annotation in corpora
- Difficulty in recognizing fixed expressions

This, of course, makes a translation unsuccessful due to the lack of metaphorical meaning, as literal meaning or word for word translation can not deliver the context meaning.

This study tested 4 common zoonymic idioms through three popular AI platforms:
- Google Translate: tends to produce literal translations for rare idioms.
- DeepL: performs better with context but struggles with culturally bound expressions.
- ChatGPT: offers explanations and context-aware translations but is not always precise
Example: "To let the cat out of the bag"
- Google: Translates word-for-word.(mushukni sumkadan chiqaring)
- DeepL: Often gives the correct figurative equivalent if the language pair supports it. But the number of languages that provides translation is limited and most languages do not support language pair. So it also translates word for word(mushukni sumkadan chiqaring)
- ChatGPT: Explains the idiom meaning and suggests contextual translation(sirni ochib qo'ymoq)
     - Google – " To rain cats and dogs" – mushuklar va itlar yomg'ir
     - DeepL – "To rain cats and dogs" – mushuklar va itlar yomg'iriga
     - ChatGPT – "To rain cats and dogs" – juda kuchli yomg'ir yog'moqda
     - Google – " Pati yulingan tovuqdek" – like a plucked chicken
     - DeepL- " Pati yulingan tovuqdek" - like a plucked chicken
     - ChatGPT " Pati yulingan tovuqdek"- Like a drowned rat(and gave some more alternatives, explanations and suggested to use exact idioms when translating)
     - Google – "Mulla mingan eshakday" - "Like a donkey ridden by a mullah"

     - DeepL - "Mulla mingan eshakday" - "Like a donkey ridden by a mullah"(gave some more alternatives but all translated word for word)
     - ChatGPT - "Mulla mingan eshakday" - Like a peacock on a tricycle(and gave some more alternatives, explanations and suggested to use exact idioms when translating)
As seen from the examples translation with AI has some problems due to:
     - Literalism: Many AI models translate idioms word-by-word.
- Ambiguity: AI struggles when idioms have multiple meanings.
- Cultural mismatch: Some idioms have no equivalent in the target language. So there are some recommendations below:

- Include more idiom-rich corpora in training data.
- Tag phraseological units explicitly during annotation.
- Develop hybrid systems combining rule-based and neural approaches.
- Incorporate cultural context awareness in AI algorithms.

Zoonymic idioms reflect complex linguistic and cultural constructs that remain difficult for AI to fully grasp. While progress is evident, significant improvements are needed in how AI systems interpret and translate these expressions. This area offers rich opportunities for interdisciplinary research involving linguistics, computational linguistics, and AI development. Furthermore, translating the full context rather than specific phrase can be also useful as translation generators may be able to guess the metaphorical meaning in context.

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