

# Wealth/Poverty Opposition in English and Kazakh: A Comparative Study

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## Abstract

This research employs linguistic concept modeling to scrutinize the semantic variations between notions of wealth and poverty in English and Kazakh, aiming to discern their contrasting characteristics. The corpora in English and Kazakh encompassing varied genres, styles, and thematic content were examined through word frequency and co-occurrence to elucidate divergent contextual frames for the terms in both languages, unveiling cultural nuances and cognitive associations. The results indicate that in English, wealth is majorly associated with financial prosperity, real estate ownership, and the availability of resources for a comfortable lifestyle. Conversely, in Kazakh-language writings, the concept of wealth extends to encompass elements like family connections and devotion to the homeland, reflecting cultural priorities and lifestyles. A comparable distinction is evident when examining the contextual usage of the term poverty. The findings underscore the significance of exploring linguistic concepts within distinct cultural and cognitive frameworks, opening avenues for further comparative linguistic research.

**Keywords:** binary opposition, comparative linguistics, contrastive analysis, corpus analysis

## 1. Introduction

Language is not just a mere tool of communication, but rather a profound bridge that transcends boundaries, linking entire nations (Olii, 2021). Its intricate web of words, phrases, and expressions reflects a deeply rooted connection between the pulse of society and the ever-evolving vocabulary within its spoken discourse. This undeniable link between a society's essence and the lexicon it shapes is a testament to how language encapsulates the ethos, values, and nuances of the people who breathe life into it.

There are several perspectives on the integration of language and society. One of them emphasizes how social changes and interactions influence the way people use language (Sundgren, 2009; Adams, 2013; Michael, 2015; Muehlenbernd & Quinley, 2017). This is a big puzzle made of words where society is the wind that blows pieces around. Societal changes, contact with different languages, technology, and cultural influences can be seen as strong winds that rearrange these pieces. When languages meet, they share bits and pieces, like borrowing grammar or mixing different ways of speaking (Bakos, 2022). The second stance (Saavedra et al., 2023) zooms in on how society's shifts engender new words and might make some old ones less popular. It is like a garden where new flowers bloom while older ones slowly fade away. When society experiences new things or changes happen, particularly technical advancements (Edwards, 2022), people start using neologisms to talk about the new phenomena, just like adding new flowers to the garden. Cultural change is reflected in vocabulary change, and monitoring vocabulary can track cultural change. Additionally, societal shifts and the impact of time frame extension have led to changes in transition models and the management of uncertainty in an unpredictable society. These cumulative alterations gradually imprint societal changes onto a language's vocabulary.

## 2. Corpus Linguistics: Linguistic Concept Modeling

In general, the basic concepts in different languages are relatively similar (Sheikh et al., 2021). However, when it comes to conveying culture-specific concepts to those outside a particular culture, a lack of a robust linguistic framework for semantic analysis poses a challenge. This roadblock arises because distinct cultures develop unique psychological perspectives and conceptual patterns. Resultantly, these concepts resist direct translation across languages without alterations in their meanings (Ojalehto & Medin 2015; Laher & Cheung, 2022). Cultural systems, such as language, discourse, knowledge, beliefs, and epistemological orientations, influence individuals' conceptual construals (Fatehi & Tate, 2014). This implies that cognitive universality or variability cannot be easily determined, and a systems-level approach to conceptual understanding may be more fruitful (Consoli & Myers, 2022). Additionally, there is evidence favoring epistemological heterogeneity and individual heterogeneity across cultures, highlighting the need to consider cultural differences in psychological makeup, logic, and view (Lux et al., 2021).

In this context, corpus linguistics is an approach that uses authentic language examples collected into searchable corpora for the study of language. It is a methodology that involves the creation and analysis of linguistic corpora, allowing researchers to draw conclusions and build patterns and concepts about the subject studied by analyzing extensive collections of authentic language data (corpora). This method involves evaluating language patterns, structures, and usage within the corpora to understand and model various linguistic phenomena and concepts.

Further, linguistic concept modeling is a new computational approach that can be employed to analyze meaning in large bodies of text, providing unique insights for humanities research (Lewis et al., 2023; McGillivray & Tóth, 2020; Mehl, 2022; Schlechtweg et al., 2021). This technique relies on the idea that words and phrases can be represented as vectors in a high-dimensional semantic space, where their similarity and relations can be estimated and visualized. Exploring word meanings involves analyzing and comparing their usage and contexts throughout considerable volumes of textual data from various sources in several languages. This can be performed by training models on large corpora of native language text, such as articles, and essays written by speakers of different languages. These models are intended to unearth similarities and contrasts in word meanings within semantic domains and across languages. By applying linguistic concept modeling to corpora, researchers can discover hidden patterns, associations, and trends in language use, as well as juxtapose and contrast different texts, genres, and domains.

For instance, Honhalo (2022) examined the construction and comparison of lexico-semantic fields using corpus linguistics methods. Nießner et al. (2022) showcased that corpus linguistic analysis of financial statements can improve bankruptcy prediction models (Nießner et al., 2022). Another paper (Gentile, 2021) proved that corpus analysis can be instrumental in investigating syntax and linguistic schemata. Nasser & Sever (2020) presented a concept-based sentiment analysis system for Arabic language using corpus-based techniques (Nasser & Sever, 2020). Nitti (2022) advocated the potential of corpus linguistics in language education, specifically for teaching Italian as L1 and L2 (Nitti, 2022).

The present study aims to apply linguistic concept modeling on corpora to compare the meanings of the words “wealth” and “poverty” in both English and Kazakh as an attempt to identify their oppositional characteristics.

### 3. Methods

To fulfill the objective of this study, various examples of natural language usage were collected from a range of sources such as journals, novels, newspaper articles, and corpora in English and Kazakh, reflecting the current usage of the specified words within a diverse range of genres, styles, and thematic content.

As a first step, we conducted a literature review focusing on the keywords wealth and poverty across English scientific literature and “байлық” and “кедейлік” across Kazakh sources. This was required to provide a concise overview of how previous researchers have elucidated and discussed these concepts. Further, the corpora (specified below) were searched against dominating keywords. Based on the search outcomes, a word cloud was generated and a frequency analysis was run to explore the interconnections and occurrence patterns of words using Python packages (the process is exemplified in Figure 1).

```
from wordcloud import WordCloud
import matplotlib.pyplot as plt

word_freq = {
    'management': 2239,
    'people': 1892,
    'power': 1857,
    'taxes': 1756,
    'American': 1734,
    'work': 1615,
    'year': 1331,
    'nation': 1327,
    'economy': 1297,
    'state': 1224
}

# Add your word frequencies here
```

Figure 1. An example of the Python output

The analysis of Kazakh words drew upon three databases: (a) the Turkish-Kazakh Web database; (b) the National Corpus of the Kazakh Language from the Institute of Linguistics named after Akhmet Baitursynov, comprising 30 million words; (c) and the Almaty Corpus of Kazakh Language from Al-Farabi Kazakh National University, currently exceeding 40-million-word tokens. These collections encompass texts spanning five distinct styles of the Kazakh language: artistic, scientific, journalistic, business, and conversational. The corpora were merged and annotated via an automatic morphological analyzer, parsing approximately 86% of word types. Notably, the corpus homonymy was not eliminated, so that all potential analysis options were assigned to each word type. Post-processing included manual removal of duplicates, resulting in 4014 occurrences of “байлық” and 51 occurrences of “кедейлік” in the Turkish-Kazakh Web database, alongside 98 and 19 occurrences in both National Corpus of the Kazakh Language and Almaty Corpus of Kazakh Language.

The English word analysis was based on the English Web 2021 database, yielding 2,031,056 occurrences of “wealth” and 1,720,555 occurrences of “poverty”. Specifically, the initial 5,000 words were extracted for both terms. Official parts of speech and pronouns were excluded from the further analysis. The obtained data was assessed in terms of oppositional characteristics of words, considering their







#### 4.2 Kazakh Concepts: “Байлық” and “Кедейлік”

The corpus analysis yielded the 10 most frequent words, namely “рухани” (spiritual, 1688), “адам” (human, 1520), “денсаулық” (health, 1378), “қазақ” (Kazakh, 1303), “жер” (land, 967), “басты” (main, 925), “ақ” (white, 784), “ел” (country, 767), “өмір” (life, 741), “бай” (rich man, 641) (Figure 4).



Figure 4. Word cloud of terms related to байлық

The prominence of the word “рухани” (spiritual) in proximity to the term “байлық” (wealth) within the pooled Kazakh corpus evinces a correspondence between the concept of wealth and spiritual spectrum. This suggests that, within Kazakh cultural context, the notion of wealth is more closely aligned with spiritual well-being rather than merely material prosperity. This inference gains weight when considering the frequency of the term “ақша” (money) which directly pertains to material goods. The “ақша” appears only 456 times, considerably less compared to the prominence of “рухани” (spiritual), which further supports the idea that Kazakh perceptions of “wealth” lean towards a cultural or philosophical connection with spiritual enrichment rather than a focus solely on material wealth.

The word “адам” in the word cloud first of all begs the following question: what does wealth mean for a person? It depends on the actions of the person whether their life will be spent in accumulating material wealth or in helping others and increasing spiritual wealth. Should semantic issues be considered in isolation from the cultural context, one might assume that the term “денсаулық” connotes a reciprocity between wealth and health, mirroring a consideration of the interplay between financial welfare and physical well-being. But this is not really true in the current case. The following saying is widely disseminated in Kazakh folklore: “Бірінші байлық - денсаулық, екінші байлық - ақ жаулық, үшінші байлық - он саулық” (The first wealth is health, the second wealth is family, the third wealth is livestock.) This saying can be found in lots of literary works, and the corpus entails some of these works. This is why we can assert that wealth for the Kazakh people is synonymous with health.

The term «жер» (land) holds deep significance for the Kazakh people, dating back to ancient times when the land was revered as a nurturing force, akin to a foster mother providing bountiful harvests and protecting against famine. The nomadic lifestyle integral to Kazakh heritage involved extensive livestock grazing, where the health and abundance of livestock directly correlated with the land’s fertility.

Traditionally, the number of horses, camels, cows and sheep was a benchmark for the wealth of a Kazakh family, and the land played a vital role in augmenting this wealth. As a cornerstone of livestock grazing and a source of sustenance, the land was a fundamental factor influencing the prosperity and livelihoods of Kazakhs. This is mirrored in the following Kazakh proverb: “Жері байдың елі бай,” which means “The one who is rich in land has a rich country.”

One more prominent term in the word cloud is “ақ” (white), which is linked to the notion of “white wealth,” signifying milk and dairy products in Kazakh culture. Similarly, there exists a concept termed “black wealth,” which pertains to oil.

The word “ел” (country) indicates a connection between wealth and the nation or country, potentially reflecting discourse on national prosperity or wealth on a broader scale. “Өмір” (life) suggests narratives about wealth and its bearing on life or livelihood, potentially emphasizing the impact of prosperity on one’s life. “Бай” (rich man) directly relates to the concept of a wealthy individual, presuming a focus on affluent persons within the corpus records touching upon wealth.

The non-material sense of the term “байлық” is also echoed in the designation of the linguistic capital of the language: this is where the expression “тілдің сөз байлығы” is traditionally used, which means “the vocabulary richness of the language” (Dzhusupov, 2016). Historically, wealth in Kazakh language symbolizes status as well: wealth was a source of privileges, respect from compatriots and the title

“бай” (rich man), often granting an advantage over the descendants of “khans” (rulers) and over the most noble elders (Sabitov, 2016). Altogether, the literature review and corpus analysis yielded similar results: in Kazakh, wealth signifies: (a) health, (b) a large family, (c) high social status, and (d) a considerable livestock flock.

The list of the top 10 dominant words around the term “кедейлік” (poverty) in the Kazakh corpus provides some insights into the thematic landscape and contextual specifics related to the concept. The list is as follows: “төмен” (low, 27), “шегін” (threshold, 20), “әлеуметтік” (social, 16), “жұмыссыздық” (unemployment, 15), “халық” (population, 15), “Қазақстан” (Kazakhstan, 14), “бас” (head, 10), “табыс” (income, 9), “көмек” (assistance, 8), “күнкөріс” (livelihood, 8).



Figure 5. Word cloud of terms related to кедейлік

Per the conceptual modeling, the term “төмен” (low) implies a connection between poverty and a state of low status or economic situation. The word “шегін” (threshold) is likely to assume a poverty given Kazakh idiomatic expressions such as “to sleep on the doorstep” or “to haunt thresholds,” which symbolizes seeking aid when facing financial hardship. Therefore, the term “threshold” embodies the physical or symbolic barrier between poverty and wealth.

The presence of words like “әлеуметтік” (social) and “халық” (population) within the context of poverty can denote a multitude of senses. The term “әлеуметтік” can imply the existence of social disparities or inequalities within the population, suggesting a discrepancy in access to resources, opportunities, or social privileges among different segments of the population. The occurrence of “әлеуметтік” in the semantic bubble of poverty underscores the interconnectedness of poverty with a broad range of societal issues. Allegedly, it stresses that poverty is not merely an individual concern but a collective societal challenge that involves the entire population. Indeed, both “әлеуметтік” and “халық” within the discourse on poverty point towards the multi-layered and collective nature of poverty.

The term “жұмыссыздық” (unemployment) highlights the relationship between poverty and unemployment, indicating a key factor contributing to financial deprivation. The term “табыс” (income) may spell the link between inadequate financial resources and the experience of economic hardship or poverty within the population. Similarly, the word “күнкөріс” (livelihood) suggests narratives about the means of survival or sustenance, particularly within the context of poverty. The term “көмек” (assistance) is supposedly indicative of aid systems aimed at reducing poverty. The word “бас” (head) may refer to a leader or person responsible for decisions regarding governance of enterprises, economy or a country. Alternatively, “head” might denote leadership roles or initiatives aimed at addressing poverty. Finally, “Қазақстан” (Kazakhstan) implies a contextual parallel between poverty and the national context of Kazakhstan.

In Kazakh-language literature, poverty is often viewed as a test. For instance, a Kazakh proverb states: “Барлық не дегізбес, жоқтық не жергізбес”, which can be translated as “Hardship forges a man, while wealth makes him forget his humanity.” The word “жоқтық” (hardship) is synonymous with poverty. However, poverty was also considered punishment, a curse of fate or an injustice, as illustrated by the following Kazakh proverb: “It is better to be a rich man’s slave than a poor man’s son.” Overall, the literature on the understanding of poverty by Kazakhs is meagre and mainly consists of proverbs and sayings. To put it simply, in Kazakh language, poverty betokens low social status and a test.

#### 4.3 Limitations

The major limitation of the present study lies in the deficit of data appropriate for analysis. The limited number of words comprising the Kazakh corpora, restricts the breadth of the investigation and prevents drawing unambiguous conclusions. To increase the reliability of the findings, it is recommended that this analysis be replicated in the future using larger Kazakh corpora, unavailable at the time of writing.

## 5. Conclusion

The concepts of wealth and poverty are among those that could reflect the value system encapsulated in the native speakers' worldview, and are therefore of interest to explore from a variety of scientific standpoints, including linguistics. We tackled these concepts within the framework of linguoculturology and cognitive linguistics via the corpus approach. As the findings illustrated, in English-language sources wealth is commonly emblematic of financial abundance, ownership of real estate and access to resources enabling a pleasant lifestyle. On the other hand, in Kazakh-language texts, the semantic content of the word wealth additionally embraces niches such as family ties and worship of the native land, probably mirroring culturally ingrained priorities and lifestyles. A similar contrast can be inferred in the case of the contextual environment of the word poverty. Unlike the English semantic frame concentrated on the physical domain, in the Kazakh language poverty is conceptualized as a life challenge. This investigation can serve as a starting point for further analytical efforts in the field of comparative linguistic research.

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## Authors' contributions

Both authors have contributed regularly to the concept and objectives of the study. All authors read and approved the final manuscript.

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