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Article



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DESCRIPTION OF PAREMIAS IN PARALLEL CORPORA

Abstract: This article is devoted to analyze paremias in parallel corpora. The number, translation, tagging, format and sources of proverbs are described in parallel corpora. Bilingual parallel corpus databases of English have been studied.

Key words: corpus, paremias, proverbs, bitext, bilingual, sources, translation, parallel sentences, format.

Language: English

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Introduction

One of the urgent problems of linguistics in today's globalization process is the creation of an electronic version of the language. This problem can be solved by modern linguistic fields such as natural language processing, machine translation and corpus linguistics. It is an important task to create a national and parallel corpus of paremias of the genre of folk art.

Paremia (from the Greek. Παροιμία - proverb, proverb, parable) - a stable phraseological unit, which is an integral sentence of didactic content. In linguistics, proverbs and sayings are understood as paremias.

Paremia narrowly includes proverbs and sayings. In this sense, paremia was used as a synonym for the proverb in our investigation.

Analysis of Subject Matters

Some paremiologists and folklorists, such as Mieder, A. Taylor, G. Permyakov, Y. Rozhdestvensky, H. Hristova-Gotthardt, Outi Lauhakangas, K. Steyer, N. Norrik, studied the theoretical and practical aspects of paremiology.

The issue of creating more satisfactory electronic databases on both paremiology and paremiography is considered one of the most complicated problems of modern computational linguistics. This issue is essential for not only paremiology of one language, but also from the point of international paremiology.

Because of the peculiarities of different natural languages, proverbs existing in those languages also reflect various peculiarities of the languages to which they belong. Besides, they do not reflect only linguistic peculiarities of the language, but also the language owners' national culture and traditions as well.

Many corpora are collections of electronic texts which have been compiled to address a specific research question and are selected for parameters such as author, source, topic, text type, time period or medium. In our context these are special proverb corpora, e.g. searchable collections of texts or text excerpts from data bases which contain proverbs.

There are several different types of corpus in corpus linguistics, one of them is the parallel (the same text is given in different languages) corpus, which belongs to the category of language and language corpus.

There are the following types of parallel corpora:

- 1) One language
- 2) Two languages
- 3) Multilingual

Bilingual or multilingual corpora are of the following types

- 1) Parallel or translation corpus;
- 2) Comparable corpus.

Parallel corpus means a text which is available in two (or more) languages: it may be an original text and its translation, or it may be a text which has been

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written by a consortium of authors in a variety of languages, and then published in various language versions. A corpus of this type of text is sometimes called a “comparable corpus”, though this term is also used (confusingly) for a corpus of similar but not necessarily equivalent texts. Another term is bitext.

Research Methodology

World linguists such as Zavlyova, Kortova, Durko, Matej, Zirkel, A. Kirkman, Rozumko investigated on proverbs based on the corpus.

The corpus-empirical approach has only recently started to impact on paremiology.

Pioneering work has been done by Ďurčo and Čermák, Generally, two corpus linguistic approaches to the study of current proverb use can be distinguished:

— Knowing a proverb, because it is codified in a dictionary or as an entry in the mental lexicon of speakers and then searching this proverb in the corpus (corpus based)

— Detecting a proverb in a corpus (corpus driven). One prominent approach for this is the statistical collocation analysis of paremiological keywords (e.g. cultural symbols like numbers, colors, animals or body parts) or introductory formulas like proverb, saying, slogan or says an old wisdom.

Finnish proverbs and their parallel corpus base are researched by Matti Kuusi. The material which serves as the basis for this work is quite massive, although the basic type index is not so large. There is the original Finnish proverb index (with additions 8,184 entries) with its analysis of cultural distribution. Literature references (28,900 references from 350 collections or articles) are supplied with original proverb texts in the main European languages and translations from Asian, Islamic and African parallels, if they belong to the universal types (757 types) or their “family” types. This material is coded as entries in the Paradox database files. The thematic classification of proverbs consists of 13 main themes or “home districts” and their 52 main classes are divided into 325 subgroups or “home addresses”.

Kathrin Steyer investigated German proverbs based on German Reference Corpus. The platform contains of three sections:

- a) A multilingual lexicographic database of 300 proverbs in five languages
- b) A series of didactical exercises for teachers and students
- c) A proverb community – proverbs in social networks like Twitter and Facebook.

For the source language German, He had to run the empirical validation for a total of 2000 German proverbs based on the German Reference Corpus. Then proverb candidates were extracted from dictionaries, textbooks and collections. As a result, about 900 proverbs could be proved in the corpus (this is 45%).

E.H. Shamsutdinova and G. Fassel studied the English and Tatar proverbs with the lexeme cats based on the British national corpus, the Modern American English corpus, the written corpus of the Tatar language and the Tatar national corpus “Tugan Tel”.

In all, a total of 14 English and 9 Tatar proverbs were studied, respectively. 5 of English proverbs were not found in the BNC and COCA at all, and for the 9 which were present in the corpus, frequency ranges from very high to very low. For example, the English proverb Let the cat out of bag has 34 coincidences, while The cat shuts its eyes when stealing cream and A cat in gloves catches no mice has 1 coincidence. Only 3 Tatar proverbs were found in the corpora, the other 6 were not found.

Analysis and results

Yoruba-English Parallel Corpus. The Yoruba language is the third most spoken language in Africa, and it is native to the south-western Nigeria and the Republic of Benin. It is one of the national languages in Nigeria, Benin and Togo, and it is also spoken in other countries like Ghana, Cote d’Ivoire, Sierra Leone, Cuba, Brazil and by a significant Yoruba diaspora population in the US and United Kingdom mostly from the Nigerian ancestry. The Yoruba-English parallel corpus consists of the Bible, news stories, film transcripts, short stories and proverbs. It consists of 20100 parallel sentences, 10700 training sentences, 3397 development sentences and 6633 test sentences. The Yoruba-English parallel corpus also contains proverbs commonly used by the Yoruba people, which includes 2,700 parallel sentences from twitter. This corpus is a two-way Yoruba-English and English-Yoruba parallel corpus, and in the English-Yoruba part of the parallel corpus, proverbs make up 9.04 parts of the existing texts, while in the Yoruba-English part, this indicator is 8,74 parts. This parallel corpus shows the difficulty of translating proverbs from Yoruba to English.

English-Tamil Parallel Corpus. The English-Tamil parallel corpus built on the basis of translation memory consists of 50,000 English-Tamil parallel sentences, 5,000 proverbs and 1,000 idioms and phrases, 200,000 technical words, and 100,000 common words. English and Tamil idioms and phrases, proverbs are also included in the corpus to improve the system accuracy, because their translations are different from the usual translations. All resources in the corpus of books, idioms, phrases, articles are transferred and uploaded in tmx format.

English-Chinese Bilingual Parallel Corpus. The English-Chinese bilingual parallel corpus consists of 125,635 words in English and 123,943 words in Chinese. There are 171 bilingual proverbs in this corpus. translations are given in the corpus in the form of partial matching. For example: English ; You must reap what you have sown, Chinese language: 种

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瓜得瓜，种豆得豆。 It has a GUI interface and is compatible with the XML markup scheme.

English-Persian parallel Corpus. The corpus consists of about 3,500,000 English and Persian (Farsi) words aligned at sentence level (about 100,000 sentences, distributed over 50,021 entries). The format of the files is Unicode. It has been originally created with SQL Server, but it is presented in access file type. The texts in the corpus include a variety of text types, which are distributed as follows: Art: 1804 entries (3.61%), Culture: 5097 entries (10.19%), Idiom: 435 entries (0.87%), Law: 2266 entries (4.53%), Literature: 11470 entries (22.93%), Medicine: 1089 entries (2.18%) Others: 16989 entries (33.96%), Poetry: 692 entries (1.38%), Politics: 5493 entries (10.98%), Proverb: 292 entries (0.58%), Religion: 686 entries (1.37%), Science: 3708 entries (7.41%).

English-Slovenian parallel corpus. ParaDiom is a parallel corpus with sentences sampled from existing corpora. The corpus contains 1,000 Slovene sentences with their English translation and 1,000 English sentences with their Slovene translations. The sampled sentences contain idioms, similes, and proverbs, which are annotated in the corpus. Sentences were sampled based on a selection of 100 Slovene and 92 English idioms and similes by searching through sentences in the corpora ccGigafida (<http://hdl.handle.net/11356/1035>), ParlaMint (<http://hdl.handle.net/11356/1431>), and The Corpus of Late Modern English Texts (<http://fedora.clarin-d.uni-saarland.de/clmet/clmet.html>). All sampled sentences were tagged with MULTEXT-East MSD tags, Universal Dependencies morphological features and lemmas using Stanza (<https://github.com/stanfordnlp/stanza>) for English and CLASSLA for Slovene (<https://github.com/clarinsi/classla>) sentences. Some idioms were found as part of proverbs, which were also annotated. Half of the sampled sentences were translated by hand, and the other half were translated using machine translation and post-editing. We used the Q-CAT annotation tool (<http://hdl.handle.net/11356/1262>) to annotate the idiomatic expressions. The annotated noun, adjective and adverbial idioms were given the label MWE ID ('idiomatic multiword expression'), verb idioms MWE VID ('verbal idiomatic multiword expression'),

similes MWE SIM ('simile'), and proverbs MWE P ('proverb').

English-Kurdish parallel corpus. Kanaan M. Kaka-Khan, a computational linguist from Kurdistan, worked on a system based on machine translation from English to Kurdish. It prototypes a collection of 500 different sentences, including simple sentences, compound sentences, idioms, phrases, and proverbs. He always gives literal translation of idioms and proverbs, for example he translated the proverb "Better late than never" to *زبگهه مل گنمرد رتشاب*, which is a very literal and meaningless translation, this proverb in the proposed machine translation, it is figuratively translated in the form of *تسهگن مل ننتشهگ گنمرد رتشاب*. It shows that the average accuracy of the analysis of English proverbs in the Kurdish language is 1.25, and the average accuracy of the recommended system is 2.22 percent.

Ukrainian linguist V.V. In his article "Linguodidactic potential of corpus technologies within teaching proverb-translation features", Stepanov puts forward the project of creating a parallel English-Ukrainian-Russian corpus consisting of 171 articles. As a source to be included in the corpus, K.T. Barantsev's English-Ukrainian Phraseological Dictionary collection, Google search engine sources are selected.

The selected proverbs can be checked by authenticity through the BNC reference corpus although this step is not obligatory: proverb originals are derived from the lexicographical source, that is they are already registered and freely used in the foreign language. Thus, we will not engage reference corpora for linguodidactic aims.

The alphabetically arranged parallel proverb corpus provides for engaging a concordancer that will be a means of designing exercises. We suggested to use the AntConc concordancer — it generates necessary proverb-triad concordances that will be taken, edited, composed into exercises, saved in the Microsoft Word 2003 program and finally printed as tasks for translation lessons.

Teneala N. Spencer investigated proverbs based on English-Spanish corpora. This corpora consist of 1.7 million sentences. He has collected over 4000 Spanish and English proverbs and their equivalents and have stored them into a database. For the design process of the application, the programming languages I interfaced Java and C++ for the Android application, and Swift, Objective C, and C++ for iOS.

Table 1. Statistical quantity of proverbs in parallel corpora

Names of parallel corpora	Amount of words	Amount of sentences	Amount of proverbs.
Yoruba-English Parallel Corpus		20100	2700
English-Tamil Parallel Corpus.	3.5 million	50,000	5,000
English-Chinese Bilingual Parallel Corpus	249578 million	400,000	171
English-Persian parallel Corpus	3,500,000 million	100, 000	292
English-Slovenian parallel corpus		2 000	192

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English-Spain corpora		1.7 million	4000
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The above table shows the quantitative statistics of proverbs in parallel corpora, and it can be seen that their quantity is not much in parallel corpora.

In conclusion based on the above, it can be said that the following features are paid attention to in providing proverbs in parallel corpora:

- proverbs are given on the basis of a subcorpus or a common corpus in parallel corpora:

- the number of proverbs in parallel corpora is not large:

- proverbs are presented in works of art, newspaper and magazine articles, and social network materials in parallel corpora:

- proverbs are translated literally and figuratively:

- formats such as txm, SQL and AntConc were used to enter proverbs into the database.

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