# Dynamics of the English Hyper Word 'of' and 

## its Functional Equivalents in Telugu

(for the purpose of Machine Translation)

A thesis submitted to the University of Hyderabad in partial fulfillment of the requirements for the award of the degree of

> Doctor of Philosophy in Translation Studies

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## Certificate

This is to certify that Mr. Muddam Srikanth worked under our supervision for the degree of Doctor of Philosophy in Translation Studies at the Centre for Applied Linguistics and Translation Studies, Schools of Humanities, University of Hyderabad. His thesis entitled 'Dynamics of the English Hyper Word of and its Functional Equivalents in Telugu (for the purpose of Machine Translation)' is the outcome of his own independent research work which has not been submitted to any other institution for the award of any other degree.

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## Declaration

This is to certify that I Muddam Srikanth, have carried out this research work embodied in the present thesis entitled 'Dynamics of English hyper word of and its functional equivalents in Telugu (for the purpose of machine translation)' during the full period prescribed under the Ph.D. ordinances of University of Hyderabad.

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## Chapter-1

## Introduction

The aim of this research is to study the dynamics of the English word of and to find its functional equivalents in Telugu for the purpose of Machine Translation. The overall approach of the investigation is resolutely descriptive and empirical. It is, mostly, an approach driven by translation needs.

This research is mostly related to English-Telugu machine translation system. Here I have adopted some of the popular machine translation methods: Rule Based Method, Example/Parallel Corpora Based Methods and Dictionary Based Method. Thus, there will be a visible influence of these methods on whatever I discuss in this thesis. Mostly, we look at the input sentences to render them using sense of these methods to get most natural translation. For example, to avoid the unnecessary analysis, idiomatic sentences will be put in the example or database list, which is one of the methods of machine translation.

This thesis contains seven chapters. First chapter is about methodology and the history of the research on of. Second chapter is about the grammar of the English word of and its Telugu correspondences. Third chapter discusses the distribution of of in English. Fourth chapter is about the data and its analysis. Fifth chapter is about the translation process found after the data analysis. Sixth chapter is about the implementation. And seventh chapter is conclusion.

### 1.1. Introduction:

In the process of translation, we have to work on two issues: First one would be, an explicit analysis of the source language in terms of structural elements and their
meaning, etc. and the second one would be finding the functional equivalents to these in the target language. The quality of the translation depends on the resolution of the issues and obtaining acceptable equivalents.

Some categories of the source language may not be available in the target language. For instance some languages, like English, may have prepositions and some other may not. Languages like Japanese, Telugu, etc do not have the concept of preposition. In Japanese nouns take postpositions, according to the function, i.e. subject, object, etc. The Telugu language doesn't have the category preposition, but have a whole set of corresponding postpositions, for example gūrci/guriñci, nuñci, etc. While translating such words into the target language the source language's category may have its corresponding category rather than the same category. Though Telugu doesn't have prepositions, but it has post positions which serve more or less similar function.

Consider prepositions, one of the closed class syntactic categories of English, they are polysemous and homonymous in nature. However, words, especially of, found in various word combinations offering various degrees of mapping problems in the target language. Most of the time they are grammaticised and don't have explicit lexical status.

### 1.2. Methodology:

1.2.1. Identification of the problem:
i. No original meaning exists: Until a few hundred years ago of and off were merely different pronunciations of the same word. In Old English of is an unstressed form of 'æf' (preposition, adverb) with the meaning of 'away' and 'away from'. Primary sense in Old English was still 'away', but it was later used to translate the Latin genitive case and so acquired all the meanings expressed in Latin by the genitive. And it has become the most grammaticised word.

[^0]ii. Most frequent word: In a corpus study, independent of domain, of is the second most frequent word in English. 100 million corpus of BNC has 6, 187, 267 entries of the word the as the most frequent word and with $2,941,444$ entries of stood second. In a written corpus which contained 89.7 million words, the word the occurred in 5, 776, 384 times, and of occurred in 2, 789, 403 times. Here also of is the second most frequent word. In both corpora and is the third most frequent word.
iii. Special identity: Because of the word's frequency and it's almost exclusively postnominal function, CLAWS (Constituent Likelihood Automatic Word-tagging System - developed by the Center for Computer Corpus Research on Language, Lancaster University) has given a separate tag for of, PRF, whereas all other prepositions are given a common tag PRP.
iv. Found in many categories: $O f$ comes with different combinations of syntactic categories in English like phrasal verbs, complex prepositions, phrasal nouns etc.
v. Most grammaticised: Complement in the structure of NPs, complement in the structure of AdjPs and AdvPs.

### 1.2.2. The Data:

1000 specific sentences containing of were taken from the Cambridge Advanced Learner's Dictionary (the dictionary contains a total of 39,332 sentences with of), Cambridge University Press 2003. These sentences contain various constructions involving nearly 150 nouns, 81 phrasal verbs, 351 phrases and idioms, and some other combinations.

These constructions are cross checked with the BNC corpus and some examples sentences are taken from it.

### 1.2.3. Translation:

The above mentioned sentences involving phrasal nouns, phrasal verbs and idioms and other combinations were translated into Telugu for the purpose of comparison
and analysis. The translations are analyzed and will be listed out the explicit functional equivalents for the word of are listed.

### 1.2.4. Generalization:

On the basis of these translations some generalizations are made.

### 1.2.5. Implementation:

The generalizations in the form of rules are implemented in a machine translations system, that is being developed and tested at the Language Technology Laboratory, CALTS, University of Hyderabad

### 1.1.3. Earlier works on of:

So far, as far as our knowledge goes the word of has not been studied explicitly as an independent item and we have not been able to find any relevant literature from the point of translation. However, different syntactic categories which contain of have been studied, like complex prepositions, phrasal verbs, idioms etc. Some of the details these works discussed in the following section.

Some of the information used in the following section is from secondary sources. (And the most of the data that researchers used (according to them) for diachronic study are computerized historic corpora, Helsinki Corpus, CALD, BNC)

Complex prepositions: It is difficult to date the first reference to complex prepositions in the literature, the preposition-like nature of PNP-constructions had certainly been recognized by a number of writers by the second half of the nineteenth century.

Matzner (1873), for example, discusses 'Prepositionale Formeln' (prepositional formulae') and restricts his description to those constructions in which the second prepositional element is of. Matzner's list thus covers only a subset of the sequences
commonly known today as complex prepositions. He hasn't given them full prepositional status but only states that they 'resemble prepositions'.

According to Hoffmann (2005), in the course of time the syntactic usage has been changed as in the typical example instead of, which has its roots in the Old English in stede plus a genitival NP: [[in stede] of X$]=>[[$ in stede of $] \mathrm{X}]$ '. The formerly concrete locative reference of in stede + NP (people and objects) has gradually extended to carry a predominantly substitutive meaning that in middle English could also be applied to abstract activities. Today, the Germanic word stede meaning place is almost exclusively used in homestead or in the archaic in his/her/its stead. Thus, stead has clearly lost its syntactic and lexical independence and instead of is a fixed and indivisible phrase. Finally, spelling is another indication of this gradual process with today's standard twoword spelling first occurring in the $16^{\text {th }}$ century. It may be said that most of the complex prepositions of modern English are formed like this.

Sweet (1892) takes a more sophisticated approach in that he clearly highlights the distinction between form and function. He describes complex prepositions as 'consisting of a noun governed by a preceding preposition and followed by another preposition, which grammatically governs the following noun, although logically the noun is governed by the whole group'. Structure and function thus do not coincide: while PNPconstructions are described structurally as consisting of individual parts, the entire combination is described as functioning as a single preposition.

Givon (1993) makes this distinction even clearer. In his discussion of pseudopossessives, he notes the 'discrepancy between surface form and semantic-grammatical reality' in complex locative and offers the following examples and explanation:
a) True possessive:

He measured the front of the house.
It was 30 feet wide. ('it' $=$ the front)
b) Pseudo-possessive:

He stood in front of the house.
It was 30 feet wide. ('it'=the house)

The contrast in the above examples indicates that a semantic and grammatical historical reanalysis has taken place in expressions such as (b). The reanalysis pertained to which noun is the head of the NP and which one is the modifier. In (a), the original possessive modifier construction indeed retains its original semantic status. In (b), the historical reanalysis has conspired to enrich the inventory of locative prepositions in English, giving rise to new complex prepositions.

Givon's analysis makes it clear that complex prepositions must be examined within a historical context. A number of earlier grammarians also take a historical perspective and try to trace the development that led to the establishment of complex prepositions. Among them is Earle (1892), who writes that "through the phrasal prepositions we are able to see how the older prepositions came into their place, and (to speak generally) how the symbolic element sustains itself and preserves itself from decay by inanition a presentive word gets enclosed between two prepositions, as if it had been swallowed by them, and were gradually undergoing the process of assimilation. By and by the substantive becomes obsolete elsewhere, and lives on her won as a preposition, with a purely symbolic power." (Earle, 1892:515). As an illustrative example of this process, he offers the development of in despite of to despite. Thus for Earle complex prepositions are only an intermediate stage on the way towards (new) single-word prepositions.

According to Kruisinga (1932) in the whole range of PNP-constructions, many of which would certainly not be considered prototypical complex prepositions by today's grammarians: in presence of, for purpose of, beyond reach of, beyond hope of and under cover of. Kruisinga goes on to note that:
"In all these cases, the construction with the article (in the presence of, etc.) is also possible and perhaps equally current. The reason is that each element of the group has retained its independent meaning in the minds of many speakers. But there are
outwardly identical cases when the group has so much unity that no article is ever used. This applies to 'by reason of, by way of, in virtue of, in imitation of, in case of, in hopes of, by dint of, etc". (Kruisinga 1932: 345).

The borderline between complex prepositions and free sequences of adjacent PP phrases is not easy to determine. No distinctive formal or functional features can be defined and a closer look at standard grammars suggests that lists of complex prepositions are based on intuition rather than precise grammatical criteria. Quirk, (1985:671-2) offer nine different criteria which help in the distinction between complex prepositions and other, freer combinations. For example, in spite of allows no modifications whatsoever (*in the spite of, *in spite to, *in spites of) whereas in pursuit of one can find in the pursuit of and in hot pursuit of etc. they establish a 'scale of cohesiveness with in spite of at one extreme behaving in all possible ways like single word prepositions - and on the shelf by (the door) at the other extreme, allowing all nine types of variation. However, the authors stress that these 'indicators of syntactic separateness' form a gradient scale and consequently offer no opinion as to where the cut-off point should be drawn.

According to Hoffmann Sebastian (2005), not only the spelling and usage, the meaning also changes in many cases. Early newspaper texts show a completely different use from what can be found both in Gutenberg and the BNC (examples are given in other chapters).

Phrasal verbs: According to Tom McArthus, the term 'phrasal verb' was first used by Logan Pearsall Smith, in 'Words and Idioms' (1925), in which he states that Oxford English Dictionary Editor Henry Bradley suggested the term to him. Alternative terms for phrasal verb are 'compound verb', 'verb-adverb combination', 'verb-particle construction' etc. Many English verbs consist of two parts, a base verb and another small word. The small word is either a preposition or an adverbial particle. In some cases, the meaning of a two-part verb is simply a combination of the meanings of the two words, ex. come in, run away, walk across, sit on, etc. In some cases, the first word keeps its
meaning, but the second has a special intensifying sense. It means something like completely or thoroughly, Ex. break up, tire out. In other cases, the new two-part verb has quite a different meaning from the two separate parts, Ex. give up means surrender, and blow up means explode.

Other than the above, there are many other issues related to the of has to be studied explicitly for the purpose of machine translation.

In the next chapter, we will discuss the grammar points related to of in English. There, we will explore the basic syntactic units of English and their functions, besides, corresponding Telugu grammar will be discussed.

## Chapter-2

# The Grammar of English and Telugu 

(with reference to the English word of and its Telugu correspondences)

The aim of this chapter is to give an introduction to the English grammar related to the word of, and the corresponding Telugu grammar. Some general issues related to the prepositions, which ever thought needed, are also discussed in this chapter.

Though the study is based on description, some generalization is needed. Attempting to describe a language without having a theory of grammar is difficult because most of the languages are so big, in terms of usage, to be described. For example, Telugu or English sentences can be constructed as long as one needs to express some meaning. The number of sentences that have been spoken and written so far is vast, new ones are being produced every day around the world. The current aim of this study is to understand the grammar of of in English and come up with certain generalizations that would enable us to render English of constructions mechanically into acceptable Telugu equivalents.

Thus, as part of this exercise, the grammar of English of constructions and its Telugu corresponding phenomena have been discussed in the following sections.

The major source for English grammar in this chapter is Rodney Huddleston and Geoffrey K. Pullum. 2006. The Cambridge Grammar of the English Language, Cambridge University Press.

### 2.1. Case in English:

It is necessary to discuss 'case' because in many instances there is a functional similarity between a noun in the genitive case and the same noun as head of a prepositional phrase with of.

The term case applies in the first instance to a system of inflectional forms of a noun that serve to mark the function of an NP related to the construction containing it.
i. I slept soundly. (the pronoun I functions as the subject of the clause and is in the nominative case.)
ii. Please help me. ( $m e$ is the object of the clause and is in the accusative case)
iii. Where is my bag? ( $m y$ is subj-det of NP and is in the genitive case)

At the general level, the nominative is a case whose primary function is to mark the subject of an intransitive or a transitive clause, while the accusative is a case whose primary function is to mark the direct object of a transitive clause. The genitive is somewhat different in that its primary function is to mark an NP as a dependent in the structure of a larger NP.

In the present day English, the morphological contrast between nominative and accusative is found with only a handful of pronouns. At the former stages of the language the contrast applied to the whole class of nouns but the inflectional distinction has been lost except for these few pronouns in the modern English.
i. The doctor slept soundly. (subject, plain case)
ii. Please help the doctor. (object, plain case)
iii. the doctor's bag (subj-det on NP, genitive)

According to the traditional grammar, 'doctor' is nominative in i. and accusative in ii. but in fact there is no inflectional distinction between these two occurrences of the noun 'doctor'. The difference in function is not marked by any difference in the internal form of the NP. In other words, there is no contrast of case here. Case is only one among a variety of possible markers of syntactic function, and as far as the present-day English is concerned the linear position of an NP relative to the verb plays a larger role in the marking of syntactic function than does inflectional case.

The earlier case system of English distinguished (morphologically) not only nominative, accusative, and genitive, but also dative. The loss of inflectional endings has resulted as dropping the morphological case out of the system altogether from the language. To an extent, it is not even retained in the personal pronouns.
i. We took him to the zoo. (direct object, accusative case)
ii. We showed him the animals. (indirect object, accusative case)

Although case is prototypically marked inflectionally a change in or addition to the form of a word which shows a change in the way it is used in sentences. Syntax tells us when a lexeme may or must carry a certain inflectional property, while inflectional morphology tells us what form it takes when it carries that inflectional property. For example, a rule of syntax stipulates that a verb in construction with the perfect auxiliary 'have' must carry the past participle inflection as in 'They have killed it, She had rung the bell, while inflectional morphology describes how the past participles of verbs are formed from the lexical base: 'killed is formed from the base 'kill' by adding the suffix -ed, 'rung' from 'ring' by changing the vowel, and so on), there are languages where case is marked analytically, by special grammaticised words. Japanese is a language of this type, with subject, direct object, and indirect object marked by distinct postpositions.

Genitive case: the form of a noun, pronoun, etc. in the grammar of some languages, which shows that the noun, pronoun, etc. possesses something.

English nouns have a two-case system: the unmarked common case (boy) and the marked genitive case (boy's). Since the functions of the common case can be seen only in the syntactic relations of the noun phrase (subject, object, etc), it is the functions of the genitive that need separate scrutiny. In many instances there is a functional similarity between a noun in the genitive case and the same noun as head of a prepositional phrase with of.

Ex. What is the ship's name?
What is the name of the ship?

Following are some of the examples where prepositional phrases represent genitive case.
possessive genitive: the gravity of the earth - the earth has gravity
భూమ్యూకర్షణ/భూమి ఆకర్షణ (bhūmyākarṣaṇa/bhūmi ākarṣaṇa)
my knowledge of Hindi - I know Hindi
నా హిందీ జ్ఞానం (nā hindī jñānaṃ)
subjective genitive: the rise of the sun - the sun rose
సూర్యుడి ఉదయం/పొద్దుపొడుపు/సూర్యోదయం (sūryuḍi udayaṃ/
poddupoḍupu/sūryōdayaṃ)
statement of the facts - . . stated the facts
వాస్తవాల ప్రకటన (vāstavāla prakaṭana)
genitive of origin/ source:
the wines of France - France produced the wines ఫ్రాన్స్ వైన్స్ (jāns vains)
descriptive genitive: the degree of doctor - a doctoral degree/a doctorate
డాక్టరు పట్టా (ḍākṭaru patṭā)
genitive of measure and
partitive genitive: an absence of ten days - the absence lasted ten days
పదిరోజుల గైర్హాజరు (padirōjula gairhājaru)
the height of the tower - the tower is (of) a certain height టవర్ ఎత్తు (ṭavar ettu)
part of the problem - the problem is divisible into parts సమస్య(లోని)బాగం (samsya(Iōni)bhāgaṃ)
appositive genitive: the city of York - York is a city
యార్క్ నగరం (yārk nagaraṃ)
the pleasure of meeting you - meeting you is pleasure నిన్ను కలవటంలోని ఆనందం (ninnu kalavaṭaṃlōni ānandaṃ)

## Some genitive case constructions:

a. Subject-determiner:
'[Kittu's father] has arrived'.
In this example 'Kittu's' is a genitive NP functioning as subject-determiner within the matrix NP 'Kittu's father'; genitive case marks 'Kittu' as standing in a relation of dependence within this matrix NP. 'Kittu's father' itself has plain case and can occur in the full range of NP positions; it is interpreted as definite 'the father of Kittu', not 'a father of Kittu'.
b. Subject of gerund-participial:
'No one objected to [Kittu's joining the party].'
In this example the genitive marks the subject of a gerund-participial clause in complement function the clause is object of the preposition 'to'.
c. Fused subject-determiner-head:
'Ravi's attempt wasn't as good as [Kittu's].'
'Kittu's' in this example is an instance of the fused-head construction.
d. Oblique genitive:
'She's [a friend of Kittu's].'
Genitive referred as oblique because it is related to the head noun 'friend' obliquely, via the preposition of, rather than immediately, as in 'Kittu's friend'. In subject-determiner type genitives fill the determiner position where they mark the NP as definite, while the oblique allows the relation between subordinate and matrix NPs to be
expressed while leaving the determiner position free to be filled by other kinds of determiner. Compare,

| $\quad$ Pre-head | Post-head: oblique |
| :--- | :--- |
| i. * a Kittu's friend | a friend of Kittu's |
| ii. * those Kittu's friends | those friends of Kittu's |
| iii. Kittu's friend | *the friend of Kittu's |
| iv. Kittu's friend that I met in Paris | the friend of Kittu's that I met in Paris |
| v. all/both Kittu's friends | all/both friends of Kittu's |
| vi. Kittu's every move | every move of Kittu's |

e. Predicative genitive:
'All this is Kittu's.'
The genitive marks the relation between Kittu and the predicate 'all this', a relation like that expressible by 'belong + to'. Kittu's here is thus not part of same matrix NP.
f. Attributive genitive:
'He lives in [an old people's home].'
In 'an old people's home', the genitive is an attributive modifier within a nominal. At the top level of structure we have 'an' as determiner and 'old people's home' as head: it is clear that 'an' can not belong within the genitive expression, which is here plural. These genitives, moreover, can be preceded by other attributes, as in 'a luxurious old people's home', where 'luxurious' modifies 'old people's home'.

### 2.2. Prepositions: nature and distribution

In English, one of the important syntactic categories is a preposition. It has been studied for long time in the field of computational linguistics. It's said to be a most polysemous word.

General definition:
Cambridge Advanced Learners Dictionary (2003): A word that governs and precedes a noun or pronoun and which expresses the latter's relation to another word.

The Cambridge Grammar of the English Language (2006): A relatively closed grammatically distinct class of words whose most central members characteristically express spatial relations or serve to mark various syntactic functions and semantic roles.

The most central members have meanings which have to do with relations in space. The situation may be either
static: 'Kittu is in Mumbai' or
dynamic: 'Kittu went to Mumbai'.

### 2.2.1. Properties of prepositions:

Here we discuss some of the important properties of prepositions.

### 2.2.1.a. Object or complement of prepositions:

### 2.2.1.a.i. Prepositions take NP complements.

Within the category of complement one can distinguish between core and non-core complements: characteristically core complements have the form of NPs while non-core ones are realized by PPs.

The only words that take NP complements are verbs and prepositions. This is the one of the properties of the prepositions.

If we compare this property (prepositions take NP complements) with other grammatical categories, we will find that no adverb takes an NP complement, and only four adjectives do:

## worth

due
like and
unlike
2.2.1.a.ii. Prepositions also take complements that are not NPs:
i. The magician emerged from behind the curtain (PP),
ii. I didn't know about it until recently (AdvP),
iii. We can't agree on whether we should call in the police (Interrogative Clause but some say that a word otherwise similar to a preposition but taking a declarative content clause complement is traditionally analysed as a 'subordinating conjunction'),
iv. They took me for dead (AdjP).

Prepositions allow a wide range of complement types, a rather subset of those licensed by verbs. Most prepositions license an obligatory or optional complements, those that do not are almost wholly restricted to the spatial domain.

### 2.2.1.b. Prepositional modifiers of the verb:

Elements traditionally regarded as modifying the verb are adjuncts, but prepositions also occur as heads of phrases with this function. Almost every semantic type of adjunct can be realized by a phrase with either an adverb or a preposition as head.
i. She did it carefully/with great care.
ii. They communicate electronically/by email.
iii. They live locally/in the vicinity.
iv. The prices went up astronomically/by a huge amount.
v. I haven't seen her recently/since August.
vi. She's working with us temporarily/for a short time.
vii. They check regularly/at regular intervals.
viii. I loved her immensely/with all my heart.
ix. It failed consequently/for this reason.
(manner)
(means)
(spatial location)
(extent)
(temporal location) (frequency)
(duration)
(degree)
(reason)
2.2.1.c. Head of complement:

The ability of many prepositions to head phrases in complement function is an important property distinguishing them from adverbs. One such case is the goal
complement of certain transitive verbs such as 'put' or 'place' and a few intransitives such as 'dart' and 'slither':
i. a. I put it in the drawer.
b. *I put it.
ii. a. He darted behind the curtain.
b. *He darted.
' $a$ ' examples here have prototypical PPs consisting of preposition + NP complement. But other forms can be assigned to the PP category on the basis of their ability to occur in this position.
i. a. I put it in/downstairs/away (preposition); *I put it adjacently. (adverb)
ii. a. He darted off/indoors. (preposition); *He darted immediately. (adverb)

Phrases consisting of such words as in, downstairs, away, off, indoors by themselves are distributionally like uncontroversial PPs such as 'in the drawer' or 'behind the curtain', and are accordingly assigned to the same category. Prototypical adverbs, those formed from adjectives by suffixation of '-ly', do not occur in these positions.

A second case of an obligatory complement is in clauses with the verb 'be' as head.
i.a. Giri is in the office.
b. *Giri is.
ii.b. The proposal is without merit.
b. *The proposal is.

Examples in ' $b$ ' above are admissible if elliptical, with a complement recoverable from the preceding text-ex. "What percentage was left?" "Twenty" (=20 percent), but otherwise 'be' normally requires an internal complement. Leaving aside the specifying use of 'be' which allows complements of just about any category, adverbs cannot in general function as complement to 'be'.

Some of the functions of the prepositions are discussed here.

### 2.2.1.d. Adjunct:

Prepositional phrase can function as an adjunct in clause structure that is not in a predicative relation to the subject (non-predicative adjunct). This is one of the main differences between prepositions and adjectives.

Ex. i. a. Tired of the ship, the captain saw an island on which to land. (AdjP)
b. *Tired of the ship, there was a mall island.
ii. a. Ahead of the ship, the captain saw an island on which to land (PP)
b. Ahead of the ship, there was a small island.

In i.a 'tired of the ship' is an AdjP predicated of the subject: it entails that the captain was tired of the ship. The deviance of i.b is then attributable to the fact that there is no appropriate subject for the AdjP to be predicted of. No such constraint applies to the PP 'ahead of the ship' in ii: ii.a does not entail that the captain was ahead of the ship, and ii.b is perfectly well-formed.

Many prepositions are arisen by conversion from adjectives, and it is the ability to occur as head of non-predicative adjuncts that shows such conversion to have taken place:
i. [Opposite church] there is a path leading down to the lake.
ii. [Contrary to popular belief,] Eskimos don't have huge number of 'snow' words.

Occurrence as a non-predicative adjunct also distinguishes prepositions from gerund-participle and past participle forms of verbs. For example, 'owing' can be either a preposition or the gerund participle of 'owe'.
i. [Owing to my stupid bank,] there's no money for the rent. (preposition)
ii. [Owing money to my stupid bank,] I have to live very frugally. (verb)
iii.*[Owing money to my stupid bank,] there's no money for the rent. (verb)

As a preposition it takes a 'to' phrase complement and is non-predicative; as a verb, it can take a direct object + 'to' complement, but it then needs a predicand, an understood subject, such as 'I' in ii. 'as I owe money to my stupid bank, I must live very frugally'. The lack of any such predicand iii makes the example ungrammatical. Example i is fine, the predicand requirement applies to 'owing' as a verb but not as a preposition.

### 2.2.1.e. Modifier of Prepositions:

There are a small number of adverbs such as 'right' and 'straight' which occur with a certain sense as modifiers of prepositions but not of verbs, adjectives or adverbs:
i. They pushed it [right under the bed] (preposition)
ii. *They were [right enjoying themselves].
iii. *I believe the employees to be [right trustworthy].
iv.*The project was carried through [right successfully]
(verb)
(adjective)
(adverb)

Not all prepositions accept these modifications. They (modifications) occur primarily with prepositions indicating spatial or temporal relations.

Words with PP complements:
i. Every thing has been badly delayed [owing to a computer failure].
ii. [According to Kittu,] most of the signatures were forged.
iii. We had to cancel the match [because of the weather].
iv. She suddenly jumped [out of window].
v. They gave me a knife [instead of a fork].

The traditional definition of preposition excludes the underlined words, precisely because they are not followed by NPs. For the most part, these and other words of the same kind are therefore analysed as adverbs in traditional grammar.

Some prepositions can take modifiers like those found in other phrases:
i. She died [two years after their divorce].
ii. She seems [very much in control of things].
iii. It happened [just inside the penalty area].

These modifiers, are found also in AdjPs (two years old), NPs (very much a leader), and VPs (She [just managed to escape]).

### 2.2.2. Grammaticised uses of prepositions:

Some prepositions have become grammaticised in the sense of having specific syntactic roles in the language that are not determined by their meanings. A preposition like 'under' is an example of a preposition that is clearly not grammaticised. It is an ordinary lexical item with a meaning, and it is used where a preposition is permitted and the meaning that it has is the appropriate one. No rule of sentence formation or condition on complement licensing needs to single it out in any way. Any syntax of English that did make specific mention of it would be insufficiently general. In all contexts where it can appear, other prepositions can appear too: 'Put it under the table' can be 'Put it above the table', 'Put it near the table', etc.

### 2.2.2.1. Specific preposition:

In grammaticised prepositions, each of the grammaticised prepositions is specifically mentioned in the definition of at least one grammatical construction or the statement of some grammatical condition on the distribution of some class of lexical items.

For example, the verb 'dispose' (get rid, etc.) cannot be used correctly without of being present as the preposition marking its complement:

They disposed of the box.
*They disposed the box.

And other prepositions are not permitted where the of appears:
*They disposed at/below/on/through/under the box.

### 2.2.2.2. No independent meaning:

In the following examples the preposition has no identifiable meaning independent of the grammatical construction in which it occurs. Example i is a passive clause, and 'by' marks the element that is subject of the corresponding active, 'The police
interviewed him'. 'Of their king' in ii is complement of the noun 'death', and corresponds to the subject of the clausal construction 'Their king died'.
i. He was interviewed by the police. (passive)
ii. They were mourning the death of their king. (complement)

### 2.2.2.3. NP internal complement (of):

With very minor exceptions, nouns do not take NP as internal complement: instead, the NP is related to the head noun by a preposition. And of is the default preposition for this construction.
'They destroyed the city' (clause)
'their destruction of the city' (NP)

In the above example NP 'the city' is related to the noun 'destruction' by means of the grammaticised preposition of. Other prepositions than the default of are seen in 'Kittu's marriage to Radha' and 'the ban on smoking'. Adjectives behave in very much the same way: compare 'proud of her achievements', 'keen on opera' and 'very pleased with yourself'.

### 2.2.2.4. VP. Complements:

Many verbs do take NPs as internal complement, but there are others that take a PP complement introduced by a certain grammaticised preposition:

It depends on the weather.
I owe everything to her.

### 2.2.2.5. Functions as inflections:

In their grammaticised uses, prepositions often serve the same kind of functions as inflectional cases. Compare,
the death of their king
their king's death

Here 'their king' related to the head noun by the preposition of and genitive case respectively. Similarly 'to' in 'I gave it to Kittu' marks a role that in many languages is marked by the dative case.

In such cases, prepositions cannot take modifiers like those in the following examples:
She died [two years after their divorce].
She seems [very much in control of things].
It happened [just inside the penalty area].

And they are virtually restricted to occurrence with NP complements. However, there are a good number of uncontroversial prepositions that have no grammaticised uses: behind, below, since, underneath, etc.

The grammaticised uses of 'by', of, and 'with' in
He was interviewed by the police.
They were mourning the death of their king.
You look very pleased with yourself.
may be contrasted with the non-grammaticised uses seen in
I left the parcel by the back-door,
That is of little importance', and
He's with Angela.

An adequate account of prepositions must thus cover much more than the grammaticised uses.

## Prepositions are not case markers:

Some grammars of English also postulate a certain amount of analytic case: 'to', for example, has been regarded as a marker of dative case and of as a marker of genitive case in NPs;

I gave the money to Kittu.
the father of the bride

But some say that English has only inflectional case, that prepositions are not case markers. The rationale for taking 'to' as a dative marker is that 'to Kittu' is allegedly an indirect object, but they argued in fact that is not - that although it has the same semantic role as the NP 'Kittu' of 'I gave Kittu the money' it does not have the same syntactic function. Leaving aside the nominative-accusative contrast in pronouns, the core syntactic functions in clause structure are not marked by inflectional case, and there is no justification for treating 'to' as an analytic case marker here but as an ordinary preposition in
'I explained the matter to Kittu',
'I spoke to Kittu',
'He referred to Kittu' and so on.

Similarly for of. Semantically, the relation of 'the bride' to 'father' is the same in 'the father of the bride' as in 'the bride's father',
but syntactically there is a major difference: in the latter
'the bride' is determiner (or subject-determiner), whereas in 'the father of the bride' 'of the bride' is simply a complement, and as such it is similar to the post-head PPs in 'a view of the river', 'a number of animals', 'his marriage to Jikki', 'her insistence on a recount'. There are a large number of prepositions in English and overall their role is very different from that of inflectional case markers.

### 2.3. Some more information:

### 2.3.1. verb + preposition combinations:

Our major focus in this section is on prepositional complements of verbs where the combination of verb and preposition is distinctive in one or more of the following ways:
2.3.1.i. prepositional verbs: The preposition is specifically selected by the verb rather than being in potential contrast with other prepositions. This construction can be called as prepositional verbs.

The preposition 'to' of
'Kittu referred to your book' is to be distinguished from that of
'Kittu flew to Boston'
in that examples the latter may contrast systematically with such other prepositions as towards, round, from, over, and so on, whereas the former permits no such replacement.

Prepositional verbs are those which select a prepositional complement containing a specified preposition together with its own complement. This can have mobile (I referred to her book) and fixed (I came across some old letters) type of construction. The mobile ones behave in essentially the same way as unspecified prepositions, while the fixed ones do not permit variation in their position relative to the verb.

We can compare specified and unspecified prepositions with respect to four parameters: fronting of the preposition along with its complement, coordination of prepositional phrases, positioning of adjuncts before the preposition, formation of prepositional passives.
a. fronting of the preposition +NP :

Illustration with the cases that have an unspecified preposition.
The city to which I flew (relative)
To which city did you fly (open interrogative)
It was to Mumbai that I flew (it-cleft)
There are alternates with a stranded preposition (the city which I flew to) but it is the version cited in above that is of interest for present purposes, for it shows that 'to' and the following noun phrases form a constituent.

Behavior of specified preposition in these construction the mobile 'to' selected by 'refer' and the fixed 'across' selected by 'come'.

Mobile
the book to which I referred
To which book did you refer?
It was to her book that I referred.

Fixed
*the letters across which I came

* Across which letters did you come?
*It was across these letters that I came.

The mobile preposition behaves just like the unspecified one, where the fixed one does not. 'Across' cannot be moved to the left of 'come', so only the versions with stranded prepositions are admissible:
the letters which I came across
Which letters did you come across?
It was these letters that I came across.
b. coordination of prepositional phrases:

Unspecified prepositions can be readily repeated in coordination:
I flew to Mumbai and to New Delhi.

With specified prepositions we again find the mobile and fixed types behaving differently.

I referred to her book and to several others.
*I came across these letters and across some family photographs.
c. position of adjuncts:

An adjunct can be readily inserted between the verb and an unspecified preposition:

I flew regularly to Mumbai.

The same applies to mobile specified prepositions, but not to fixed ones:
I referred repeatedly to her book. *I came eventually across these letters.

## d. prepositional passives:

In this construction preposition remains next to the verb, here we don't have a systematic difference in behavior between mobile and fixed specified prepositions. With unspecified prepositions the prepositional passive is not generally admissible, but it is not wholly excluded. Passives are much more widely available with specified prepositions, but they are not admissible in all cases.

Ex.

1. *Mumbai was flown to next. This bed has been slept in.
2. *Such principles were stood for. Her book was referred to.
3. *Some old letters were come across. These matters must be seen to.

The example 1 has unspecified prepositions, $2^{\text {nd }}$ has mobile specified ones (the principles for which we stand), and 3 has fixed specified ones (*the matters to which we must see).

The mobile vs fixed distinction applies also to prepositions following an object NP:

Ex. mobile prepositions

1. He referred me to a specialist.
2. the specialist to whom he referred me
3. To whom did he refer you?
4. It was to a cardiologist that he referred me.
fixed prepositions
He got me through the biology test.
*the test through which got me
*Through which test did he get you?
*It wasn't through the biology test, but not through the anatomy one.

In example of mobile we have the transitive use of 'refer', and as with the intransitive use considered above the specified preposition 'to' can be fronted along with its complement in relatives and open interrogatives, extracted with its complement in the 'it' cleft, and repeated in coordination. The examples of fixed contain the transitive idiom 'get through', and here the specified preposition 'through' cannot be moved or repeated.

The constituent structure of clauses containing specified prepositions is best regarded as identical to that of matching clauses with unspecified prepositions this means that in all the above examples where the preposition immediately precedes an NP it combines with the latter to form a transitive PP.

Ex.
I [referred] [to her book]. I [came] across some old letters]

Where the position of the preposition is fixed we take the verb+preposition combination to be fossilized, i.e. it blocks the application of the syntactic processes that can normally apply to such combinations.
e. Complementation patterns found with prepositional verbs.
( $\mathrm{O}=$ object, prep=preposition, $\mathrm{PC}=$ predictive complement)

1. verb $-[$ prep $+O]$
I referred [to her book].
2. verb - O - [prep+O]
I intended it [for Raju].
3. verb $-[$ prep +O$]-[\mathrm{prep}+\mathrm{O}]$
He looked [to her] [for guidance].
4. verb - $[\mathrm{prep}+\mathrm{PC}]$
It counts [as her too short].
5. verb -O - [prep+PC]
They regard it [as successful].
6. verb $-[\mathrm{prep}+\mathrm{O}]-[\mathrm{prep}+\mathrm{PC}] \quad \mathrm{I}$ think $[$ of it] [as indispensable].

The NP in 1-3 is object of its governing preposition, while in 4-6 it is a predicative complement. The distinction we have drawn among complements of the verb between objects and predicatives applies also to the complements of prepositions, though the preposition governing a PC is almost always 'as'.

1. verb $-[\mathrm{prep}+\mathrm{O}]:$ This structure is similar to specified prepositions where the preposition + NP forms the only complement of the verb.

Ex. dispose of
consist of (prepositional passives are not possible here like 'Her book was referred to')
call on
abide by
bank on etc
2. verb -O - [prep +O ]: In this construction the verb has two complements, an object and a PP. The subject of related passives always corresponds to the object of the verb, not that of the preposition (It was intended for Kittu, *Kittu was intended it for). The preposition can almost always be fronted or extracted along with its complement and repeated in coordination, 'refer... to' as in examples under 'mobile prepositions' above. But there are a few informal expressions like the example 'get-through' in 'fixed prepositions' above where this is not possible.

Ex. accuse...of
assure ...of
convince...of
deprive...of
persuade..of
rob...of
suspect...of
warn...of/about
subject...to
read...into etc.
3. verb $-[p r e p+O]-[p r e p+O]:$ In this structure verb selects two prepositions:

Ex. agree with...about argue with ...about/over etc.
4. verb-[prep+PC]: This is the prepositional equivalent of the complexintransitive construction. 'Pass' allows 'for' as the preposition, as in 'He had passed for dead'.

Ex. accept, cast, know, etc.
Appoint, consider, rate, etc.
5. verb-O-[prep+PC]: This is the prepositional equivalent of the complextransitive construction. Again we have an exceptional case where 'for' is allowed as well as: He took it as obvious and 'He took them for dead'.
6. verb-[prep+O]-[prep+PC]: This is relatively unusual construction. Here the predicand for the predicative is complement of the first preposition i.e. in the example 'think [of it] [as indispensable]' the predicative 'indispensable' applies to 'it'.

## Ex. think of <br> conceive of <br> agree on etc.

### 2.3.1.ii. Particle:

The preposition can be positioned between the verb and a simple NP object.

Ex. She put in her application.

The distinctive property of particles is that they can be positioned between the verb and an NP object with the form of a proper noun or determiner + common noun.

Ex. She brought down the bed. She brought the bed down
*She brought downstairs the bed. She brought the bed downstairs.

In above examples 'down' distinguishes from 'downstairs' as we mentioned.

There is a large overlap between the particle and transitive preposition categories. Some of the differences between them as:
i. The 'particle+NP' order can usually be reversed, 'preposition+NP' cannot.

| Ex. | She took off the label. | She jumped off the wall. |
| :--- | :--- | :--- |
|  | She took the label off. | *She jumped the wall off. |

ii. Only a transitive preposition can be followed by an unstressed personal pronoun.

The NP following a transitive preposition (its object) can have the form of an unstressed personal pronoun, but the P following a particle can't. Objects of this kind must immediately follow the governing verb.

Ex. *She took off it. She jumped off it.
iii. Transitive PPs can normally be fronted/foregrounded, particle+NP sequences cannot.

Ex. *the label [off which she took] the wall [off which she jumped]
*Off which label did she take? Off which wall did she jump?
*It was off this label that she took. It was off this wall that she jumped.
iv. A transitive preposition can normally be repeated in coordination of phrases.

Ex. *Did she take off the red label or off the yellow one?
Did she jump off the wall or off the balcony?
v. A manner adverb can generally be inserted between verb and transitive preposition.

Ex. *She took carefully off the label. She jumped fearlessly off the wall.

## vi. Homonymy:

There are, naturally, homonymous sequences between particles and transitive prepositions. It is not surprising that the same item can often be found with the same verb, interpreted now as particle, now as transitive preposition.

Ex.

Particle
He shouted down his opponent.
They turned in the fugitives.
She ran off another copy.
He got over his message clearly.

Transitive preposition
He shouted [down the phone].
They turned [in the wrong direction].
She ran [off the road].
He got [over his disappointment] quickly.

These are easily differentiated by the criteria given above. The structural difference between the particle and transitive preposition members correlates with a very sharp difference in meaning, with all four of the examples and the last of the transitive preposition ones involving a rather high degree of idiomatisation.

### 2.3.1.iii. Verbal idioms:

a. With intransitive prepositions:

The verb+preposition forms an idiom, or is part of one idiom. Verb+intransitive preposition idioms are an important feature of the English vocabulary. They are very frequent and they are great number, especially in informal speech. Lexicalization may be accompanied in varying degrees by what is called fossilsation, the loss of the ability to undergo he range of manipulation found with comparable free combination.

Ex.
I gave up the struggle (abandoned)
This gave the lie to her critics (showed to be wrong)

Verbal idioms containing intransitive prepositions in free combinations will have locative meanings: in, out, up, down, etc. In free combinations we can add further locative specification:

Ex.
I ran ahead (of him)
I got out (of the box)
I climbed down (the tree)

One can find a great range of meanings with prepositional verbs, from those where there is still a transparently clear connection with the literal locative relation to others which are much stronger. For example, 'take in' has seven different senses (move into the house, renting to, tighten, includes, see, grasp, deceived).

Constructions containing verb+intransitive preposition idioms (leaving aside those containing subordinate clauses as complement):
i. verb - prep
ii. verb - prep - O
iii. verb - $\mathrm{O}^{\mathrm{i}}-$ prep - $\mathrm{O}^{\mathrm{o}}$
iv. verb - prep - transitive PP
v. verb - O - prep - transitive PP
vi. verb - prep - (as) PC
vii. verb - O - prep - [as + PC]

He have in.
She mixed up [the tickets].
I ran [him] off [another copy].
We look forward [to your visit].
$I$ let [her] in [on a little secret].
She ended up [(as) captain].
This showed [him] up [as spineless].
'prep' here stands for the intransitive preposition functioning as a complement of the verb.

The details of the above structures are not discussed here thinking that of construction are rare in these constructions.
b. With NP + transitive preposition:

Here we will see the underlined sequences of the following examples.
i. We lost sight [of out goal].
ii. They made good use [of the extra time].
iii. She lost patience [with the secretary].
iv. They cast doubt [on his motives].

This structures mostly concerns with the passive form. The idioms cited are all different in that iii takes no passive, iv an ordinary passive, i a prepositional passive, and ii a passive of either kind:

## Ordinary passive

i. *Sight was lost of our goal
ii. Good use was made of the extra time.
iii. *patience was lost with the secretary.
iv. Doubt was cast on his motives.
prepositional passive
Our goal was lost sight of.
The extra time was made good use of. *The secretary was lost patience with.
*His motives were cast doubt on.

List of idioms which fall under the above four types:

| No passive | ordinary passive | prepositional passive | either type passive |
| :---: | :---: | :---: | :---: |
| get the better | make mention of | catch sight of (fossilsed) | make a fuss of |
| of (fossilised) |  |  |  |
| give birth to | do justice to | lay hold of (fossilsed) | make an example of |
| give the lie to | keep tabs on | lose sight of | make use of |
|  |  | lose touch with (fossilsed) | see much/little of |
|  |  | make fun of (fossilsed) | take advantage of |
|  |  | make love to | take note of |

### 2.3.2. Idiomatic expressions:

English is rich with idiomatic and semi-idiomatic constructions where prepositions enter. Many consist simply of preposition + noun, or preposition + determinative + noun: ex. in abeyance, in person, after a fashion, in a word, on the spot, etc. These are simply PPs with a preposition as head and an NP as complement. But, structure with second preposition ('in accordance with + NP') is not that simple. It can be represented as:
$[$ Prep1 + (Article) $\mathrm{N} 1+$ Prep $2+\mathrm{Nx}]$
(where Nx is the variable with different form)

Characteristics of this structure:

- The article is usually 'the', but ' $a$ ' is also found, as in
'with a view to finishing the report'.
- In some cases even the Nx element is specified as part of the idiom,
'in point of fact',

> 'in the nick of time',
> 'in the twinkling of an eye', so on.

- Usually Nx is independently variable, countless NPs could be replaced.
- Fixed expressions.

A sample list of such expressions, excluding Nx :

| under the aegis of | in accordance with | on account of |
| :--- | :--- | :--- |
| in addition to | in back of | in charge of |
| in aid of | under the auspices of | at the behest of |
| in case of | in charge of | in comparison with |
| in compliance with | in conformity with | in consequence of |
| in contact with | by dint of | with effect from |
| with the exception of | in exchange for | at the expense of |
| in (the) face of | in favour of | by (the) force of |
| in front of | on (the) ground(s) of | at the hands of |
| in league with | in lieu of | in (the) light of |
| in line with | at odds with | by means of |
| in the name of | in place of of | in the name of |
| on the part of | in/with reference to | in (the) process of |
| in quest of | for (the) sake of | in search of regard to |
| at (the) risk of | in step with | on the strength of |
| in spite of | on top of | in touch with |
| in terms of | at variance with | by virtue of |

These are in varying degrees idiomatic, so that the meaning of the whole is not derivable in a fully systematic way from the meanings of the components. And they do not permit the full range of syntactic manipulation (additions, omissions, and replacements) that applies with free expressions. Those where no manipulation at all of the pre-Nx sequence is permitted are said to be fully fossilized.

Compare examples: She put it [on the photo of her son]
i. She has lost [the photo of her son]
(occurrence without Prep1)
ii. She put it [on the photo]
(omission of Prep2 +Nx )
iii. She put it [on the crumpled photo of her son]
iv. She put them [on the photos of her son]
v. She put it [on this photo of her son]
vi. She put it [on her son's photo]
vii. She put it [on the photos and drawings of her son]
viii. She put it [on the phots of her son and of Kittu]
ix. *the son of whom she put it [on the photo]
(modification of N1)
(number change in N 1 )
(determiner change) (genitive alternation)
(coordination of N 1 )
(coordination of Prep2 +Nx )
(fronting of Prep2 +Nx )

In ithe sequence following Prep1 occurs on its own as an NP in object function.
In ii the sequence following N1 ('of Nx') has been dropped.
In iii an attributive adjective has been added, modifying N 1 .
iv contrasts with the original with respect to the number of N1, plural instead of singular.
In $v$ there has been a change in the determiner, from 'the' to 'this'.
In vi we have a genitive subject-determiner in place of the original 'the' as determiner + 'of her son' as complement.

The next two examples involve coordination.
In ix Nx has been relativised and placed in prenuclear position in the clause, along with Prep2, and in this case the result is ungrammatical.

The most fossilized expressions disallow all of these manipulations.
Ex:
by dint of
in case of
in lieu of
by means of
on pain of
in quest of
in search of
in spite of
in view of
by virtue of
by way of
i. *[Dint of hard work] achieves wonders. (occurrence without Prep1)
ii. *She achieved this [by dint]. (omission of Prep2 +Nx )

The less fossilised expressions allow one or a few changes, but none of them allow all. Moreover, the manipulations cannot be ordered in a strict hierarchy such that if a given manipulation is permitted then all others below it in the hierarchy will be permitted too.

For example, 'in/on behalf of' allows genitive alternation but not omission of Prep $2+N x$, but it is the other way round with 'in front'.

### 2.4. Syntactic use of grammaticised preposition of:

The following is an illustration to see the syntactic uses of grammaticised preposition of. Of is the most grammaticised of all prepositions. Apart from its basic locative meaning 'away' 'away from', it has concepts like geographic origin, belonging, selection from a set, and many others. Let's see some of the uses of the prepositions of.

### 2.4.1. Complement in the structure of NPs:

With some exceptions, nouns do not take non-genitive NPs as complement. Subordinate NPs are related to the head noun by genitive case by prepositions, and of is the default preposition used for this function.

Ex. i. the actor died.
They assassinated the actor. (clauses)
ii. the actor's death the actor's assassination (NPs)
iii. the death of the actor
the assassination of the actor (NPs)

In i 'the actor' is related directly to the verb (as subject in first and direct object in second). In ii the subordinate NP is marked by genitive case, functioning as subjectdeterminer, and in iii it is complement of of.

The NPs in ii and iii are nominalizations: the head noun is morphologically derived from a verb. The alternation between the genitive and of construction is found with other head nouns too, but the of construction allows a much wider range of semantic relations between the subordinate NP and the head, as illustrated in following examples.

Her former husband's house the house of her former husband

Patel's son-in-law
*the students' majority
*water's glass
the son-in-law of Patel
the majority of the students
a glass of water

### 2.4.2. Complement in the structure of VPs and PPs:

Verbs and prepositions do take NP complements, so prepositions in general, and of in particular, play a smaller role in their complementation. There are a number of verbs and prepositions witch do select of complements.

### 2.4.2.1. V+Prep:

She approves of the plan.
Beware of the dog.
He disposed of the old bulb.
We partook of a simple meal.
The book treats of the fauna of New Zealand.

We apprised her of the facts.
I convinced her of his guilt.
They deprived him of his liberty.
You expect too much of them.
He robbed me of my wallet.

### 2.4.2.2. Prep+Prep:

ahead of her rival
instead of tea
out of the box

### 2.4.2.3. die+of:

of indicating cause may be included here as it is virtually restricted to occurrence with 'die'.

Ex.
He died of a broken heart.

### 2.4.2.4. of/about:

There are also cases where it alternates with 'about' which has its ordinary lexical meaning:

## Ex.

They had spoken of/about their wartime experiences;
He's thinking of/about moving to Bangalore.

### 2.4.3. Complement in the structure of AdjPs and AdvPs:

Like nouns, adjectives do not take NPs as post-head complement. Subordinate NPs are related to the head adjective by means of a preposition, and of can be the default preposition in this construction.

Ex:
I feel ashamed of myself.
They seem bereft of ideas.
She is convinced of his guilt.
It is full of water.
It is good of you to help.
We're short of money.
He was afraid of dogs.
They are mindful of the danger.

They were heedless of the danger.

A list of adjectives which take of complements:

| afraid | ashamed | aware | beloved | bereft |
| :--- | :--- | :--- | :--- | :--- |
| capable | certain | characteristic | cognizant | conscious |
| convinced | desirous | destructive | devoid | distrustful |
| productive | proud | reminiscent | representative respectful |  |
| scared | short | suggestive | supportive | sure |
| tired | wary | worthy |  |  |

Following adjectives are commonly occur in combination with it+extraposed subject, ex. 'It was very kind of you to wash the dishes', alternating with a construction with a personal subject, 'You were very kind to wash the dishes'.

| careless | considerate | generous | good | honest |
| :--- | :--- | :--- | :--- | :--- |
| idiotic | kind | naive | noble | pleasant |
| silly | stupid |  |  |  |

### 2.4.4. Other functions of of PPs:

There are a few cases where of is not selected by the head and thus makes an independent contribution to the meaning. In the following examples of phrase is
i. Modifier in NP structure:
a matter of no importance
a frame of steel
a girl of a sunny disposition
a man of honour
a boy of sixteen
the best novelist of her time
ii. Predicative complement:

It is of no importance.

The frame is of steel.
She is of a sunny disposition.
iii. Adjunct in clause structure:

We like to go to the beach of a week-end.
He did it of his own accord.

The predicative complements in ii match the modifiers in i, but the predicative construction allows a narrower range of semantic types. Compare,
*'The man is of honour'
or
*'The boy is of sixteen'.

Leaving aside idioms and fixed phrases such as 'of course', 'of late', 'of necessity', etc., of PPs are rarely found as clause adjuncts. The only productive case is for indicating time in multiple situations, as in the 'of a week-end' in the example iii: the NP denotes a time period and must begin with the indefinite article.

### 2.4.5. Subject-determiner genitives and of construction:

In the structure of NPs, as in the structure of clauses, we often find that an element with a given semantic role may be aligned with complements of different kinds:

$$
\begin{array}{ll}
\text { the flood's consequences } & \text { (cause as subject-determiner) } \\
\text { the consequences of the flood } & \text { (cause as of oblique) }
\end{array}
$$

### 2.4.5.1. Bivalent construction (contained two complements):

In event nominalisations corresponding to transitive clauses, we typically have three possible alignments:
i. Alexander the Great's conquest of Persia [subject-determiner $+o f$ oblique]
ii. Persia's conquest by Alexander the Great [subject-determiner +'by' oblique]
iii. The conquest of Persia by Alexander the great [of oblique +'by' oblique]

Version iii has two obliques, the others a subject-determiner +one oblique. In obliques it is the complement associated with the role of agent that takes 'by, while other roles take the default preposition of. In the mixed constructions, pattern i is more usual than ii: there is a preference for the more active role to be aligned with the subject-determiner, and for the other to be aligned with an oblique, which will therefore take the preposition of.

- Note: there is no system of voice in NP.'...Conquest by Alexander...', '...Persia by Alexander...'are not passives.


### 2.4.5.2. Monovalent construction (having one complement):

 subject-determiners compared with of phrases.In bivalent constructions a subject-determiner can combine with an of phrase, but in monovalent ones the two kinds of complement tend to be in competition with each other:

Genitive subject-determiner of + non-genitive
i.a. Radha's sister b. the sister of Radha
ii.a. the accident's result
b. the result of the accident

In the above examples one would prefer i.a. and ii.b., but not others. We have to review a number of factors favouring one or the other:
2.4.5.3. Semantic relation between the NP and the head noun:

Certain semantic relations are excluded from the subject-determiner construction but permitted in the of phrase one. The first involves a structure that excludes the genitive as ungrammatical, while with the others it is a matter of preferences.

```
*the hay stack's painting
*the cross's sign
*all battles' battle
*2\%'s rise
*Roman coins' collection
*red wine's glass
*shrub's two kinds
*gold's colour the colour of gold
```

| *honour's men | the men of honour |
| :--- | :--- |
| *despair's cry | the cry of despair |
| *unemployment's problem | the problem of unemployment |
| *washed silk's dress | the dress of washed silk |
| *purple's evil | the evil of purple |
| *twelve years' girl | the girl of twelve years |

There is also no genitive counterpart of the predicative construction
'the stupid nitwit of a husband' - *a husband's stupid nitwit, or of portative like
'the youngest of the boys' - *'the boys' youngest'.

### 2.4.5.4. Semantic character of the NP:

NPs denoting humans and animals occur with much greater frequency as subjectdeterminers. For example,
'Mary's green eyes' and 'cat's paw' are much preferred to 'the green eyes of Mary and 'the paw of the cat'.

There is also - less strong - preference for NPs denoting times and geographical entities to be subject-determiners, e.g. 'October's weather is preferred to the weather of October', and 'London's pubs' is preferred to 'the pubs of London'. Least preferred as subject-determiners are NPs denoting other inanimates, e.g. 'the roof of the house is preferred to the house's roof'.

### 2.4.5.4.1. Syntactic character of the NP:

Pronouns are very strongly preferred as subject-determines, and rarely found as the complement of of: compare
'her money' and 'your nose' with the very unnatural 'the money of her' and 'the nose of you'.

However, pronouns are not totally excluded from the of construction. We have examples like
'The only portrait of her can be found in the National Gallery.'

Where 'her' as human topic is intended as relatively lower on the semantic hierarchy: 'her only portrait' could also be interpreted as creator or owner. There are also almost idiomatic phrases like 'That will be the death/undoing/making of him' Where again a low role seems to be intended.

Other things being equal, relatively short, head-final NPs will generally prefer subject-determiner position while relatively long NPs with post-head dependents will generally refer the oblique position:
i.a. the city's usual rush-hour traffic b. the usual rush-hour traffic of the city
ii.a. a relatively young designer from Italy's creations
b. the creations of a relatively young designer from Italy

Version i.a. is preferred and ii.b too. This reflects the general linguistic tendency for heavy dependent to be positioned to the right of the head.

### 2.4.5.4.2. Morphological character of the NP:

A small tendency has been noted for the regular plural ending to be avoided in subject-determiners: in speech,
'the king's horses' and 'the kings' horses' are not distinguishable, whereas 'the horses of the king' and 'the horses of the kings' are.
2.4.5.5. Subject-determiner genitive and oblique genitive, a comparison:

The oblique genitive construction is semantically less general than the subjectdeterminer construction.

| Subject-determiner genitive | semantic meaning (d-dependent, h -head) | oblique genitives |
| :---: | :---: | :---: |
| Radha's green eyes | Radha has green eyes. [d has body part h] | Those green eyes of Radha's |
| Radha's younger sister | Radha has a younger sister. <br> [d has kin elation h] | That younger sister of Radha's |
| Radha's husband | Radha has a husband. <br> [d has married relation h] | That husband of Radha's |
| Radha's boss | Radha has a boss. <br> [d has superior h] | That boss of Radha's |
| Radha's secretary | Radha has a secretary. <br> [d has subordinate h ] | That secretary of Radha's |
| Radha's friend | Radha has a friend. <br> [d has equal h] | That friend of Radha's |
| Radha's team | Radha belongs to a team. <br> [ d is a member of h ] | That team of Radha's |
| Radha's debut | Radha performs her debut. <br> [ d is performer of h ] | That debut of Radha's |
| Radha's book | Radha writes a book. <br> [d is creator of $h$ ] | That book of Radha's |
| Radha's new house | Radha owns a new house. <br> [d is owner of h] | That new house of Radha's |
| Radha's honour | Radha is honourable <br> [d has human property h] | ?that honour of Radha's |
| Radha's anger | Radha feels angry. <br> [d has feeling h ] | ?that anger of Radha's |
| Radha's letter | Radha receives a letter. <br> [ d is recipient of h ] | ?that letter of Radha's |
| Radha's obituary | Radha is the topic of an obituary. <br> [ d is human topic of h ] | *that obituary of Radha‘s |
| The cathedral's spire | The cathedral has a spire. <br> [d has inherent part h] | *that spire of the cathedral's |
| The summer's heat | The summer is hot. <br> [d has non-human property h] | *that heat of the summer's |

The oblique genitive therefore does not generally contrast with the non-genitive of phrase construction, since this is disfavoured by animate dependents and virtually excluded in the case of personal pronouns. There is no possibility of
*'those green eyes of her' competing with 'those green eyes of hers'.

We can note two cases where there is competition. Firstly, it has been established that relatively long and heavy post-head dependents can favour the of phrase construction over the subject determiner construction, this carries over to a competition between the oblique genitive and simple of phrases. We are more likely to have:
'those green eyes of Radha's' (oblique genitive - not favoured)
'those green eyes of Radha' (of phrase - favoured usage)
'those green eyes of the girl who lives next door's'
'those green eyes of the girl who lives next door' (favoured usage)

Secondly, in the special case of the equal relationship the difference between the two constructions can indicate different perspectives. We gloss Radha's friends' as 'd has equal h', indicating that the relationship is viewed from Radha's perspective, and 'those friends of Radha's' is understood in the same way. In 'those friends of Radha', however, the perspective is that of the friends, so that an appropriate gloss would have the terms reversed, giving ' $h$ has equal d'.

### 2.4.5.6. Head and phrasal genitives:

We have a usage head and phrasal genitives. Genitive NPs are usually marked as such by the inflection of the head noun: it can be referred as head genitives. It is also possible for the marking to be located on the last word of a post-head dependent, and these can be called as phrasal genitives.

| [Edward's] daughter | [the King of England's] daughter |
| :--- | :--- |
| [everyone's] responsibility | [everyone else's] responsibility |

In the first example above, the head of the genitive NP is 'King' but the suffix ' 's' attaches to 'England', the last word of the phrase 'the King of England'. The range of phrasal genitive constructions is greater in informal, especially spoken, style than in formal and written one.
[the Head of Department's] speech
?[the Head of the newly formed Asian Studies Department's] speech

The first example is acceptable in any style, but the second one is marginal and would generally be avoided in favour of other construction 'the+N+PP' (the speech by the Head of the newly formed Asian Studies Department).

In both head and phrasal genitives the genitive marking is on the last word. It is not possible to have genitive marking on the head if there is a post-head dependent: we cannot have *'[the Head's of Department] speech'.

### 2.5. Telugu language:

Telugu is a verb-final language. It has postpositions, the genitive precedes the head noun, and the comparative marker follows the standard of comparison. The complementizer follows the embedded clause. Adjectives, participial adjectives, and relative clauses precede the head noun. Telugu is a nominative-accusative language, as are the other Dravidian languages. Telugu has the typical dative subject construction. Verbs carry pronominal suffixes as their ending. Telugu is a pro-drop language. The subject, direct object, indirect object, and Adverbial Phrase of the finite embedded and matrix sentence may be dropped.

### 2.5.1. Telugu postpositions:

A postposition is a type of adposition, a grammatical particle that expresses some sort of relationship between a noun phrase (its object) and another part of the sentence.

Postpositions are adpositions which follow their objects. The equivalent of the postposition in English is the preposition, which differs in that it precedes its object.

Postpositions in Telugu indicate the role of the nouns in relation to the verb in a sentence.

Ex. vaipu, veṇṭa, vadda, etc.

Postpositions in Telugu can function as case markers, ni/nu (accusative), ki/ku (dative), valla/valana (ablative) etc.

Some postpositions take case markers after them.
Ex. vaddaku, etc.

Some postpositions are bound to oblique stems of nouns and some are separate words.

Postpositions are added to the oblique stem of nouns and correspond in meaning of prepositions in English. (For our purpose, finding the functional equivalent for of, we need oblique forms null forms and postpositions).

According to Krishnamurthy (1985) postpositions can be classified as independent and dependent. In dependent type, postposition marker is added to the oblique form of the word, where as independent type can some times function as independent words.

Examples for dependent postpositions are:

$$
\text { ni/nu } \quad \text { accusative }
$$

ki/ku dative
kōsaṃ for the sake of, on account of
tō with, along with

| nuñci/niñdi | from |
| :--- | :--- |
| $a / n a / n i$ | in, on, at |
| $a / n a / n i$ | than, compared to |
| guṇ̣āādvārā | through |

Examples for independent postpositions are:

| Iō | in |
| :--- | :--- |
| Iōpala | inside |
| mída | on |
| kinda | under |
| baiṭa | outside |
| daggira | near, contiguous |
| venaka | behind |
| mundu | in front of, before |
| lā, lāgā | like |
| prakāraṃ | according to |
| tarvāta | after |
| varaku, dāka | up to (place), until (time) |
| eduṭa | opposite |
| madhyana | between |
| pakkana | by the side of |
| pāṭu | for (of time) |
| vaipu | in the direction of, towards |

Grammar related to the postpositions of Telugu is also discussed in the following chapters, where ever it is require.

In the next chapter we will discuss the various syntactic and semantic distributions of the word of according to our purpose i.e. machine translation.

## Appendix of the chapter:

## I. Basic concepts of grammar (syntax):

I.1. Grammatical arrangement of words in a sentence can be called syntax. A sentence can be analysed on the basis of its constituents, syntactic categories of the constituents and grammatical function of the constituents in a given sentence.

## I.1. Constituents:

The hierarchical composition of wholes from parts can be called constituent structure. The grammatical rules of a language say that sentence modification can be done without interrupting the constituent. Often a constituent will have other constituents in them, and those are made up from still shorter constituents

Ex. 'A boy read the book'.


Hierarchical composition of sentence

The sentence is divisible in the first instance into two parts. These parts of the sentence at the first level are called immediate constituents of the sentence.
'a boy' (the subject) and
'read the book' (the predicate).

The phrase 'a boy' is itself made up of smaller parts:
'a' and 'boy'

And same with the 'read the book'. Here, similarly, 'read' and 'the book' are the immediate constituents of 'read the book'. The words are the ultimate constituents of the sentence.

The grammatical rules of a language say that modification can be done with out interrupting the constituent.

Ex.
Apparently a boy read the book.
A boy apparently read the book.
A boy read the book, apparently.
But not
*An apparently boy read the book.
*A boy read apparently the book. Etc.

From the above examples star marked are interrupting the constituents, 'a boy', 'read the book'. This point should be kept in mind to form a general rule for a language.

## I.1.a. Syntactic categories:

We can categorize constituents as lexical (noun, verb, and also phrasal nouns phrasal verbs etc) and phrasal (VP, NP, AdjP, etc) categories - one of the main difference between these two categories is that, traditionally, dictionaries have lexical entries.

## I.1.b. Grammatical functions:

Every constituent will have a role in the constructions. This role could be called as a function (subject, object, etc). Here a syntactic category can have more than one grammatical function.


In the sentence 'A boy read the book', 'A boy' and 'the book' belong to the same category, NPs (because both have a noun as the major element); but they have different functions, subject, object respectively.

Constituents can have the same grammatical function but belong to different syntactic categories.


For example, in sentences 'His guilt was obvious' and 'That he was guilty was obvious' 'His guilt' and 'That he was guilty' both have same function, subject (they stand in the same relation to the predicate), but the categories are different, NP and a clause.

## I.2. Head and dependents:

A phrasal category can be divided as head and dependents. The head, normally obligatory and plays the primary role in determining the distribution of the phrase.

## 1.2.a. Head:

'his guilt' and 'that he was guilty' can function as subject but they differ in other aspects of their distribution -
'The news that he was guilty was devastating', but not
*The news his guilt was devastating

We need a preposition to correct the above sentence:
'The news of his guilt was devastating'

This difference is attributable to the fact that the head of the former is a noun while the head of the latter is a verb (i.e. according to the head the grammar changes).

## I.2.b. Dependent:

Dependents often optional and they are syntactically subordinate elements. In any given construction the kind of dependent permitted depends on the head:

Ex.
'too' (in a sense of 'excessively')
'too carefully', 'too careful'

Here, 'too' is functioning as dependent to an adjective or adverb, but not to a noun or verb:
*their too extravagance, *you shouldn't too worry

Dependent is a very general function, and we can subdivide this function according to their more specific relation to the head, like complements, modifiers, and determiners.
i. the photographs of their dog that they had brought with them [complement]
ii. the photographs of their dog that they had brought with them [modifier]
iii. the photographs of their dog that they had brought with them [determiner]

## I.2.c. non-head:

Although the functions of head and dependent apply to a very wide range of constructions, we must also allow for non-headed constructions.
i. She bought [a hamburger, some chips and a glass of milk]. [coordination - the underlined NPs are of equal syntactic status]
ii. A storm damaged - or so I'm told - the roof of their house. [supplementation instead of being integrated into the constituent structure of the sentence as a dependent or coordinate, it is loosely attached, set off from the rest in speech by separate intonational phrasing and in writing by punctuation.]

## Preposition in non-expandable clause:

If declarative content clauses do not permit the subordinator 'that' then they are non-expandable. Almost all words that license complements of this kind are prepositions, though there are also prepositions that take expandable content clauses, like heads of other categories.
i. We left [before the meeting ended].
ii. I'll come with you [provided (that) it doesn't rain].
iii. I [know (that) you've done your best].
(non-expandable)
(expandable)
(expandable)

In ' $i$ ' 'before' is preposition because it is not possible to insert 'that' in it. With 'provided' the word 'that' is permitted, as it is with the verb 'know' in 'iii' and here we therefore need further evidence 'that' is a preposition.

Phrasal verb: a phrase which consists of a verb in combination with a preposition or adverb or both, the meaning of which is different from the meaning of its separate parts. Ex. look after, work out make up for.

Idioms: a group of words in a fixed order that have a particular meaning that is different from the meanings of each word understood on its own. Ex. To "have bitten off more than you can chew" is an idiom that means you have tried to do something which is too difficult for you.

Phrase: a group of words which is part rather than the whole of a sentence.

Case: any of the various types to which a noun can belong, according to the work it does in a sentence, usually shown by a special word ending: the accusative/dative case.

## Chapter-3

# Nature, Distribution and Semantics of of constructions in English 

In this chapter we explore the distribution and semantics of English word of. In second chapter the grammaticised use of of is discussed. This chapter is essentially the continuity of the discussion on the grammar of of in English but with greater details of focused microstructures involving $o f$.

### 3.1. Syntactic Occurrences of $\boldsymbol{o f}$ :

To get the functional equivalent for the word of first we have to identify where it occurs and the form it has. For that I searched for the syntactic structures where preposition mostly of occurs.

To begin with, I tried to find where this word of is occurring. The word is found in

1. Nouns, adjectives, adverbs, and in another preposition,
2. Phrasal verbs,
3. Idioms and phrases
4. Substitution of genitive case, instrumental case etc.
5. Preposition,
6. Interchangeable/synonymous.

The details can be useful to find out lexical units for the purpose of dictionary building. Dictionary is one of the main resources for a Machine Translation System.

The syntactic structures with of has been divided in to three types: merged, non-merged and typical order based.
3.1.1. Merged structures: In this type of structures, separate analysis for the word of it is not necessary i.e. of is the part of that particular lexical category. Ex. Nouns, adjectives.

| S.No. | Structure | Example | Comments |
| :--- | :--- | :--- | :--- |
| 1 | N+of+N | i. article of faith <br> ii. bag of bones | Noun |
| 2 | N+of+adj+N | Cost of living index | Noun |
| 3 | Adj+N+of+N | United States of America | Noun |


| 4 | N+of+N | End-of-season: <br> The end-of-season play-offs. | Adjective |
| :---: | :---: | :---: | :---: |
| 5 | Adj+of | Undreamed-of: <br> Norway has enjoyed undreamed-of success with their first album. | Adjective |
| 6 | Prep+of+N | i. Out-of-court: out-of-court settlement <br> ii. Out-of-town: <br> An out-of-town shopping center | Adjective |
| 7 | N+of+adv | Matter of factly: <br> i. I came in with three A levels, she said, matter of factly. <br> ii. Before the sun, I repeat matter-offactly. | Adverb |
| 8 | of+prep | Twenty-six percent of all appeals set down were disposed of in that way | Phrasal preposition |
| 9 | prep+of | i. inside of: He finished it inside of two hours. <br> ii. out of: An apple rolled out of the bag <br> iii. upwards-of: Upwards of fifty thousand people assembled in the main square. | Phrasal prepositions |
| 10 | V+[of+object] | dispose of: <br> i. How did they dispose of the body? <br> ii. It took a mere five minutes for the world champion to dispose of his opponent. <br> Following list shows various occurrences of verb dispose: <br> 1. The behaviourist theory of knowledge says that for someone, S , to know or believe that some proposition p is true is for $S$ to be disposed to behave in some way which is suppose <br> d to appropriate to the world's being as p says. <br> (*disposed to) <br> 2. African sculpture has been commonly described as <br> frontal, i.e. the figures are symmetrically disposed about <br> a vertical axis. (*disposed about) <br> 3.Honest crap you can flush own the lavatory, he wrote, but dishonest crap, of the kind produced by so-called artists, is more difficult to dispose of.(*stranded) <br> 4. His home, a very well disposed, if modest, semidetached residence in the affluent part of Montreal <br> known as Westmount, backed on to a part overlooking the city and the mighty st. Lawrence River and port. (*verb usage) <br> 5. That deference towards the well-disposed reader is hard to find in later criticism for good reason, no doubt.(*adjectival use of disposed) <br> 6. twenty-six percent of all appeals set own were disposed of in that way. (*ypical usage to two prepositions) | Prepositional verb= The preposition is specifically selected by the verb rather than being in potential contrast with other prepositions. This construction can be called as prepositional verbs. |


| 11 | V-object-[of+object] <br> Vb_pst+of+gerund; | Accuse...of: <br> i. They accused him of wrong propagation <br> ii. The confederation of British <br> Industry accused the financial markets of hysterical over-reaction and said... <br> iii. Aquino Government accuses him of having stolen up to .... <br> Following is the example for the structure: <br> Vb_past+of+gerund; He claimed that he was sick of this <br> Steffi is Great attitude and he accused you of showing <br> favour towards Steffi. <br> Following is the structure without object between verb and $o f$ : <br> When we are not being accused of ignoring the vernacular pub tradition... <br> Assure...of: <br> iv. In my view, accuracy can only be assured over very short periods of time, after which the refereeing panel must receive a proper rest. <br> v. Miloslav Mecir, whose season has been handicapped by back trouble, assured himself of a place in the semifinals along with Becker with a 6-2, 6-1 victory against Austria's Thomas Muster yesterday. <br> convince...of: <br> vi. Only de Valera's personal intervention convinced them of their lack of perception and judgment. <br> rob ...of: <br> viii. ...Barmouth's 115 span timber bridge would rob the Cambrian cost of its railway, but... <br> ix. Giant's pub deal robs tenants of guest beer rights report by Stephen Cox. | Prepositional verb |
| :---: | :---: | :---: | :---: |
| 12 | V-[of+object]-[prep+PC] | think of: <br> i. I can think of more upsetting things in life. <br> ii. See what you think of Harwich in | Prepositional verb |


|  |  | the meantime. <br> Conceive of: <br> ...he can conceive of nature's immensity in the womb of this .... |  |
| :---: | :---: | :---: | :---: |
| 13 | V+of+Nx | Admit of something: <br> i. The present schedule does not admit of modification. <br> ii. The latest events admit of several interpretations. <br> The basic Dijon process can admit plenty of variations. <br> Allow of something: <br> iii. The rule allows of no exception. <br> iv. The evidence allows of only one interpretation - he was murdered by his wife. <br> Come of something: <br> v . Did something come of all those job applications? <br> vi. Cameron looked at Menzies and said, James what will come of today's work. <br> vii. Nothing will come of nothing, as <br> King Lear said once upon a time. | Phrasal verb |
| 14 | V+NP+transitive prep | i. We lost sight [of our goal] ii. The glider pilot was dazzled for a moment and lost sight of the tug. iii. They made good use [of the extra timel | Verbal idiom |
| 15 | [prep+N+of+Nx] | In aid of $N x$ : <br> i. The proceeds would be in aid of the same charity as our garden opening. <br> ii....organising a concert for Amnesty at Lincoln Castle in aid of Amnesty on August. <br> Under the auspices of $N x$ : <br> iii...in July 1990, under the auspices of the United Nationals. <br> iv...in London under the auspices of Aaron Copland, ... | Complex (partially fossilized) <br> A set of words which start with preposition but not act like a preposition (most of them are idiomatic in nature) |
| 16 | [prep+N+of+Nx] | By dint of Nx: <br> i...., was to be acquired like a mechanical trade, by dint of labour, or | Complex (most fossilized) complex like structure but these are separate |


|  |  | I may add the absurdity of supposing that... <br> ii....and forgotten nothing, but, by dint of constant pressure on Argentina's elected leaders, .... <br> In case of $N X$; <br> iii...kept her keys in her pocket rather than her bag in case of mugging. iv...we would also be protected in case of emergency. <br> In lieu of NX: <br> v...and Mk 3 sleepers in lieu of the Pullmans. <br> vi...that donations in lieu of floral tributes should be ... <br> vii...income to the Treasury in lieu of tax. | prepositions <br> ...a small amount of water in the airlock. <br> After a couple of weeks in a cool place ... |
| :---: | :---: | :---: | :---: |
| 17 | [prep+N+of+Nx] | In favor of: <br> i. As internal partitions and old seating are removed in favour of connected raised levels of hardwood <br> ii. Karate competition is biased in favour of long-limbed individuals who have good reach in relation to their weight. <br> On behalf of: <br> iii. Motability has also negotiated good discounts on new cars on behalf of purchasers. <br> iv....although allegedly acting on behalf of society and the ... | Compound A set of words which start with and acts like a preposition. |
| 18 | conj+of | Because of: <br> i. ....partly because of customers' understandable preference for.. ii....particularly because of problems experienced by... | Phrasal-acts like prepositions |

3.1.2. Non-merged structures: These types of structures are not the part of any lexical category. A separate grammatical analysis for the word of is necessary.

| S.No | Structure/type Example <br> Non-inflectional  <br> form of the genitive  | i. Name of the ship = Ship's name <br> ii. the sister of Radha = Radha's sister <br> iii. the result of the accident = the accident's <br> result | In the monovalent <br> construction (having <br> one complement) the <br> two kinds of <br> complement (subject- <br> determiner and of <br> phrase) tend to be in <br> competing with each <br> other. |
| :--- | :--- | :--- | :--- |
| 2. Stranded | i. What's all this something in aid of? <br> ii. As much and as deep coherent thought as he <br> was capable of. | Idiom |  |
|  | iii. Every avenue that we can think of. <br> iv. On the night of Thursday Cameron slept <br> badly, for no reason that he knew of. | phrase |  |


| 4. | At the beginning of the sentence <br> a. of +N <br> b. of + what <br> c.of+propnoun <br> d. Of+det <br> f. Of+auxiliary | i. Of the elements composing the rainbow coalition, Marxism is the most prominent and intellectually respectable. <br> ii. Of what was he guilty? <br> iii. Of reverence for death, or perhaps decorum \& hellip; <br> iv. Of England, as the Howard or Boleyn knows. <br> v. Of what interest to members, I hear you cry, are pubs that cater for; swilling executives? <br> vi. Of these, content clauses represent the default category... <br> vii. Of is the most highly grammaticised of all prepositions | adjunct <br> nominal |
| :---: | :---: | :---: | :---: |
| 5 | N+of+gerund | ...proper activity of reading, studying, and enjoying literature. | Complement |
| 6 | $\begin{aligned} & \text { gerund +of+(det) } \\ & \text { n(plural) } \end{aligned}$ | ...the hearing of other appeals... | Complement |
| 7 | N+of+it | i. But this is not an attempt to be controversial for the sake of it. | Complement |
| 8. | not+of+det+adj+N | Theory, to be intellectually respectable, has to be presented as such, and to be a product of the academy, not of the amorphous institution of literature. | Negative word+of |
| 9 | of+of+prep | The fifth chapter discusses the distribution of of in English | Object |
| 10 | copula + of+N | The story is of ersatz oppression and liberation, oppression by domesticity and chips in suburban Liverpool, liberation by sunshine and retsina on a Greek island holiday. | Complement |
| 11 | V+Prep+of+N | i. Yeats is made up of millions of tiny fungus cells which literally go ... <br> ii. The branch and regional structure is overseen by a national Branches Committee made up of Regional Directors. | Complement |


| 12 | Adj+of+what | But present-day theorists are likely to be <br> dismissive of what has been called writers' | Clausal complement |  |
| :--- | :--- | :--- | :--- | :--- |
| 13 | Adj+of+N | speculation about their art, finding it <br> impressionistic and unsystematic. | i. It is full of water. <br> ii. I feel ashamed of myself | Complement |
| 14 | Adv+of+Nx | i. The duel solves disputes independently of <br> abstract principles of justice. <br> ii. We should make out decision independently <br> of whether we plan to take immediate action to <br> implement it. |  |  |

3.1.3. Typical Structure: These types of structures are somewhat different form the common behavior of the language. Ex. Word order, having single occurrences.

| Se <br> No. | Structure | Example | Comment |
| :--- | :--- | :--- | :--- |
| 1 | N1+of+N2 <br> (No change in <br> word order) | i. a kilo of mangos <br> kilō māmiḍi pa!!u <br> ii. a third of all people <br> mūḍavavantu/mūd̄ōntula prajalu | $\mathrm{N} 1+\mathrm{of}+\mathrm{N} 2=$ <br> $\mathrm{N} 1+\mathrm{of}+\mathrm{N} 2$ |
| 2 | Die+of | He died of cancer | Special verb <br> (instrumental <br> case) |
| 3 | Made +of+N <br> (material) | The bridge was made of steel. | Instrumental case |
| 4 | interchangeable/ <br> synonymous | i. Do you know of/about a good doctor? <br> ii. Free somebody $\underline{\text { of/from something (phrasal verb) }}$iii. head of/about something/somebody <br> iv. a baptism of/by fire. (saying) <br> There is a <br> possibility of <br> using other <br> prepositions in <br> place of $o f$. |  |

From the above, we can see that English preposition would be found in various syntactic structures. Parsing these structures for the purpose of Machine Translation is very important to find the correct meaning in target language.

### 3.2. Some specific details for some of the above mentioned structures are given bellow:

3.2.1. We have two types of $\mathrm{N}+\mathrm{of}+\mathrm{N}$ structures namely, phrasal nouns and plain case of genitive structure.

## a. Phrasal nouns:

The phrasal nouns are fixed structures. We can put all phrasal nouns in a dictionary as lexical items. While translating this structure, into Telugu language, with minor exceptions, the word of is dropped and equivalent is given with or without an inflection. In other words present Telugu doesn't have any explicit lexical equivalent for the word of in genitive structure, but there are some exceptions, examples are given in the following paragraphs. The explicit genitive marker (archaic word 'yokka') is dropped and used the base forms of the nouns or mere oblique forms of the nouns.

```
Ex.
contempt of court - kōrṭu dhikkāram
bag of bones - emukala sañc\overline{i}/pōgu/gūdu (plural oblique)
the bank of England - imglāṇduu byāñku
bicarbonate of soda - sōḍā baikārbōnēṭu
```


## b. Plain form:

The second form of structure $(\mathrm{N}+\mathrm{of}+\mathrm{N})$ is plain form: In this case the genitives are full range of NP. Unlike phrasal nouns, these forms are variables (not fixed). These cannot be entered into the dictionary as a lexical item. In the following examples the structure $\mathrm{NP}+\mathrm{of}+\mathrm{NP}$ is an plain form of the genitive form

```
Ex. genitive form
    Her former husband's house
    Dick Brown's son-in-law
```

Here, also, the explicit genitive marker (archaic word 'yokka') is dropped and the base forms of the nouns or mere oblique forms of the nouns are used.

```
the son-in-law of Dick Brown
dik braun alludu
    not/rarely
ḍik braun yokka a!!uḍu
the house of her former husband
àme mājī bharta illu
    not/rarely
āme mājī bharta yokka illu
```

But some times, the structure $\mathrm{N}+\mathrm{of}+\mathrm{N}$ has explicit lexical equivalent for the word of in Telugu. Here in some cases of is taking explicit lexical equivalent or no marker in Telugu.
loads of food - āhāra(pu) rāśulu (informal idiomatic meaning: loads - a lot)
center of attraction - kēndra/mukhya(maina) ākarṣaṇa
the pain of separation - viḍipōyē (ṭappaṭi) bādha
playing-fields of Eton -

## c. typical structure:

The third type of this structure is $\mathrm{N} 1+\mathrm{of}+\mathrm{N} 2=\mathrm{N} 1+\mathrm{of}+\mathrm{N} 2-$ no change in word order
a third of all people - mūḍavavantu/mūḍōntula prajalu
a mile distance - mailu dūraṃ

### 3.2.2. Phrasal prepositions:

We have 'free' and 'fossilised' usages of this structure. In free order sequences of prepositions there is nothing idiomatic or fossilized about such cases. For example,

He emerged from behind the curtain.
She went down to the post office.

Here, we are going to discuss the sequences which are fossil as well as prepositions. Most of these can be entered into the dictionary. Some of the fossil expressions in general are listed here:
i. Prep+of=Prep:
out of upwards-of
inside-of

| up to | up against | upon |
| :--- | :--- | :--- |
| in between | into | onto/on to |
| as to | as for | as from as per |

'Out of' shows a high degree of fossilization. It is virtually impossible to separate the two components or to repeat of in coordination.
*'the door of which she had come out' or
*'All the furniture will have to be taken out of the dining-room and of the lounge'

We evidence against treating 'out of' as a composite/phrasal preposition. If the following NP is omitted the of must drop too:

They came out of the building
They came out
'Because of' is similar, except that instead of omitting 'of+NP' we can replace it by a content clause:
because of the rain
because it was raining

Let us see some examples:
ex. because of ('because of' is a preposition and it means 'as a result of and because is a conjunction, and it means 'for the reason that' - We can't go to Julia's party because we're going away that weekend.), out of - (some of the meanings of 'out of': no longer in, made from, because of, from among, not involved), inside of (time), upward(s) of.

The train was delayed because of bad weather.
వాతావరణం అనుకూలించనందువల్ల/వలన రైలు ఆలస్యమైంది
(vātāvaraṇaṃ anukūliñcananduvalla/valana railu ālasyamaindi)

An apple rolled out of the bag.
ఆపిల్ సంచీ(లో)నుంచి దొర్లిపోయింది
(āpilu sañc $\bar{i}(l \bar{o}) n u n ̃ c i ~ d o r l i p o ̄ y i n d i) ~(~) ~$

He finished it inside of two hours.

```
అతడు దాన్ని రెండుగంటలలోపల/లో పూర్తిచేసాడు
(ataḍu dānni reṇdugaṇtalalōpala/lō pūrticēsāḍu)
```

Upwards of fifty thousand people assembled in the main square.
యాబైవేలమంది(కి)పైనే ప్రజలు కూడలిలో జమకూడారు
(yābaivēlamandi(ki)painē prajalu kūḍalilō jamakuḍāru)

### 3.2.3. Phrasal Adjective:

of can also found in some phrasal adjectives:
ex. out-of-court, out-of-date, out-of-town, undreamed/undreamt of, matter-of-fact, end-of-season.

Out-of-court settlement.
న్యాయస్తానం బయటి ఒప్పందం
(nyāyasthānam bayatị ōppandaṃ)

An out-of-town shopping centers
ఊరిబయటి షాపింగ్ సెంటర్
(ūribayaṭi ṣāpiñg seṇṭar)

Norway has enjoyed undreamed-of success with their first album.
నార్వే కలలోకూడఊహించని/కలకనని తమ మెదటిఅల్బం విజయానికి ఆనందించారు
(nārvē kalalōkūḍa ūhiñcani/kalakanani tama vijayāniki ānandiñcāru/ ānandiñcidi)

The end-of-season play-offs.
సిజన్-చివరి ప్లే-ఆఫులు
(sījanu-civara plē-āphulu)

For some concepts which are functioning as adjectives will have functional equivalents in Telugu.

He spoke in a very matter-of-fact way about the accident.
అతను ఏంతో నిక్కచ్చి వైకరితో ప్రమాదంగూర్చి మాట్లాడాడు
(atanu eṃtō nikkacci vaikharitō pramādañgūrci māṭlāḍāḍu)

An out-of-town shopping centre.
That radio looks so out of date.
అది చాలా కాలం చెల్లిన రేడియే లాగా కనబడుతుంది
(adi cālā kālam cellina rēdiyō lāgā kanabaḍutundi)

### 3.2.4. Adverb:

of can be found even in the phrasal adverbs. Only example I found is:
'matter-of-factly'

### 3.2.5. Verb+particle/Phrasal verbs:

The term 'phrasal verb' implies that the combinations concerned form syntactic constituents belonging to the category verb. According to the CALD phrasal verb is a phrase which consists of verb in combination with a preposition or adverb or both, the meaning of which is different from the meaning of its separate parts. But, in this thesis, the second part of the definition has taken as verbal idioms.

In case of phrasal verbs we have two possibilities to find the target language equivalents. One is using available target language vocabulary related to that sense or making or trying to translate according to the sense by coining the words or phrasal forms.

## Ex.

The evidence allows of only one interpretation.

```
ఈసాక్షం కేవలం ఒక అర్థాన్నిస్తుంది.
īsākṣyaṃ kēvalaṃ oka ardhānnistundi
```

The latest events admit of several interpretations.
ప్రస్తుత సంఘటనలు చాలా అర్దాలనిస్తాయి. (plural oblique marker ‘la' (ల ) and 'nu/ni’ (ను/ని) accusative marker)
prastuta sañghaṭanalu cālā ardhālanistundi.

The latest events admit of only one interpretation.
ప్రస్తుత సంఘటనలు ఒకే అర్థాన్ని స్తాయి
prastuta sañghaṭanalu ōkē ardhānnistāyi.

Did anything come of all those job applications?

```
అన్ని ఆ ఉద్యోగ దరకాస్తులతో/లో (నుండి) ఏమైనా వచ్చిందా?
(anni ā udyōga darakāstulatō/lō (nundil) ēmaina vaccind\overline{a}?)
```

The team consists of four Europeans and two Americans.
జట్టు నలుగురు యూరోపియనులను/లు ఇద్దరు అమేరీకనులను కలిగిఉంది.
(jatṭu naluguru ūrōpiyanulanu/ūrōpiyanlu iddaru amērikanulanu kaligiuṃdi)

### 3.2.6. idioms and phrases:

Ex. at the best of times (when things going well).
Ex. Our car is slow even at the best of times.
మా కారు మంచి సముయాలలో కూడా నిదానమే.
(mākāru mañcisamayālalō kūḍā nidānamē)
baptism of/by fire (difficult situation)
I was given a million-dollar project to manage in my first month - it was a real baptism of/by fire (phrase).
...ముంటతో బ్యాస్టిజం
(... manṭatō byāpṭijam)

### 3.2.7. interchangeable/synonymous:

Ex. 'with', 'from, 'by', 'about': Free somebody from/of sth (pv), heard about/of, a baptism by/of fire (a saying - a very difficult first experience of something.).

Ex. Do you know about/of a good doctor?
ఎవరైన మంచి డాక్టరు(గురించి) తెలుసా?
(ēvaraina mañci ḍākṭaru(guriñci) tēlusā?)

### 3.3. Semantic occurrence of $\boldsymbol{o f}$ :

Till now we have seen of with different syntactic categories (noun, verb, idiom etc.). We can list these entries into a dictionary. Semantically, of can be found in the following senses (the list is given on the basis of CALD).
(Telugu translations of the following examples are available in other places, so translations are not given here)

## Possession:

used to show possession, belonging or origin:
Ex. a friend of mine

Amount:
used after words or phrases expressing amount, number or particular unit:
Ex. a kilo of apples

Containing:
Ex. a bag of sweets

## Position:

used in expressions showing position:
Ex. the top of his head

## Typical:

typical or characteristic of:
Ex. She has the face of an angel.

Days:
used to refer to a particular date in a month:
Ex. the eleventh of March

Time:
used in saying what the time is:
Ex. It's ten (minutes) of five (= ten minutes before five o'clock)

During:
Ex. I like to relax with a pipe of an evening.

## Judgment:

used after an adjective when judging someone's behavior:
Ex. It was a bit unkind of you to mention her weight.

Relating to:
about; relating to:
Ex. Speaking of Elizabeth, here she is.

Made of:
made or consisting of; having:
Ex. dresses of lace and silk

Separate from:
used in expressions showing distance from something in place or time:
Ex. We live within a mile of the city centre.

Loss:
used in expressions showing loss:
Ex. They were robbed of all their savings.

That/are:
Ex. the problem of homelessness

Comparing:
used when comparing related things:
Ex. Best of all I liked the green one.
of all people/things/places
used to express the idea that a particular person/thing/place is unlikely or surprising:
Ex. Stella, of all people, is the last one I'd expect to see at the club.

Done to:
Ex. the massacre of hundreds of innocent people

Felt by:
felt or experienced by:
Ex. the suffering of millions

Through:
through; having as the cause:
Ex. He died of cancer.

Giving all the above mentioned information to a machine is very important. Without this information system cannot recognize the correct meaning of the word. But giving this information to the machine is not that easy. There will be lot of overlapping problems. Different methods are available to overcome this problem (though they have their own limitations), most popular are Rule Based method, Example/Parallel Corpus method, Statistical method etc.

In the next chapter we will analyze the data and the issues related to the translation will be discussed.

## Chapter-4

# The Analysis 

Asterisk $\left({ }^{*}\right)=$ noun has 'upavibhakti+vibhakti' ('oblique form plus postposition').

### 4.1. The Data:

1000 specific sentences (idioms, phrases, phrasal verbs, etc.) containing of in them were taken from Cambridge Advanced Learner's Dictionary, Cambridge University Press 2003 - the dictionary contains a total of 39,332 sentences with of. Nearly 150 nouns, 81 phrasal verbs, 351 phrases and idioms, and some other combinations are there in those sentences.

The above mentioned sentences were translated into Telugu - including phrasal nouns, phrasal verbs and idioms/phrases for the purpose of analysis. A list of 530 sentences is given in the appendix.

### 4.2 Different Telugu functional equivalent/s for the word $o f$ :

Telugu is often considered as an agglutinative language, where certain syllables are added to the end of a noun in order to denote its case. For exemple, nuñci (from) ablative, ni - genitive, ki - dative, tō - instrumental etc. Some details of various markers and their functional uses are discussed in chapter 4.

Following is a list of examples, which was sorted according to the markers, from the translated sentences.

తో (tō)
'tō' is an instrumental marker or causative in Telugu language.

Ex.1. He died of/from cancer. (died of/from something)

```
అతను క్యాన్సరుతో చనిపోయాడు.
(atanu kyānsarutō canipōyāḍu) (causative)
```

Ex.2. I was given a million-dollar project to manage in my first month - it was $a$ real baptism of fire. (a baptism of/by fire (saying - a very difficult first experience of something)). నాకు మొదటినెలలోసే మిలియన్ - డాలర్ల ప్రాజెక్టు ఇచ్చారు - అది నిజంగా మంటతో బ్యాస్టిసం.
(nāku modaṭinelalōnē miliyan-ḍālarla prājekṭu iccāru - adi nijañgā maṇṭatō bāptismaṃ) (causative)

Ex.3. The dress was made out of velvet. (out of (made from, one of the meanings of 'out of'))
$ఈ$ దుస్తులు వెల్వెట్ తో చేయబడినవి/చేయబడ్డాయి
(ī dustulu velveṭtō cēyabaḍinavi/cēyabaḍ̣̣āyi) (instrumental)

Following example contains an abstract instrument. But 'valla' also suitable here. 'valla' is an ablative (pañcami) marker in Telugu grammar.

Ex.4. With a courage born of necessity, she seized the gun and ran at him. (born of sth)

అవసరంతో/వల్ల పుట్టిన ధైర్యంతో, తుపాకితీసుకొని అతనివైపు పరిగేత్తింది.
(avasarantō/valla puṭṭina dhairyantō, tupākitīsukoni atanivaipu parigettindi)
(causal)

Ex.5. The train was delayed because of bad weather.

Above could be a dialectal variation.

In the following example causative and 'to' is not an instrumental marker, but a typical usage to tell about a situation.

Ex.6. I'm sick of his excuses. (used to connect particular adjectives with nouns - fond of swimming - ఈeßoß


అతని సాకులతో/అంటె విసుగు చెందాను
(atani sākulatō/amṭe visugu cendānu) (causal) *

Ex.7. I'm sick of him whining about money. అతను/ని డబ్బులగురించి నసగడంతో/అంటె విసుగుచెందాను. (atanu/ni ḍabbulaguriñci nasagaḍamtō/aṃṭe visugu cendānu) (causal)

Verb + of +Nx
Ex.8. She came of her own accord. No one asked her to come. (of your own accord.(Phrases and idiom))

ఆమె ఇష్టంతో/తనకుతానుగా/తనకుతాను వచ్చింది. యెవ్వరూ ఆమెను రమ్మని అడగలేదు. (āme iṣtantō/tanakutānugā/tanakutānu vaccindi. evvarū āmenu rammani aḍagalēdu) (adverbial particle)

A reason, as a result, method, situation, material, adjective: these are the different situations where Telugu 'tō' comes. In general 'tō' is used as an instrumental or causative marker. But there are many other situations where 'tō' is used. For example: vāḍitō kalisi...(together with him...), ḍabbutō vaccāḍu (he came with the money), etc.

గ ( g ā):

Ex.9. I want to know how it happened because it certainly didn't happen of itself.
నేను ఇది యెలా జరిగిందో తెలుసుకోవాలని అనుకుంటున్నాను యెందుకంటే ఇది కచ్చితంగా దానంతటఅది/దానికదే/తనంతటతానుగా జరిగివుండదు.
(nēnu idi elā jarigindō telusukōvālani anukuṇṭunnānu eṃdukaṇtē idi khaccitañgā dānantațaadi/dānikadē/tanantaṭatānugā jarigi uṃḍadu) (adverbial particle)
'itself' is functioning as an adverb and of showing the relation between the verb and the pronoun. ('itself' is modifying the verb 'happen'; it is resembling the example 'she came of her own accord')

లో (IO): (among sth, inside, point of time, place/inside of something)
Ex. 12. Best of luck with your exams! (best of luck)
?అదృష్టంలో మంచిది... (నీ పరిక్షలు బాగా జరగాలి)
?adrṣtaṇ̣|̄̄ mañcidi... (nī parikṣalu bāgā jaragāli) (postposition)

In this example 'best of luck' doesn't have any Telugu equivalent because the usage is not there in Telugu.

Ex.13. Shall we play the best of five? ( the best of (game))
?ఐదింటిలో ఉత్తమం ఆడుదామా?
(?aidiṃṭilō uttamaṃ āḍudāmā?) (?postposition)

Ex.14. The coffee machine is out of order. (idiomatic and one of the meanings of 'out of')
? కాఫీ యంత్రం క్రమంలో/ఆర్డర్రో లేదు. (పని చేయడం లేదు)
(? kāphī yantraṃ kramaṃlō/ārḍarlō lēdu. (pani cēyaḍaṃ lēdu)) (postposition)

Ex. 15. Best of all I liked the green one.
నేను అన్ని(ం)టిలో( కి) పచ్చదాన్ని బాగా ఇష్టపడ్డాను.
(nēnu anni(ṃ)ṭilō(ki) paccadānni bāgā iṣṭapaḍ̣̣ānu.) (postposition+case) *

Ex. 16. Worst of all was the food!
అన్ని (ం)టిలో( $క$ ) బాగాలేనిది ఆహారం.
(anni(ṃ)ṭlō(ki) bāgālēnidi āhāraṃ.) (postposition+case)

Ex. 17. I think that of all his films it's my favourite.
అతని అన్ని సినిమాలలో(కి) ఇది నాకు ఇష్టమైనది.
(atani anni sinimālalō(ki) idi nāku iṣṭamainadi.) (postposition+case) *

Ex. 18. She works in the city and lives in the country, so she gets the best of both worlds. (the best of both worlds)

ఆమె నగరంలో పనిచేస్తుంది మరియు ఊరిలో ఉంటుంది, అందువల్ల ఆమె రెండు ప్రపంచాల( లోని) మంచిని/లాబాన్ని పొందుతుంది.
(āme nagaraṃlō panicēstundi mariyu ūrilō uṃṭundi, aṃduvalla āme reṇdu prapañcāla(İ̄ni) mañcini/lābhānni pondutundi.) (postposition+case)*
Some other examples: అతనిలో యేముందో (atanilō ēmundō), బావిలోకి చూడు (atanilō ēmund̄̄), కళ్ళలోకి కళ్ళు పెట్టిచూడు (ka!!alōki ka!!u petṭicūḍu), ...

## నికి/నకు (niki/naku):

Ex. 19. We live within a mile of the city centre.
మేము పట్టణానికి/పట్టణమునకు ఒక మైలు లోపల నివసిస్తాము.
(mēmu patṭaṇāniki/patṭaṇamunaku oka mailu lōpala nivasistāmu.) (postposition+case)
phrase/idiom
Ex. 20. It was the beginning of the end for their marriage when he started drinking. (the beginning of the end.)
యెప్పుడైతే అతడు తాగటం మోదలుపెట్టాడో అదే అతని వివాహ అంతానికి ఆరంభం.
(eppuḍaitē ataḍu tāgaṭaṃ modalupetṭạ̣̄̄̄ adē atani vivāha aṃtāniki ārambhaṃ.) (postposition+ case)

Above examples have both markers ni/nu and $\mathbf{k i} / \mathbf{k u}$. This is a kind of markers which are showing the destination point.

## su/sి (ku/ki)

Phrasal verbs:
Ex. 21. The latest events admit of several interpretations. (admit of somethingresulting)

ప్రస్తుత సంఘటనలు చాలా అర్దాలక్ తావిస్తాయి/తావిస్తున్నాయి.
(prastuta sañghaṭanalu cālā ardhālaku tāvistāyi/tāvistunnāyi.) (case)
or
ㅁ.అర్ధాలన్ ఇస్తాయి
(... ardhālanu istāyi)

Ex. 22. Whatever became of that parcel you sent? (become of sb/sth)
నువ్వు పంపిన పార్సిల( క్/కి) యేతైపోయింది/యేమైంది.
(nuvvu pampina pārsil(ku/ki) ēmaipōyindi/ēmaindi.) (case)
or
నువ్వు పంపిన పార్సిల్ యేైుెంది?
(nuvvu pampina pārsil ēmaindi?)

Ex. 23. The whole affair smacks of mismanagement and incompetence. (smack of Sth (if something smacks of an unpleasant quality, it seems to have that quality))

మొత్తం వ్యవహారం తప్పు డునిర్వహణ మురయయు చేతకానితనానికి నిదర్శణం. (mottaṃ vyavahāraṃ tappuḍu nirvahaṇa mariyu cētakānitanāniki nidarśanaṃ.) (case)
or
. ..చేతకానితనాన్ని సూచిస్తుంది.
(... cētakānitanānni sūcistundi.) (case)

Apart form the dative case the ' $k u / k u$ ' markers function as generic possession markers.
Ex. He has the money. - వాఢికి డబ్బుఉన్నది. (vāḍiki ḍabbu unnadi).

He has no money - వాఢికి డబ్బులేదు. (vāḍiki ḍabbulēdu).

This is distinct from 'temporal possession', expressed by the postposition 'డగ్గిర’(daggira) - near.
Ex. There is money with him. - వాఢి దగ్గర ఢబ్బుఉన్నది (vāḍi daggara dabbu unnadi).

He has no money with him now. - వాఢి దగ్గర ఢబ్బులేదు (vāḍi daggara dabbu lēdu).

## ను/ని (nu/ni)

I. Verb + of $+N x$

Phrasal verbs:
Ex.24. The present schedule does not admit of modification. ( admit of sth)
ప్రస్తుత షెడ్యూలు సవరణన్ అనుమతిిచదు.
(prastuta ṣeḍyūlu savaraṇanu anumatiñcadu.) (case)

Ex.25. This rule allows of no exceptions. (allow of sth )

## ఈ ఆదేశం ఏ మినహాయింపులను అనుమతతించదు.

( $\bar{i}$ ādēśaṃ ē minahāyimpulanu anumatiñcadu.) (case)

Ex. 26. The team consists of four Europeans and two Americans. (consists of sth) టీము నలుగురు యూరోపియున్లను యిద్దరు అమేరికన్లను కలిగిఉంది. (ṭimu naluguru yūrōpiyanlanu iddaru amerikanlanu kaligiuṃdi.) (case)
I. Verb + of +Nx

Ex.27. The evidence allows of only one interpretation - he was murdered by his wife.( allow of sth )

ఈ సాక్ష్యం ఒకే విషయున్ని దృవీకరిస్తుంది.
(ī sākṣyaṃ ōkē viṣayānni dhṛvīkaristundi.) (accusative) (case)

Ex. 28. How did they dispose of the body? (dispose of sb/sth)
వాళ్ళు శవాన్ని ఎలాతీసిపారేసారు?
(vā!!u savānni ēlātīsipārēsāru) (accusative) (case)

Ex. 29. It took a mere five minutes for the world champion to dispose of (=defeat) his opponent.

ప్రపంచ చాంపియన్ కు తన ప్రత్యర్ధిని మట్టికరిపించడానికి/తీసిపారేయుడడాననికిఐదు నిమిషాలు మాత్రమే పట్టింది.
(prapañca chāmpiyan ku tana pratyardhini matṭikaripiñcadaniki/
tīsipārēyadaniki aidu nimiṣālu matrame patṭṭịdi.) (case)

Ex.30. I feel I've been deprived of your company. (deprived of sth)
నీతోడు(ను) కోల్ప్రీయానని అనుకుంటున్నాను/బాధపడుతున్నాను.
(nītōḍu(nu) kōlpōyānani anukuṇṭunnānu/bādhapaḍutunnānu.) (case)

Ex.31. They were robbed of all their savings.
వాళ్ళు మొత్తం వాళ్ళ పొదుపులను/ఆస్తులను దోచుకోబడ్డారు.
(vā!!lu mottaṃ vā!!a podupulanu/āstulanu dōcukōbaḍ̣̣āru.) (case)
$\mathrm{ni} / \mathrm{nu}$ denotes the object of the sentence. The accusative suffix added to a noun denotes the person or object affected by the action signaled by the following verb.

## నుంచి/నుండి (nuñci/nuṇ̣̣i):

All the following examples have the sense of distance form a point of thing. Some have dynamic some or static situations and some have idiomatic meanings. Traditionally nuñci/nuṇḍi comes under 'pañcami'', ablative. It shows a point of place or person or thing or situation etc. The usage of nuñci would be like both ways - akkaḍinuñci - form there, akkaḍinuñci -from here.

Verb + of +Nx
Ex. 32. Did anything come of all those job applications? (come of sth)
అన్ని ఆ అప్లికేషనులలోనుంచి/ఉద్యోగప్రయత్నా లనుంచి యేమైనా వచ్చిందా?
(anni ā aplikēṣanulalōnuñci/udyōgaprayatnālanuñci ēmainā vaccindā?)
(postposition) * ('of all' gives the marker $\mathrm{N}+\mid \mathrm{la} \overline{\mathbf{o}}$ )

Ex. 33. You can't duck out of your responsibilities. (duck out of sth (out of - avoid, stop,
enjoy, persuade, cloths, interest, idea))
నీ బాధ్యతలనుంచి తప్పించుకోలేవు/పారిపోలేవు.
(nī bādhyatalanuñci tappiñcukōlēvu/pāripōlēvu.) (postposition) *

Ex. 34. I must get out of the habit of finishing off people's sentences. ((stop) get out of sth)

యెదుటివారి వాక్యాలను పూర్తిచేసే అలవాటునుంచి నేను యేలాగైనా/తప్పకుండా బయటపడాలి.
(eduṭivāri vākyālanu pūrticēsē alavāṭunuñci nēnu ēlāgainā/

Ex. 35. I reckon her backache was just a way of getting out of the housework. ('way of' is a common usage, it takes ' $e$ ' marker in general - way of talking - ē māṭāḍē vidhānaṃ, way of watching - cūsē vidhānaṃ, Etc)
ఇంటిపనినుంచి తప్పించుకోపడానికి/బయటపడడానికి ఆమె వీపునొప్పి అనిచెబుతుందని నేననుకుంటున్నాను.
(iṃṭipaninuñci tappiñcukōvaḍāniki/bayaṭapaḍaḍāniki āme vīpunoppi anicebutundani nēnanukuṇṭunnānu.) (postposition)

Ex.36. He just can't snap out of the depression he's had since his wife died.( snap out of sth)

అతను తనభార్య చనిపోయిన దుఃఖంనుంచి ఇంకా బయుటపడలేదు. (atanu tanabhārya canipōyina duḥkhannuñci ị̣kā bayaṭapaḍalēdu.) (postposition)

Ex. 37. It's better to stay out of their arguments. (stay out of sth)
వారి వాదనలనుంచి బయుట ఉండటమే మంచిది.
(vāri vādanalanuñci bayaṭa uṃḍaṭamē mañcidi.) (postposition) *

Ex. 38. Although they had signed the contract they tried to weasel out of the deal later. (weasel out of sth)

వారు కాంట్రాక్టు సంతకం చేసినాకాని తర్వాత దాని నుంచి తప్పు కోతాలని ప్రయత్నం చేసారు. (vāru kāṇtrākṭu santakaṃ cēsinākāni tarvāta dāni nuñci tappukōvālani prayatnaṃ cēsāru.) (postposition)

Ex.39. He promised he'd help me decorate, but now he's trying to wriggle out of it. ( wriggle out of sth)

అతను అలంకరణలో నాకు సహాయం చేస్తానని మాటిచ్చాడు, కాని ఇప్పుడు దానినుంచి తప్పించుకోతాలని చూస్తున్నా డు.
(atanu alañkaraṇalō nāku sahāyaṃ cēstānani māṭiccāḍu, kāni ippuḍu dāninuñci tappiñcukōvālani cūstunnāḍu.) (postposition) *

Phrase/idiom
Ex. 40. As of next month, all the airline's fares will be going up. (as of/from)
వచ్చే నెలనుంచి, అన్ని విమాన చార్జీలు పెరగబోతున్నాయి.
(vaccē nelanuñci, anni vimāna cārjīlu peragabōtunnāyi.) (postposition)

Preposition
Ex. 41. I paid for the computer out of (using some of) my savings.
నా పోదుపులనుంచి కొంత కంప్యూటర్ గురించి చెల్లించాను.
(nā podupulanuñci konta kampyūṭar guriñci celliñcānu.) (postposition)
verb+prep+of $+\mathrm{Nx} /$ verb+out of +Nx
Prepositions:
Ex. 42. An apple rolled out of the bag.
సంచి( $ల^{5}$ )నుంచి ఆపిలు దొర్లిపోయింది.
(sañci(lō)nuñci āpilu dorlipōyindi.) (postposition + postposition) *

Ex. 43. The patient is now out of danger.
రోగి ప్రమాదంనుంచి బయుట ఉన్నాడు/పడ్డాడు.
(rōgi pramādaṃnuñci bayaṭa unnāḍu/paḍ̣̣āḍu.) (postposition)

## గూర్చి/గురించి (gūrci/guriñci)

I. Verb + of +Nx

Ex.44. I'd never heard of him before he won the prize. (hear of sb/sth (know))

అతనికి బహుమతి రాకముందు అతనిగూర్పి/గురించి ఎప్పుడు వినలేదు.
(ataniki bahumati rākamundu atanigūrci/guriñci eppuḍu vinalēdu.) (postposition) *

Ex. 45. It's a tiny country that most people have never heard of.
ఇది చిన్న దేశం చాలామంది దానిగూర్చి/గురించి వినిఉండరు.
(idi cinna dēśaṃ cālāmandi dīnigūrci/guriñci viniuṃdaru.) (postposition) *

Ex.46. We haven't heard anything of Jan for months. (hear sth of sb (receive news))

మేము జేన్ గూర్చి/గురించి నెలలుగా వినలేదు.
(mēmu jēn gūrci/guriñci nelalugā vinalēdu.) (postposition)

Ex.47. Do you know of a good doctor? ( know of sb/sth)
మీకు మంచివైధ్యుడుగూర్చి/గురించి తెలుసా.
(mīku mañcivaidyuḍugūrci/guriñci (ēvaraina) telusā.) (postposition)

Ex.48. What do you make of the new boss? (make of sth/sb (opinion))
కోత్త బాస్ గూర్కి/గురించి మీరు యేమునుకుంటున్నారు!/మీ అబిప్రాయమేమిటి?/యేమి తయరు చేసారు?
(kotta bās gūrci/guriñci mīru ēmanukuṇṭunnāru?/mī abhiprāyamēmiṭi? /ēmi tayaru cēsāru?) (postposition)

Ex.49. I think of him as someone who will always help me. (think of sth/sb (opinion))

నాకు యెల్లప్పుడు సహాయం చేసేవాడిగ అతని ని) గూర్చి/గురించి అనుకుంటాను. (nāku ellappuḍu sahāyaṃ cēsēvāḍigā atani(ni)gūrci/guriñci anukuṇṭānu)

## (postposition) *

Ex.50. What do you think of (=do you like) my new dress?
నా కొత్త దుస్తులగూర్చి/గురించి యేమనుకుంటున్నా వు?/ నీ అభిప్రాయమేమిటి?
(nā kotta dustulagūrci/guriñci ēmanukuṇṭunnāvu?/ nī abhiprāyamēmiṭi?)
(postposition) *

Ex.51. I thought of you immediately when they said they wanted someone who could speak English. (think of/about sb/sth (imagine))

వాళ్ళు యెవరైనా యింగ్లీషు మాట్లాడేవాళ్ళు కావాలని వాళ్ళు అడిగినప్పుడు నీగూర్చి/గురించి అనుకున్నా ను/గుర్తుచేసుకున్నాను.
(evaraina iṃglīṣu māṭ|āḍēvā!!u kāvālani vā!!u aḍiginappuḍu nīgūrci/ guriñci anukunnānu/gurtucēsukunnānu.) (postposition) *
II. phrase/idiom

Ex.52. What's all this something in aid of? (What's sth in aid of?)
ఆ అరుపులు దేని గూర్చి/గురించి?
( $\bar{i}$ arupulu dēni gūrci/guriñci?) (postposition)

Ex. 53. If you can sort out the drink for the party, I'll take care of the food. (take care of sth)

నువ్వు పానియాలు ఏర్పాటు చేయగలిగితే, నేను ఆహారం గూర్చి/గురించి పట్టించుకుంటాను చూసుకుంటాను.
(nuvvu pāniyālu ērpāṭu cēyagaligitē, nēnu āhārāṃ gūrci/guriñci patṭiñcukuṇṭānu/cūsukuṇṭānu.) (postposition)

Ex.54. I wanted to pay but she wouldn't hear of it. (hear of sth (not allow))
నేను యివ్వాలని/చెల్లిందాలని అనుకున్నాను కాని అమె దాని (గూర్చి/గురించి)

వినలేదు/పట్టించుకోలేదు.
(nēnu yivvālani/celliñcālani anukunnānu kāni ame dāni (gūrci/guriñci) vinalēdu/paṭtiñcukōlēdu.) (postposition) *

## gerund + of +Nx

Ex. 55. Talking of Jon, here he is.

```
జాన్ గూర్చి/గురించి మూట్లడటdఅనుకోవటం అతనిక్కడ.
```

(jān gūrci/guriñci māṭlạ̣aṭaṃ/anukōvaṭaṃ, atanurāvaṭaṃ.) (postposition)
'guriñci' is similar to 'about' in English. 'about' comes under the category of preposition and of too. The senses which guriñci comes are: come, get, snap, stay, make, know, think, aid, take care, hear, etc.

పు (pu): (belongs or owning characteristics/things)

Verb + of +Nx
Ex.56. His promotion reeks of favouritism.( reek of sth)
ఇతని పదోన్నతి పక్షపాతపు కంపుకొడుతుంది.
(itani padōnnati pakṣapātapu kampukoḍutundi.) *

Phrase/idiom
Ex.57. ...the armpit of the North. (be the armpit of sth (unpleasant, dirty place))
ఉత్తరప్ చంక
(uttarapu cañka) *

The translation is unacceptable for a Telugu speaker. The meaning of the idiom is very new for the Indian speaker.

Ex. 58. front page of the book
పుస్తకం/పుస్తకపు ముందు పుట
(pustakaṃ/pustakapu mundu puṭa) *

ఏ( $\overline{\mathrm{e}})-:$

Verb + of +Nx
Ex.59. This is the kind of toy that children will soon tire of. ( tire of sth/sb ((cendē/lō))

పిల్లలు తొందరగా విసుగుచెందే (రకం) బొమ్మ ఇది
(pillalu tondaragā visugucendē (rakaṃ) bomma idi)
(పాలిక్చే జంలువు, విసుుుపుట్టింకే పెల్లవాడు, బడికెల్లే పిల్లవాడు, అప్పెచ్చే వ్యక్తి)
(pāliccē jantuvu, visugu puṭtiñcē pillavāḍu, baḍikive!!è pillavāḍu, appiccē vyakti)

## కంటె (kaṇṭe) (comparison):

We many senses of comparisons like time, physical characteristics and even abstract comparisons.

Ex. 60. She arrived in advance of everyone else. ( in advance of sth/sb (idiom/phrase))

ఆమె అందరికంటే ముందు వచ్చింది.
(āme aṃdarikantē mundu vaccindi.) (case)

లాగా/లాంటి (lāgā/lāṇṭi):
Ex.62. She has the face of an angel.
ఆమె దేవత( (లాంటి) ముఖం కలిగిఉంది.
(āme dēvata(lāntili) mukhaṃ kaligiuṃdi.) (adjective)

Ex.63. That man's got the brain of a donkey!
ఆ మనిషి గాడిద(లాంటి) మెదడు కలిగిఉన్నా డు.
(ā maniṣi gāḍida(lāntị) medaḍu kaligiunnādu.) (adjective)

Some of the instances are: అతని లాగా దుస్తులు వేసుకున్నావు. అతని దుస్తుల లాంటి దుస్తులు వేసుకున్నావు. (atani lāgā dustulu vēsukunnāvu. atani dustula lāṇṭi dustulu vēsukunnāvu). (adjective)

There are two types of comparison available in Telugu language:
i. equal comparison: లాంటి, లాగా (lāṇṭi, lāgā) etc.(there is a slight difference between these two markers : lāṇṭi can be a part of a whole ex. అతనిలాంటి మనసు (atanilāṇṭi manasu) - not like him, but like his heart. And లాగా: అతని లాగా (lāgā: atani lāgā) - like him, whole. So, perhaps, these two can not be substituted with each other) ii. unequal comparison: కoటే (kaṇtē), etc.

ఉ ( $\overline{\mathrm{U}}):$

Ex.64. She came within two seconds of beating the world record. రెండు సెకనుల లోపల ప్రపంచ రకార్డును ఎద్దలుచేస్తూ ఆమె వచ్చింది/గెలిచింది. reṇ̣̣u sekanula Iōpala prapañca rikārḍunu baddalucēstū āme vaccindi/gelicindi.

## se/గe (kala/gala):

It's all about containing, possessing something.
Two types. i. possessing (inalienable) sth
ii. containing (alienable) sth

## Ex.65. a woman of great charm.

గొప్ప ఆకర్షణ గల యువతి.
goppa ākarṣaṇa gala yuvati

Ex. 66. a subject of very little interest.
చాలా తక్కువ ఆసక్తి గల విషయుం
cālā takkuva āsakti gala viṣayaṃ

కల/కలిగిఉన్న/ఉన్న (kala/kaligiunna/unna) (sth containing sth)

Ex.67. a bag of sweets (containing)
మిఠాయిల(నుకలిగిఉన్న/ఉన్న) సంచి
miṭhāyila(nukaligiunna/unna) sañci *

He is carrying a bag of sweets.
అతడు మిఠాయిల సంచిమోస్తున్నాడు (ataḍu miṭhāyila sañci mōstunnāḍu)

A bag of sweets has fallen down from the truck.
ట్రక్కునుంచి మిఠాయిల సంచి పడిపోయింది. (ṭrakkunuñci miṭhāyila sañci paḍipōyindi)

Ex. 68. It's a book of short stories.
ఇది చిన్న కథల పుస్తకం. (idi cinna kathala pustakaṃ)

Ex. 69. A book of short stories has been published.
చిన్న కథల పుస్తకం ప్రచురితమైంది (cinna kathala pustakaṃ pracuritamaindi)

Above two examples are ambiguous in Telugu if do not use marker -
[చిన్న కథలుకల] పుస్తకం ([cinna kathala] pustakaṃ),

చిన్న [కథల పుస్తకం]) (cinna [kathala pustakaṃ])
Thus the marker is necessary here.
చిన్న కథలనుకలిగిఉన్న పుస్తకం (cinna kathalanukaligiunna pustakam)
చిన్న కథలు(ఉ)న్న పుస్తకం (cinna kathalu(u)nna pustakaṃ)
చిన్న కథలుకల పుస్తకం (cinna kathalukala pustakaṃ)

Ex.70. sacks of rubbish.
చెత్త గోనెసంచులు (cetta gōnesañculu)
(ambiguous in Telugu without the marker - useless bags or used to dump the rubbish)

చెత్త(నుకలిగి)ఉన్న గోనెసంచులు (cetta(nukaligi)unna gōnesañculu *

Ex.71. a class of idiots.
మూర్ఖుల తరగతి (mūrkhula taragati)
(ambiguous - idiots owning the class or a class containing idiots; which one is the head noun- in English it no problem)

మూర్ఖులు(ఉ)న్న తరగతి (mūrkhulu(u)nna taragati)
మూర్ఖులనుకలిగిఉన్న తరగతి (mūrkhulanukaligiunna taragati)
'ఉన్న' ('unna') is very common in all the above examples.

## అ๐ట (aṃṭē):

This marker is used to
i. tells about something: అతడు అంటే ఇష్టం/భయం/కొపం (ataḍu aṃṭē iṣṭaṃ/bhayaṃ/ kōpaṃ), etc.
ii.typical usage mostly while exclaiming sth: అతడు అంటే వేరు!, అదంటే వేరు!, వాడంటే ఇక్కడ చాలరోజులుగా పనిచేస్తున్నాడు! ( ataḍu aṃṭē vēru!, adaṇṭ̄ vēru!, vāḍaṇ̣̣̄ ikkaḍa cālarōjulugā panicēstunnāḍu!)

Ex.72. (He is) frightened of spiders
సాలీడు( $\mathbf{\omega}$ )అంటే బయపడే (వ్యక్తి)
(sālīḍu(lu) amțē bhayapaḍē (vyakti))

Ex. 73. Are you frightened of spiders?
నీకు సాలెపురుగులు అంటే బయమా? (నువ్వు సాలెపురుగులకు బయపడతావా?) *
(nīku sālepurugulu amteē bhayamā? (nuvvu sālepurugulaku bhayapaḍatāvā?)) *

Ex. 74. She was very fond of horse.
ఆమెకు గుర్రాలంటీ ఇష్టం. (ఆమే గుర్రాలను ఇష్ట పడుతుంది.)
(āmeku gurrālanttē iṣṭam. (āme gurrālanu iṣṭapaḍutundi.))

Ex. 75. I'm very fond of you, you know, 'he said'.
నాకు నువ్వంటే చాలా ఇష్టం, తెలుసానికుם.
(నువ్వునాకు చాల ఇష్టం, తెలుసాロ.)
(nāku nuvvaṇṭē cālā iṣṭaṃ, telusānīku...)
((nuvvunāku cāla ișṭaṃ, telusā...))

## కొద్ది/ఆది (koddi/ādi) :

## (quantity/unit)

Ex.76. The massacre of hundreds of innocent people...(quantity ) వందలాది/వందలకొలది/వందలకొద్ది/వందలమంది అమాయక ప్రజల నరసంహారం.
(vandalādi/vandalakoladi/vandalakoddi/vandalamandi amāyaka prajala narasaṃhāram.) *

Quantifiers can be classified as
i. postposition: లాది, మంది, కొద్ది/కొలది. ( lādi, mandi, koddi/koladi).
ii.Container/noun: సంచీడు, గ్లాసుడు, బండేడు, పిడికెడు, చిటికెడు (sañciḍu, glāsuḍu, baṇḍeḍu, piḍikeḍu, ciṭikeḍu) etc.
iii.foreign words usage: కిలో, గ్రాము, లీటరు,(kilō, grāmu, līṭaru) etc.

Telugu quantifiers have markers 'di' endings (i) and 'ḍu' endings (ii). And foreign words do not need any marker.

Actually, it is not the of which is taking the equivalent but it is the semantics of the context which is taking the equivalent. However, broadly, after translation, 21+1 functional equivalents are found for the word of:
yokka, pu, koddi/ādi, Iō, Iōki, ḍu, lāṇṭ//āgā, aṃṭē, kala/gala, nu, ādi, tō, (t)ū, gā, guriñci/gūrci, ku, nuñci/nuṇ̣̣i, kaṇṭē, niki/naku, ē, valla and plural oblique forms la and a.

So far we have seen the distribution of of in English (chapter 3) and its functional equivalent in Telugu in this chapter. In the next chapter we will discuss some of the translation issues, for both human and machine.

## Chapter-5

# Translation Issues 

 (of both Human and Machine)A translation task has two major phases. First one is to find the meaning of a text in the source language and the second one is to find the functional equivalents in the target language. For the first phase, we have to go through a number of issues like polysemy, idioms, phrases etc. The second phase contains issues like culture, availability of target language equivalent, proper nouns, coining of the new words, and also inflectional morphology and syntax etc.

Let's discuss these issues:

Following is a flowchart showing the above mentioned two phase of translation.


A flow chart of translation mechanism
5.1. Source language issues (identifying the semantic units):

A lexical item can have more than one concept in it. A concept can be in a single word form or a phrasal form. Because of the dynamic nature of the syntactic or semantic units, it is very difficult to find them especially for machines.

### 5.1.1. Word meaning:

A meaning of a word or phrase depends on the context. On surface level, context is a combination of the word strings. In a direct interaction one can get help from various tools like intonation, context, body language etc. but when it comes to an indirect mode of interaction this gets worse. Analysing satirical or ironical text or finding meaning from the idiomatic expressions is the most problematic issue in the world of machine translation.

Polysemy and homonymy: a word can have more than one meaning according to the type it belongs. For example,

## a. Count:

i. Would you like [another chocolate]? (count)
ii. Would you like [some more chocolate]? (non-count)
'Chocolate' in 'ii' denotes a food substance, where as in ' $i$ ' it denotes an individual unit consisting of that substance. It is a case of 'polysemy'. Homonymy is the phenomenon where distinct lexical items happen to be pronounced and spelled alike. A standard example is 'bank', where we distinguish two homonymous lexical items, one denoting a financial institution, the other the sloping margin of a river. These happen to derive ultimately from the same etymological source, but they have come into English via different routes and, more importantly, they are not perceived as being semantically related. But in the case of ' i ' and ' ii ' there is a clear relation between the two meanings, and we therefore take them to be senses of a single lexical item.

## b. Proper nouns:

'America' is a proper noun, but 'The United States of America' is not. And not even 'The United State' or 'United' or 'states' are proper noun. Proper nouns function as heads of proper names, but not all proper names have proper nouns as their head: the head of such proper names as 'The United States of America', 'the Leeward Islands', 'the University of Manchester' are common nouns. Proper names with common nouns as head often contain a smaller proper name as or within a dependent, but they do not need to.

Proper nouns are nouns which are specialized to the function of heading proper names. There may be homonymy between a proper noun and a common noun, often resulting from historical reanalysis in one or other direction. For example, in 'the Earl of Sandwich' 'Sandwich' is a proper noun, while that in 'a ham sandwich' it is a common noun.

## c. Adjectives Vs Adverbs:

There are a number of adverbs that are identical in form with adjectives. The over lap is greater in non-standard speech.

Adjective
i.a. She's a hard worker.
b. She works hard.
ii.a. It's a real gem.
b. That's real nice of you.
iii.a. They make regular payments.
b. They pay the rent regular.

Adverb
'Hard' is one that is stylistically neutral; there is an adverb 'hardly', but its meaning is quite different, and there is no alternation between 'hard' and 'hardly' in 'i.b'. The use of 'real' in 'iib' is very informal: other styles would have 'really' and 'iiib' is clearly non-standard, the standard variety requiring the -ly form 'regularly'.

## d. Adjectives vs nouns:

i. It was a very professional performance.
ii. She did better than all the professionals. (N)

Attributive 'professional' in ' i ' is modified by 'very', indicating that it is an adjective, while the plural form in 'ii' must be a noun: the singular form 'professional' is thus a noun homonymous with the adjective.

## e. some more examples:

'no' and 'know', 'bow' (front part of the ship) and 'bow' (a weapon) are homonyms.

## f. prepositions:

These polysemy in the prepositions. Let's see some of the prepositions and concepts where they found.

Of : possession, amount, containing, position, typical, days, time, during, judgment, relating to, made of, separate from, loss, that is/are, done to, through.

In : inside, part, involved, wearing, expressed, during, no more than, before the end, experiencing, result, arrangement, comparing amounts, characteristic, cause, from outside, sent, coast, completion, sport, fashionable, age/temperature.

On: above, connected, writing, recording/performance, performing, pain, to, relating, money, necessary, next to, time, after, travel, food/fuel/drug, process, involvement, member, again, comparison, possession, payment, faulty, tool, not stopping, moving forward, position, operating, happening, points.

## g. another example:

In any language, an individual word may fall under one or more syntactic categories and may have one or more grammatical functions. For example, according to the WordNet 2.1, 'bank' has 10 noun senses and 8 verb senses.
bank (NOUN):

1. Depository financial institution (a financial institution that accepts deposits and channels the money into lending activities. Ex. he cashed a check at the bank)
2. Sloping land (especially the slope beside a body of water. Ex. they pulled the canoe up on the bank)
3. A supply or stock held in reserve for future use (especially in emergencies)
4. Bank building (building in which the business of banking transacted. Ex. the bank is on the right side of the school)
5. An arrangement of similar objects in a row or in tiers. Ex. he operated a bank of switches)
6. Coin bank, money box, savings bank ( a container, usually with a slot in the top, for keeping money at home (ex. the coin bank was empty)
7. A long ridge or pile (ex. a huge bank of earth)
8. The funds held by a gambling house or the dealer in some gambling games. (ex. he tried to break the bank at Monte Carlo)
9. Cant, chamber (a slope in the turn of a road or track. ex. the outside is higher than the inside in order to reduce the effects of centrifugal force)
10. A flight maneuver; aircraft tips laterally about its longitudinal axis, especially in turning. (ex. the plane went into a steep bank)
bank (VERB):
11. Tip laterally. (ex. the pilot had to bank the aircraft)
12. Enclose with a bank. (ex. bank roads)
13. Do business with a bank or keep an account at a bank. (ex. Where do you bank in this town?)
14. Act as the banker in a game or in gambling)
15. Be in the banking business
16. Deposit. (put into a bank account; ex. she deposits her paycheck every month)
17. Cover with ashes so to control the rate of burning (ex. bank a fire)
18. Trust, swear, rely (have confidence or faith in. ex. We can trust in God, bank on your good education)

### 5.1.2. Phrasal words:

So far we have seen issues related to the single word entries. Now we discuss some issues related to the group words, i.e. phrasal words.

Phrasal words are most common in any natural language. Some of them are idioms. Some even say that idioms and phrases represent the beauty of a language. They have their own identity. But, it is very difficult to analyze these units by normal methods. There is a need to take them for separate study. While analyzing a sentence first of all it is better to extract the phrases (phrasal nouns, phrasal verbs, phrasal prepositions etc.) and then analyze the sentence according to that phrase.
(other chapters have illustrations for phrasal units, so here illustrations are not given)

Solving all the above issues correct meaning of a word or phrase should be identified. Most of the senses, listed above, have different/specific functional equivalents in the target languages. Thus those issues should be studied well, to get proper translation.
5.2. Target language issues (finding equivalents): (Here, of has been taken as the example which is the main concern of this thesis)

After I identifying meaning of source language, finding equivalents for them is another challenging issue. Because, some entries can have word to word equivalents in target language and some can not.

### 5.2.1. Explicit functional equivalent:

Ex.1. Did something [come of all those job applications]?

The Telugu translation for the above English sentence would be:

| అన్ని ఆ | ఉద్యోగ | ప్రయత్నాల | నుంచి యేమైనా | వచ్చిందా? |
| :--- | :--- | :--- | :--- | :--- |
| (anni $\overline{\mathrm{a}}$ | udyōga | prayatnāla | nuñci ēmainā | vaccindā?) |

All those job (oblique) applications (obl) of something did come?

In the above example, though there is no physical movement taking place, the feature of movement is attributed. The verb 'come' is a dynamic verb and it shows a motion from a place or to a place. The functional equivalent for of here is 'nuñci'.
(To identify these kinds of phrases, following kind of rules would be helpful. 'come $+\mathrm{of}+\mathrm{Nx}$ ' is a phrase where the word of takes the equivalent 'nuñci' - In next chapter we will discuss this method)

### 5.2.2. No lexical equivalent required:

Ex.2.
I reserved them by phone yesterday in the name of Kittu.
'in the name of sth' is an idiomatic expression. If we translate the full phrase the translation would be 'kiṭtu pēru pai/tō' (కిట్టు పేరు పై/తో).
of phrase is complementing the head preposition phrase 'in the name'. Here the phrase 'the name of Kittu' is in the form of inflected genitive 'Kittu's name' that can be translated in Telugu as 'kitṭu pēru' (sిట్టు పేరు ) (of in genitive does not have explicit lexical equivalent in Telugu - one of the general observation is that subject determiner genitive doesn't have explicit lexical equivalent in Telugu, only oblique from fulfils the purpose. Here in this example there is no oblique form for the noun 'kittu', because there is no oblique form for nouns, in Telugu).

## Ex. 3.

Much blood has been spilled in the name of religion.
This example is similar to the previous example. It can be inflection genitive form 'religion's name', and according to our observation genitives does not have explicit equivalent in Telugu. The translation of the phrase would be 'matam pērupai/tō' (మతం పేరు పై/తో), without explicit lexical equivalent for of.

### 5.2.3. Inflections:

> Ex. He sent me some flowers by way of an apology.
> అతడు కమాపణలకు గుర్తుగా పూవులు పంపాడు
> (ataḍu kṣamāpaṇalaku gurtugā pūvulu pampiñcāḍu)

Here the 'la' is plural oblique and ' $k u$ ' dative marker. Most of the plural nouns in Telugu take 'la' oblique form.

### 5.2.4. Some translation issues of the structure $\mathbf{N}+\mathbf{o f}+\mathbf{N}$ :

(these are applicable for phrasal nouns and plain forms of genitives)
(These issues are needed at the time of dictionary compilation)
While translating the nouns from source language (here English) into a target language (here Telugu) following issues have to be considered.
5.2.4.a. Equivalents available in target language: for some nouns target language may have local equivalent.

Ex. presence of mind - samayaspūrti (సమయస్పూర్త)

### 5.2.4.b. Transliteration:

### 5.2.4.b.a. culture specific:

Source language sense may be new for the target language.
Ex. the fall (of man) - di phāl āph myān (ది ఫాల్ ఆఫ్ మ్యూన్)
communion of saints - kamyūniyan āph seyiṇts (కమ్యూనియున్ ఆఫ్

## సేయింట్సు)

These nouns relate to the Christian religion. According to the Bible, the Fall (of man) was the occasion when the first man and woman disobeyed the rules of God and were sent away from the garden of Eden. And, 'communion of saints' means all the
people who are part of the Christian church. Instead of trying to find the equivalent in the target language transliteration is the better option to retain the original sense.
5.2.4.b.b. technical words:

Ex. coat of arms - kōṭ āph ārms (కో ${ }^{6}$ ఆఫ్ ఆర్మ్స) Jaws of Life - jās āph laiph (జాస్ ఆఫ్ లైఫ్)
5.2.4.b.c. names of the institutions: Bank of England - byāṅk āph iṃglāṇ̣u (బ్యాంక్ ఆఫ్ ఇంగ్లాండు)

Coat of arms relates to a special shield or shield-shaped pattern which is the sign of a family, university or city. Jaws of Life is a US trademark. It's a piece of equipment which can cut through metal and which is used to get people out from their vehicles after an accident. Translation of the trademarks is not recommended. 'Bank of England' is the central bank of the United Kingdom. If we translate like 'iṃglāṇ̣̣u byāñku' in Telugu it gives a general sense i.e. a bank related to England not as the central bank of England.
5.2.4.c. Word to word substitution (without syntactic change - the place of the head remains the same even after translation):

It is different because in the structure $\mathrm{N} 1+\mathrm{of}+\mathrm{N} 2$ when this structure is translated into Telugu it becomes N2+of+N1. Ex. a bunch of papers - pēparla katta ( $ప \mathbf{్ ర ర ్ ల ~ క ట ్ ట ~})=$ of papers a bunch

But in some cases this rule will not work and the structure $\mathrm{N} 1+$ of+N2 remains the same even in the Telugu.

Ex. a kilo of mangos - kilō māmidi pal!u $\left(s^{6}\right.$ మామిడి పళ్ళ) $=\underline{\text { a kilo of mangos }}$ hundreds of people - vandalādi prajalu (వందలాది ప్రజలు)= hundreds of people

### 5.2.4.d. Different sense: (this point is needed in a bilingual dictionary)

II.4.d.a. Country level: Some nouns are used differently in different countries.

Ex. High Court of Australia

In Australia 'High Court of Australia' is the law court where decisions that are made in the Supreme Court of each state can be considered again. The sense is opposite in India. The Supreme Court considers the decisions made in High Courts of the states.

### 5.3. Some more issues related to the equivalents.

### 5.3.1. Oblique forms:

1. a. All plural nouns exhibit oblique stem by the marker ' $a$ ' ( $l u=>l a)$ in Telugu.

Ex. బాలికలు (bālikalu) - girls బాలికల (bālikala) - of girls బల్లలు (ballalu) - tables బల్లల (ballala) - of tables

But for singular word which ends with a shape' $ల \mathbf{\prime}$ '(lu), will take oblique form ' $i$ '.

Ex. మనుమరాలు (manumarālu) - granddaughter (singular noun) మనుమరాలి (manuma rāli) - of granddaughter (singular oblique)

1. b. Singular nouns take oblique stem in Telugu:

Ex. man of god (dēvựi maniṣi) - దేవుడి మనిషి
rate of exchange (māraka/mārakapu viluva) - మారక/మారకపు విలువ
1.c. Not all singular nouns take oblique stems.

Ex. mitruḍu (friend) - mitruḍi (of friend), but
చెట్టు cetṭu (tree) - చెట్టు cetṭu (of tree).
Some more examples

```
గూడు, మెదడు, గూడు 'gūḍu, medaḍu, gūḍu'.
```

We can classify nouns in Telugu in genitive case, or possessive case as

1. Geni nouns: oblique forms which can be used in genitives case,
2. Null-geni nouns: which has no oblique form but it can used in genitive case, and
3. Context base geni nouns: Ex. pannu - tax and tooth, illustrated in 2.e. in the following section). s

### 5.3.2. Influence of the neighboring words on markers:

A noun, which precedes or follows the word of, or/and a verb can influence the oblique stem of the word. Consider the following examples.
5.3.2.a. influence of the noun which is preceding of:

Ex.
pages of the book - పుస్తక పుటలు (pustaka puṭalu)
front side of the book - పుస్తక(0) ముందుభాగం (pustaka(ற̣) mundubhāgaṃ)
third page of the book. పుస్తకం మూడవపుట (pustakaṃ mūḍavapuṭa)

Modern usage of the language is the main reason for the above problem/situation. There was no problem in olden Telugu because the suffix 'పు' (pu) is most suitable for all the above situations.

Here the preceding nouns 'pages, front, third' influencing the suffix marker.
5.3.2.b. influence of the noun which is following of:

Ex. reek of something (phrasal verb)
His promotion reeks of favoritism. - atani padōnnati pakṣapātapu kampukoḍutunnadi.
...reeks of tiger. - puli vāsana/kampukoḍutunnadi.
...reeks of America. - amerikā vāsana/kampukoḍutunnadi.
...reeks of American policy. - amerikā vidhāna(m) pu vāsana/kampukodutunnati.
...reeks of Americans. - amerikanla vāsana/kampukoḍutunnadi.

Here the following nouns 'favoritism, tiger, America, American policy' influencing the suffix marker, not the verb.
5.3.2.c. Verb influence: The following example has the combination of relieve+of which always takes same equivalent for the word of, irrespective of it complement

Ex: relieve somebody of something (pv) : (from'sense)
i. object sense:-
(polite): May I relieve you of that heavy bag?
ఆ బరువు సంచి నుండి మీకు నేను విముక్తి కలిగించవచ్చా?
ā baruvu sañci nuṇdi mīku nēnu vimukti kaligiñcavaccā?
(humorous): The pickpocket delicately relieved him of his wallet.
జేబుదొంగ జాగ్రత్తగా అతని వ్యాలెట్ నుండి విముక్తి కలిగించాడు
jēbudoñga jāgrattagā atani vāleṭ nuṇ̣̣i vimukti kaligiñcāḍu.
ii. job sense:- The committee's chairperson is to be relieved of her duties.

కమిటీ చైర్ పర్సన్ బాద్యతల నుండి ఆమె తప్పుకోవాల్సివుంది
kamiṭī cairparsan bādhyatalanuṇ̣̣i āme tappukōvalasi uṃdi.
Here the verb 'relieve' always demands for the suffix 'nunḍi' irrespective of the noun it relates.

### 5.3.3. Word selection among synonyms:

The English word 'boy' has equivalents 'bāluḍu, abbāyi or kurravāḍu'. Here the word 'bāluḍu' and ‘kurravāḍu' take oblique stem where as 'abbāyi’ doesn't explicitly display the same.

Ex. Shoes of the boy:
బాలుడి మేజోళ్లు bāluḍi mējō!lu

అబ్బాయి మేజోళ్లు abbāyi mējō|lu
కుర్రవాడి మేజోళ్లు kurravāḍi mējō|lu

Ex. The state of being a boy (boyhood):
బాలుడిగా ఉండే సమయం bāluḍigā uṃḍ̄̄ samayaṃ
అబ్పాయిగా ఉండే సమయం abbāyigā uṃḍē samayam
కుర్రవాడిగా ఉండే ... kurravāḍigA uṃ̣̣̄̄...

### 5.3.4. Homonyms and oblique forms:

పన్ను (pannu) can be a 'tooth' or 'tax' in Telugu.

1. tooth:
color of the tooth
పంటి రంగు (paṇṭi rañgu)

The dentist cleaning the tooth
పంటివైద్యుడు పంటిని/పన్ను శుబ్రంచేస్తున్నాడు (paṇṭi vaidyuḍu paṇṭini/pannu śubhrañcēstunnāḍu)

Here we can find an influence of modern usage: accusative marker can be deleted paṇṭi/pannu
2.tax:
burden of the tax
పన్ను భారం/మోత (pannu bhāraṃ/mōta)

He is paying the tax
అతను పన్ను కడుతున్నాడు (atanu pannu kaḍutunnāḍu)
Here we can observe that the sense 'tax' is taking no oblique stem where as 'tooth' is taking the oblique stem. So we can say that oblique stem of geninouns depends on the meaning, not on the mere outer shape of the word.

As I said before, some nouns take explicit oblique form, some don't and for some others it is optional. It depends on the neighboring words, and
5.3.5. Proper nouns: proper nouns in a phrasal noun do not take any equivalent for of in Telugu.

Ex. Poems of Ravindranath Tagore
ravīndranāth ṭhāgūr kavitalu

United States of America
amerikā saṃyukta rāṣṭālu.

But, proper nouns ending with 'du' form don't follow above rule.
Ex. Sons of Ram rāmuḍi/ rāmuni putrulu.

Songs of Krishna
krṣṇuḍi/ krṣṇuni gēyālu.

From the above we can see that it is the target language which decides the oblique form not the source language.

### 5.3.6. Some rules for oblique formation:

Note: following is the tentative information, because it has not studied with all perspectives.
a. ' $i$ ' ending oblique forms

- 'య్యి' (yi) takes 'త+ఇ' (t-i) oblique stem with human nouns and with non-human it may be optional.

> hand -చేయి (cēyi)
power of the hand
చేతి బలం/శక్తి (cēti balaṃ/śakti)

```
pit - గొయ్యి (goyyi)
depth of the pit
గొయ్యి(తి) లోతు (goyyi(ti) lōtu)
stove - పొయ్యి (poyyi)
flame of the stove
పొయ్యి మంట (poyyi maṇṭa)
```

- ‘రు’ (ru) takes ‘ట+ఇ’ (ta+i), ‘ర+ఇ’ (ra+i) oblique stem:

Ex. mouth - నోరు (nōru)
part of the mouth - నోటి భాగం (nōṭi bhāgaṃ)
village - ఊరు (ūru)
outskirts of the village - ఊరి పొలిమేర (ūri polimēra)
But it not true with the some words like
Ex. battle - పోరు (pōru)
result of the battle
పోరు ఫలితం (pōru phalitaṃ)
b. Nouns which are ending with 'o' will take oblique form.

```
Ex. book - పుస్తకం (pustakaṃ)
pages of the book - పుస్తక పుటలు. (pustaka puṭalu)
government - ప్రభుత్వం (prabhutvaṃ)
Statement of the government
ప్రభుత్వ ప్రకటన (prabhutva prakaṭana).
nation - దేశం (dēśaṃ)
resources of the nation - దేశ వనరులు (dēśa vanarulu)
gold - బంగారం (bañgāraṃ)
plates of gold
బంగారు/బంగారపు పళ్ళాలు (baṅgāru/baṅgārapu pa!lālu)
```

Above mentioned points should be considered while writing the computer rules or adopting a machine translation method. After briefly discussing some translation issues related to of, we turn to implementation of these points in a Machine Translation System, in the next chapter.

## Chapter-6

## Implementation

One of the objectives of the current exercises is the analysis of of constructions in English and their rendering in the Telugu. As part of this exercise we show how such mappings between English and Telugu with reference to 'of constructions' can be mechanically rendered in a machine translation system. The current work has been implemented and tested in the English-Telugu Machine Translation System that is being developed by the Centre for Applied Linguistics and Translation Studies (CALTS).

In this chapter the Dictionary method, Rule based and Example/Parallel corpora based methods of machine translation have been discussed.

Following is the flow chart showing the syntactic/semantic units and their functional equivalents using different methods of machine translation


Flow chart to show the Dictionary, Rule Based and Example/Parallel corpora system

The above diagram gives a step by step process to identify the functional equivalent for the word of. First, the system searches for the word of in the input sentences. If it finds the sentences with of it sends those sentences to the further stages.

In the second stage the sentences are mapped with various syntactic structures of $o f$. Then it gets the parsed output. This parsed output will be mapped with the phrasal and nouns dictionary. If it finds a map then it gives the output or it goes to further stages.

In the next stage, the system checks whether of goes with the verb. In other words it makes two group: 'of with verb' (verb+of) and 'of without verb'. These two groups go to two different modules. The verb+of structures check the 'structures base rules' to find the equivalents. If they find the match they go for the output or they go to Example or Parallel corpora method.

Other than verb constructions checks the rules for oblique nouns. If they find the map then they go for output or they go to the Example/Parallel corpora method. Where the structures are mapped with the database and give the output.

### 6.1. Dictionary Method:

One of the easiest and non analytical methods usually employed in the cases like phrasal structures and retrieving their meaning is dictionary method, where we can list all the phrases in a file and match each one of the file against the input text and extract the phrasal structures and find its equivalent in the target language. But there are some limitations to putting everything is the dictionary. The following experiment discusses this issue in detail.

The main aim of this experiment is to find how useful the dictionaries/databases are, to find the phrases and their meaning directly.

Organisation of the experiment:

The search program was developed in PERL and run on Linux Operating System. The program contains database files (Phrasal nouns: number of entries in data file: 165, Idioms and phrases: number of entries in data file: 884, Phrasal prepositions: number of entries in data file: 30, Phrasal verbs: number of entries in data file: 60). Input data files (Phrasal nouns: number of input sentences 65, Idioms and phrases file: number of input sentences 351, Phrasal prepositions file: number of input sentences 37, Phrasal verbs file: number of input sentences 77).

All the details are given in a tabular format. The table contains three columns. First column has the input sentence entry and errors it has. Serial number of the input sentences will also be given so that we can go for cross check (the lists of input sentences and phrases are there in appendix). Second column has the entry of the data file. And the third column has comments related to the analysis.

Following are the details:
6.1.a. Phrasal Noun: Here, some sentences which contain phrasal nouns are taken and mapped with the dictionary entries. Following are the details.

Number of input sentences taken: 65 .
Input Sentences matched with the data: 43.
Percentage of match: 66.1\%

It is very much possible to get $100 \%$ match in nouns if we correct the following errors. Unmatched sentences were checked and found that the data errors are the main reasons for mismatching. Details are given below:

| Input sentence numbers <br> and error | Entry in the data file | Comment |
| :--- | :--- | :--- |


| 5. Board of Education (capital letter) | board of education (small letter) | Capitalization |
| :---: | :---: | :---: |
| 6. captains of industry (plural) $36$ | captain of industry <br> (singular) | number |
| 8. contempt of court $14,19,23,59$ | contempt (of court) | extra information |
| 11. division of labout (wrong spelling) | division of labor (correct spelling) | input sentence spelling error |
| 18. house (clipping) $42 .$ | house of commons (full form) | clipping (short and full form) |
| $37,39,49,61,64,65$ | no entry | new word (unknown input sentences) |

Generally the phrasal nouns can be put in the dictionary. Sometimes, system may not recognize these entries due to the various types of errors:

1. Number: (singular-plural)
2. Extra information in data base (explanation etc)
3. Spelling mistakes: (human error)
4. Clipping: (house - house of commons)
5. Capitalization of the entry (Board of Education - board of education)
6. Hyphenated usage: Jack-of-all-trades.
7. No entry in data base.

We can group the above problems as follow:
Usage
Errors

1. Clipping
2. Missing entries
(house-house of commons)
3. Capitalization of the entry
(Board of Education - board of education)
4. Number
5. Spelling mistakes
(captain of the industry - captains of the industries)
6.1.b. Idioms \& phrases: Here, some sentences which contain idioms and phrases are taken and mapped with the dictionary entries. Following are the details.

Number of input sentences: 351.
Input sentences matched with the data: 112 .
Percentage of match: 31.9\%

Unmatched sentences have analyzed and found that the variables (tense, pronouns, $N x$, etc) and input and data errors are the main reasons for mismatching.
The following is the data:

| Input sentence numbers <br> and error | Entry in the data file | Comment |
| :--- | :--- | :--- |
| 1. her/his/etc | $\underline{\text { Your }}$ | variable |
| $20 . \underline{\text { makes }}$ a complete ass | $\underline{\text { make }}$ an ass of yourself | tense \& pronoun variable |


| of himself |  |  |
| :---: | :---: | :---: |
| 59. getting blood out of stone | get blood out of/from a stone | tense \& usage |
| 22. at the back of my mind | at/in the back of your mind | optional usage \& pronoun |
| 16. apple of sb's eye | apple of his eye | sb's - variable |
| 2. take (into) account of | take account of | extra information given |
| 10. a slice of the action $\begin{aligned} & 30,29,19,18,17,61,62, \\ & 44,70,63,52 \end{aligned}$ | a piece/slice of the action | two different possible usages |
| 117. had the courage of his ... | have the courage of your conviction | tense+pronoun+ variable $(\mathrm{Nx})$ |
| 4. takes no account of | take account of | tense \& negation form |
| 6. stands accused of $\underline{\mathrm{NX}}$ $46,7$ | stand accused of sth | tense \& variable ( Nx ) |
| 28 . holding the balance of power | hold the balance of power | tense |
| 13. all of 200 copies $\begin{aligned} & 23,24,27,26,46,53,55, \\ & 56,64,11 \end{aligned}$ | all of sth | NX |
| 54. a thick blanket of snow | a blanket of sth | $\operatorname{adj}+\mathrm{Nx}$ |


| 15. on the side of the angel | be on the side of the | 'be' usage |
| :---: | :---: | :---: |
| 25, 33 | angels |  |
| 48. is really big of you | be big of $\underline{\text { sb }}$ | 'be' +Nx |
| 65. |  |  |
| 39. the best of both worlds | the best of bot worlds | (both) spelling mistake |
| 40. the best of five | the best of (five) | braces (still found) |
| 41. have already had the best of | have had the best of | adverb |
| 42. the best of it | no entry | no entry |
| 57. didn't take a blind bit of notice | do not take a blind bit of notice | contractive usage |
| 58. In the blink of an eye | in the blink of an eye | capital letter sentence starting |
| 77. bundle of joy | a bundle (of joy) | article usage |

## Findings:

1. Tense: past, progressive, present ('ed', 'ing', 's' or base form, irregular forms of verbs)
2. Usage: in/of, etc
3. Variables: Nx (somebody, something), pronouns (his, her, etc)
4. Article usage: a, an, etc
5. Place of Nx: middle, end, etc
6. Number: (angel-angels)
7. Contraction usage: (do not-don't)
8. Spelling mistakes: (human error)
9. No entry in data base.

We can group the above problems as follow:

```
Variables
Tense (ed, ing, s, irregular verb)
Nx (word, phrase, clause)
```

Usage
in/of, from/of, etc
Contraction (not-'t) No entries in data
6.1.c. Others: Here, some sentences which contain typical phrases are taken and mapped with the dictionary entries. Following are the details.

Number of input sentences: 37.
Input sentences matched with the data: 14 .
Percentage of match: 37.8\%

Unmatched sentences have analyzed and found that the polyseme and data errors are the main reasons for mismatching. Details are given below:

| Input sentence numbers <br> and error | Entry in the data file | Comment |
| :--- | :--- | :--- |
| out of <br> $6-20,26,34,36,37$ | extra info (meaning) | Polyseme ('out of') |


| 25. unknown sentence |  | unknown sentence |
| :--- | :--- | :--- |
| 28. undreamed-of |  |  |
| (hyphenated) | undreamed of | writing style: using |
| hyphen |  |  |
| 30. upward | upward(s) | usage |
| 35. helluva | hell of a | informal |

Findings: 1. out of (polysemous)
2. writing style (usage of hyphen)
3. informal (helluva-hell of a)
4. two usages (upward-upwards)
5. No entry in data base

We can group the above problems as follow:

| Variables | Usage | Errors | Polyseme |
| :--- | :--- | :--- | :--- |
| Not appli- | usage of hyphen | Extra information | out of, etc |
| cable | Different habit (helluva-hell of a) | No entries in data |  |
|  | Forms (upward-upwards) |  |  |

6.1.d. Phrasal verbs: Here, some sentences which contain phrasal verbs are taken and mapped with the dictionary entries. Following are the details.

No match found in phrasal verbs.
Number of input sentences: 77.
Input sentences matched with the data: 0 .
Percentage of match: 0\%

Unmatched sentences have analyzed and found that the data errors are the main reasons for mismatching. The data is given below:

| Input sentence numbers <br> and error | Entry in the data file | Comment |
| :--- | :--- | :--- |
| ... admit of modification <br> $\ldots$ allows of no exception | admit of sth <br> allow of sth | No match |

## Findings:

There are three major problems to identify the phrasal verbs unit.

1. First one is the tense of the verb: The verb form can a base form, 's' form, 'ing' form, 'ed' or the irregular past forms.
2. The second one is the complement of the phrasal verb $(\mathrm{Nx})$ : The complement of the phrasal verb can be anything like a noun, noun phrase, or clause etc (the functional equivalent for of depends on meaning of the Nx ). Identifying the complement and giving the proper equivalent for that unit is challenging task for the machine translation system. For example in the following examples something (sth) can be any thing:
admit of sth:
admit of modification. - single word and singular form admit of several interpretations - adjectival and plural form
allow of sth
allows of no exceptions - negative and plural form
allows of only one interpretation - determiner and singular noun
become of sth
(Whatever) became of that parcel (you sent?) - determiner and singular
dream of/about sth
(I) dream of one day working for myself and not having a boss. - a clause
3. And the third one is the homonymous prepositions:
get out of sth (avoid)
get out of sth (stop)
get sth out of sth (enjoy)
get sth out of sb (persuade) etc

Identifying homonymous structures and fining their equivalent not possible with the dictionary.

### 6.2. Rule based method:

In this section we will discuss Rule base method of machine translation. Rule base method may need in both the phases of translation: identifying the phases in source language (parsing) and finding equivalent in target language. Here, we discuss both the phases.

Regular expressions are an extremely versatile tool for the extraction of lexical items and syntactic patterns from electronically stored text.

## Ex. $\operatorname{lbin} \backslash s(S+\backslash s)\{0,2\}$ need $\backslash$ sofls $\backslash S+i n g \backslash b$.

\S =a non-whitespace character, e.g. all letters, numbers and punctuation marks
\S+ =one or more non-whitespace characters
$\{\mathrm{x}, \mathrm{y}\}=$ between x and y instances of the element contained in the preceding bracket
$\mathrm{lb}=\mathrm{a}$ word-boundary

This string would retrieve instances of the PNP constructions 'in need of' which have a minimum of zero and a maximum of two words in the position before the nominal element 'need' and which are followed by a lexical item ending in -ing.

Regular expression searches are superior to purely lexically based searches. By other hand, by allowing up to three elements to occur before the nominal element, the precision of the search result will be lowered. This is due to the fact that instances will be retrieved where a syntactic boundary is located between the first prepositional element and the noun. One example of this, which again features the PNP-construction 'in need of', is shown in example.

Ex. The beginning of this trend, in which the fundamental need of parents is to be happy in parenthood, can be seen in two ways.

But, by using a Perl script, several regular expressions can be combined and run sequentially over the retrieved phrases. This strategy can be used to refine the conditions for retrieval by deleting irrelevant instances that were returned by an initial, relatively broad search.

The borderline between complex prepositions and free sequences of adjacent PP phrases is not easy to determine. No distinctive formal or functional features can be defined and a closer look at standard grammars suggests that lists of complex prepositions are based on intuition rather than precise grammatical criteria. Quirk et al (1985: 671-2) (mentioned earlier chapters) offer nine different criteria which help in the distinction between complex prepositions and other freer combinations. For example, 'in spite of' allows no modifications whatsoever ( $*$ in the spite of, $*$ in spite to, $*$ in spites of $)$ where as 'in pursuit of' one can find 'in the pursuit of' and 'in hot pursuit of' etc.

Thus, to make rules for these kinds of structures its better to find the possible variations and list them, at least according to the frequency - may be some cases have number of variations. For example, the preposition 'in pursuit of' occurs 332 times
(Hoffmann, 2005) in the written part of the BNC. In addition to this, there are also 33 instances where the noun is premodified by one (in one case two) adjective. 'Hot' is the most common adjective but a whole range of other adjectives are also used. The complete list of these adjectives is shown below.

```
in hot pursuit of -16
in full pursuit of-2
in ardent pursuit of-1
in breakneck pursuit of -1
in chaotic pursuit of -1
in constant pursuit of -1
in determined pursuit of-1
in endless pursuit of -1
in half-hearted pursuit of-1
in mad pursuit of -1
in personal pursuit of-1
in rigorous pursuit of -1
in silent relentless pursuit of-1
in self-conscious pursuit of -1
in steady pursuit of -1
in vain pursuit of -1
in wearying pursuit of-1
```

For the above example one can say that adjectival pre modification in complex prepositions is very much influenced by some specific words and rest of the usage is very rare. If we go by the domain specific study there is a possibility of finding no variation in the structure.

Another problem while finding the equivalents is meaning change. For example, early newspaper (Hoffmann, 2005) texts show a completely different use from what can be found in Gutenberg and the BNC.

Ex.

1. The Count Rantzon is taking his leave her, in order to [sic] his departure through Holland for France, whither he goes to reside on the part of this King. (ZEN: foreign news, 1671)
2. We are told of a Treaty making between this Town and the Marquis de Grana on the part of the Emperor, and that it is so far advanced, as to be ready for the Emperors Ratification. (ZEN foreign news, 1671)

Here, as in all 30 instances of 'on the part of' in ZEN before 1760, a suitable paraphrase would be as 'a representative of'. This sense is not recorded in the Oxford English Dictionary and an interpretation of its development is not an easy task. On the one hand this usage is possibly influenced by a metaphorically extended meaning of 'part' as the 'character assigned to or sustained by an actor in a dramatic performance (OED, part sense 9a). On the other hand, the recurring collocation 'to reside (there) on the part of X ' (where X is the ruler of the area) may suggest that another sense of 'part', a portion or a part of a country or territory, or of the world, could be involved, too (ibld., sense 13a), although this possible connection is called into question by the fact that all corresponding quotations contain 'part' in the singular.

The modern use, exemplified in the following example, shows that a change in the thematic roles of the participants has taken place:
3. There are no easy answers to African development, and an appropriate degree of humility on the part of donors is a necessary condition for developing a serous dialogue with recipient governments. (BNC; A6M:981)

In 1 and 2, people act on behalf of or for another, but in 3 the humility is their own. Two possible explanations for this differing use can be offered: first, the context specific use was restricted to newspapers alone and did not for some reason take hold in other domains of language. Second, a more archaic sense of the preposition was
preserved in the newspaper language of that time while the more grammaticalized usage had already been largely adapted in most other contexts.

Keeping above issues in min all the of constructions, which are listed in earlier chapters, are made in the form of rules for the purpose of extracting lexical items and syntactic patterns. Once we identify the patterns we have to check for the ambiguity or polysemy issues in the source language.

Then, we have to find the functional equivalents in the target language. According to my data, only limited number of structures takes the functional equivalent for the word of. So, generalization of the structures is not required here. We have to find the possible structural variability and give the equivalents to that structure in target language. Lets see how it works.

Following table show some of the rules which are helpful to identify the source language units/phrases and the corresponding functional equivalents in target language. It suggests most suitable method for the structure, if the rules are not possible to frame. Note: The following rules are framed according to the readability of machine.

| No | Structures <br> or <br> examples | Usage of <br> English | Method to be adopted <br> (Rule, dictionary or parallel <br> corpora method) | Telugu marker |
| :--- | :--- | :--- | :--- | :--- |
| 1 | died of/from <br> cancer | Special <br> verb | die(d) of +N | tō |
| 2. | baptism of fire | Phrase | Dictionary | tō |
| 3. | made out of <br> velvet | - | made out of +material noun | tō |
| 4. | ..born of | Informal | born of + non living nouns | t̄̄/valla |


|  | necessity. |  | (more specific features can be added here) | (dialectal variation) |
| :---: | :---: | :---: | :---: | :---: |
| 5. | because of bad weather ... | - | Dictionary | tō/valla <br> (dialectal <br> variation) |
| 6. | 1. I am sick of his excuses. <br> 2. I'm sick of him whining about money. | Phrase | sick of +NX <br> (Nx is not fully studied here) | tō |
| 7. | She came of her own accord. | Idiom | Dictionary <br> (Accord $=$ ishṭam <br> (not 'tanakutānu'. If it is 'tanakutānu' then the marker will be ' $g \overline{\mathrm{a}}$ ' which is adverbial in general.) | tō <br> (dialectal <br> variation) |
| 8. | ...didn't happen <br> of itself. | - | verb + <br> of itself <br> (the reflexive pronoun 'itself' needs a verb. happen= jaragu) | 'gā' |
| 9. | Out car is slow even at the best of times. | Idiom | Dictionary | ( $\mathrm{l} \overline{\mathrm{a}}) \mathrm{lo}$ plural oblique $\overline{\mathrm{a}}$ and the postpositions |


|  |  |  |  | Io |
| :---: | :---: | :---: | :---: | :---: |
| 10. | best of luck! | Phrase | Dictionary | - |
| 11. | Shall we play the best of five? | Phrase | Dictionary | Io |
| 12. | She works in the city and lives in the country, so she gets the best of both worlds. | phrase | Dictionary | la (or 'Iōni') <br> (here 'both words' takes a plural oblique form and no postposition is needed. |
| 13 | The coffee machine is out of order | Phrase | Dictionary | (transliteration <br> of the word 'order' <br> takes this marker otherwise the translation would be 'panicēyaḍaṃ lēdu' -without a marker) |
| 14 | 1. Best of all I liked the green one. <br> 2. Worse of all | Phrase | $\begin{aligned} & \mathrm{x}+\mathrm{of}+\mathrm{all}+\mathrm{x}= \\ & \mathrm{l} \overline{\mathrm{O}} \end{aligned}$ | $\mathrm{I} \overline{\mathrm{O}}$ (ki) <br> ‘'Ī(ki)’ used in some dialect |


|  | was the food! |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 15 | We live within a mile of the city centre. |  | Example/ corpus base method | niki/naku <br> style (written, spoken) |
| 16 | The latest events admit of several interpretations. | Phrasal verb | $\begin{aligned} & \mathrm{Nx}+\text { admit of+ } \mathrm{Nx} \\ & \text { (admit = țāvistāyi/isitāyi) } \end{aligned}$ | ku/nu <br> (ex. <br> anumānālaku <br> tāvisṭayi. Or <br> ardālanu <br> istāyi) <br> (Noun influences <br> on the marker) |
| 17 | Whatever became of that parcel you sent? | Phrasal verb | become of + non human noun $=$ null | null |
| 18 | I wonder what became of him. | Phrasal verb | become of + human $=\mathrm{ki}$ | Ki |
| 19 | The whole affair smacks of mismanagement and incompetence. | Phrasal verb | 1. <br> smack of +Nx (with 'nidarśanam') $=k i$ <br> 2. <br> smack of +Nx <br> ('sūcistundi') $=$ ni <br> (smack $=$ 'nidarśanaṃ' or 'sūcistundi') | $\mathrm{ki} / \mathrm{ni}$ <br> 1. cētakānitanān iki nidarśanam. <br> 2. cētakānitanān i sūcistundi (Noun influences |


|  |  |  |  | on the marker) |
| :---: | :---: | :---: | :---: | :---: |
| 20 | The present schedule does not admit of modification. | Phrasal verb | admit of $+\mathrm{Nx}=\mathrm{nu}$ | nu |
| 21. | The team consists of four Europeans and two Americans. | Phrasal verb | consists of $+\mathrm{Nx}=\mathrm{nu}$ | Nu |
| 22. | The evidence allows of only one interpretation - he was murdered by his wife. | Phrasal verb | allows of $+\mathrm{Nx}=\mathrm{nu}$ | Nu |
| 23. | 1. How did they dispose of the body? <br> 2. It took mere five minutes for the world champion to dispose of (defeat) his opponent. | Phrasal verb | dispose of $+\mathrm{Nx}=\mathrm{ni}$ | Ni |
| 24. | I feel I've been deprived of you company. |  | Deprived of + Nx = null | Null or (nu) (Dialectal influence) |
| 25. | They were robbed of all their savings. |  | robbed of $+\mathrm{Nx}=\mathrm{nu}$ | nu |
| 26. | Did anything come | Phrasal | come of + Nx | nuñci |


|  | of all those job <br> applications? | verb |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 27. | You can't duck <br> out of your <br> responsibilities. | Phrasal <br> verb | Dictionary | nuñci |
| 28. | 1. I must get out <br> of the habit of <br> finishing off <br> people's sentences. <br> (stop) <br> 2. He was <br> determined to get <br> the truth out of <br> her. (persuade) <br> $3 . ~ I t ~ w a s ~ a ~ r e a l l y ~$ <br> boring course and <br> I don't think I got <br> much out of it. <br> (enjoy) | verb | get out of +Nx= nuñci <br> (its a ploysemous phrase: <br> the phrase has four contexts <br> (enjoy, stop, avoid and <br> persuade). All the contexts <br> take the same marker, <br> because of the verb and <br> preposition relation. | nuñci |


|  | weasel out of the deal later. |  | finding ' Nx ' in parsing we can go for the example base/corpus base methods. |  |
| :---: | :---: | :---: | :---: | :---: |
| 32 | He promised he'd help me decorate, but now he's trying to wriggle out of it. | Phrasal <br> verb <br> phrasal <br> verbs | wriggle out of $+\mathrm{Nx}=$ nuñci | nuñci |
| 33. | As of/from next month, all the airline's fares will be going up. | Phrase | as of/from+ temporal noun = nuñci | nuñci |
| 32. | I paid for the computer out of (using some of) my savings. | Phrasal preposition | Example/ corpus method (out of is most polysemous word. <br> Here in this example out of gives the meaning origin of something. Finding the rules for them may lead to overlap) | nuñci |
| 33. | 1. An apple rolled out the bag. <br> 2. The patient is now out of danger. | Phrasal preposition | Example/ corpus base methods, as explained above. <br> In these examples 'out of' takes the meaning 'no longer in' | nuñci |
| 34. | 1. I'd never heard of him before he won the prize. <br> 2. I wanted to pay but she wouldn't | Phrasal verb | Example/ corpus base method. <br> Because the phase 'heard of' has three usages. (not allow, receive mews, know). These | 1. guriñci <br> 2. ni |


|  | heard of it. <br> 3. we haven't <br> heard anything of <br> Jan for months |  | senses have different equivalents according to the objects (Nx) they take. <br> Identifying these senses/context is difficult so example or corpus base method is best suitable here in this structure. | 3. guriñci |
| :---: | :---: | :---: | :---: | :---: |
| 35. | Do you know of a good doctor? | Phrasal verb | know of $+\mathrm{Nx}=$ guriñci | guriñci |
| 36. | 1. What do you make of the new boss? (opinion) <br> 2. You should make more of your IT skills on the application form. (value) | Phrasal verb | make of $+\mathrm{Nx}=$ guriñci <br> (the phrase has two meanings, opinion and value. Both the context can have the same marker. | guriñci |
| 37. | 1. I think of him as someone who will always help me. <br> 2. What do you think of (=do you like) my new dress? <br> 3. I thought of you immediately when they said | Phrasal verb | think of $+\mathrm{Nx}=$ guriñci | guriñci |


|  | they wanted <br> someone who <br> could speak <br> English. (think <br> of/about <br> somebody/somethi <br> ng - imagine) |  |  |
| :--- | :--- | :--- | :--- |
| 38. | What's all this <br> shouting in aid <br> of? | Phrase: UK <br> Informal. | Dictionary |


|  | reeks of <br> favouritism | verb | needs to identify the phrase. <br> (in this example 'pu' <br> marker (pakśapātapu) <br> will be there) |  |
| :--- | :--- | :--- | :--- | :--- |
| 43. | The armpit of <br> North. | armpit <br> of+north/south/east/west= <br> pu <br> armpit of the <br> village. | pu |  |
| 44. | This place is the <br> nouns/names =oblique <br> (in this example, village <br> takes oblique form in <br> Telugu, 'uri'. |  |  |  |
| 49. | Front page of the <br> book. |  | She has the face of | Preposition | | Example/ corpus method. |
| :--- |
| novel. |


|  | an angel. |  | (The example contains the attribution. Writing rules for attributions of various concepts is difficult task) |  |
| :---: | :---: | :---: | :---: | :---: |
| 50. | That man's got the brain of a donkey! | Preposition | Example/ corpus based method. <br> Identifying the comparison structures by rules not easy. | (lāṇṭ) |
| 52. | She came within two seconds of beating the world record. | Preposition | example/ corpus method | $\overline{\mathrm{u}}$ |
| 53. | Two actions have been taking place simultaneously. |  | Example/corpus method | $\bar{u}$ |
| 54. | A woman of great charm. |  | Example/corpus method | Gala <br> (containing) |
| 55. | A subject of very <br> little interest. | Preposition <br> (in the <br> sense of <br> 'made <br> from') | Example/ corpus method. (difficult to form rule for a structure where noun attributions vary. | Gala |
| 56. | A bag of sweets. | Preposition (with the sense of something contain something) | container noun + of + material noun $=$ kaligiunna/ unna oblique | kaligiunna/ unna |
| 57. | A book of short stories. | Preposition | Example/ corpus method. <br> Finding <br> $\mathrm{N}+\mathrm{N}$ relation is difficult | (kaligina/kaligi unna) |


|  |  |  | task here. |  |
| :--- | :--- | :--- | :--- | :--- |
| 58. | 1. Sacks of <br> rubbish. <br> 2. A class of idiots. | Preposition | Example/ corpus method. <br> like above | (kaligiunna/kal <br> a or oblique) |
| 59. | He is frightened of <br> spiders. | Preposition | frightened of + Nx = aṃṭē | aṃṭē |
| 58. | She was very fond <br> of horse. | Preposition | fond of + Nx =aṃṭe | aṃṭē |
| 59. | The massacre of <br> hundreds of <br> innocent people. | Preposition | numeral noun + of+ Nx $=$ <br> koddi/lādi | koddi//ādi <br> (dialectal <br> variation) |
| 60. | She has been <br> complaining of a <br> bad back recently. | Preposition | complaining of + Nx = āni | āni |

### 6.3. Some rules to form oblique nouns

Identifying the oblique forms of the nouns is very much important in this context of identifying the functional equivalent for English word of. Because most of the times, in modern Telugu, oblique form (some details are given in the earlier chapters) fulfills the function of genitive etc.

Apart from listing all the nouns according to their characteristics, rules can also be framed with the help of morphological analyzer. Some of the rules are given below.

| Base from of the noun | oblique form |
| :---: | :---: |
| -Llu | mti/0 |
| -nnu | m!ṭ |
| -lu | ți/0 |
| -nu | ni/0 |
| -ru | i/ti/0 |
| -ri | ṭi/0 |
| -yi | 0 |

While searching for the Telugu equivalent for the word of, we have to check the oblique form of the noun with the help of the above rules. As we have discussed, most of the times oblique forms fulfill the genitive function in the Telugu language.

Rules which are listed above, sometimes, may not fulfill the requirement. Framing rules for all Nxs, obliques, etc is not possible because these issues involved syntax and semantics. Solving these issues with rules is not fully possible.

Thus we have to check some other methods. One of these methods is Example/Parallel Corpus Based method.

### 6.4. Example/Parallel corpus based method:

Giving the possible equivalents in the target language in the form of rules is not fully possible. We need some supportive methods to solve this kind of problem. The possible method would be Example Based or Parallel Corpora Based method.

Example Based machine translation systems are trained from bilingual parallel corpora, which contain sentence pairs. Sentence pairs contain sentences in one language with their translations in the other language. It is essentially a translation by analogy. The difference between the dictionary method and parallel corpora method is that we can put semantic units in this file rather than lexical based units.

This method is more natural and effective. It solves many linguistic issues in a natural way, like human being learns a language.

## Limitation:

The major disadvantage with this method is searching and retrieving the whole data takes a longer time. It happens because of the limitation of the computer processing. If we get faster computers the parallel corpus method can work to a great extent.

But, even if we get faster computers the discourse related issues remain.

## Chapter-7

## CONCLUSION

In Old English of is an unstressed form of 'æf' (preposition, adverb) with the meaning of 'away' and 'away from'. Primary sense in Old English was still 'away', but shifted in Modern English as the substitute for the genitive case, and mostly grammaticised.
$\mathrm{O} f$ is the most grammaticised of all prepositions. Apart from its basic locative meaning 'away' 'away from', it has concepts like geographic origin, belonging, selection from a set, and many others.

Of can be part of complement in the structure of NP, VP, AdjP, AdvP etc., and it also functions as a modifier, stranded etc. Subject-determiner genitives exhibit extensive relation with of. Furthermore of syntactically comes with many combinations: nouns, phrasal verbs, complex prepositions, adjectives, etc. Of, semantically, is also found in time, place adverbs, etc.

Nouns do not take non-genitive NPs as complement. Subordinate NPs are related to the head noun by genitive case by prepositions, and of is the default preposition used for this function. Like nouns, adjectives do not take NPs as post-head complement. Subordinate NPs are related to the head adjective by means of a preposition, and of can be the default preposition in this construction.

Verbs and prepositions do take NP complements, so prepositions in general, and of in particular, play a smaller role in their complementation. There are a number of verbs and prepositions which do select of complements.

Ex. She approves of the plan.

Like nouns, adjectives do not take NPs as post-head complement. Subordinate NPs are related to the head adjective by means of a preposition, and of can be the default preposition in this construction.

## Ex.. I feel ashamed of myself.

There are a few cases where of is not selected by the head and thus makes an independent contribution to the meaning. In the following examples of phrase is

Modifier in NP structure:
a matter of no importance

It can be seen from the above details that the word of has to be studied thoroughly to get proper output of a machine translation system.

## Translation process:

Translating this hyper word of into Telugu is a challenging task for machine translation system. A translation task has two phases. First phase is to identify the structure and the meaning of the source constructions involving of, and the second phase is to find appropriate equivalent structure and meaning in the target language.

To get proper meaning of a word we have to consider the polysemy and homonymy issues. These issues are in the form of proper nouns, adjectives vs adverbs, adjectives vs nouns, etc. Apart from these issues, finding meaning for idioms, metaphors, satires or ironies, etc. is more difficult for a machine. A meaning of a word or phrase depends on the context. In a direct interaction one can get help from various sources like intonation, context, body language etc. but when it comes in an indirect mode of interaction this gets worse.

Phrasal words/meanings are most common in any natural language. They have their own identity. It is very difficult to analyze these units in a straightforward way. There is a need to take them for a separate study. While analyzing a sentence first of all it is better to extract the phrases (phrasal nouns, phrasal verbs, phrasal prepositions etc.) and then analyze the sentence accordingly.

Distribution of $\boldsymbol{o f}$ : $O f$ is found in the following structures:
Phrasal nouns, non inflected forms of genitives, fixed prepositional verbs ( $\mathrm{V}+$ Prep (fixed)), mobile prepositional verb (V + Prep (mobile)), those which select a PP complement containing a specified preposition together with its own complement (fossilized), verbal idioms, fixed particle [V+Prep], mobile particle [V+X+Prep], $\operatorname{adj}+o f+\mathrm{Nx}, \operatorname{adv}+\mathrm{of}+\mathrm{Nx}$, complex, compound, stranded, at the beginning of the sentence, adjunct, idiomatic, functioning as other POS, and some typical constructions.

The above places should be studied while identifying the original meaning of a word in a source language.

After identifying meaning of the source language, finding equivalents for them is another challenging issue. Some of the issues are:

Explicit lexical/functional equivalent in the target language:
Ex.1. Did something [come of all those job applications]? anni ā udyōga arjīla nuñci ēmainā vaccindā?
(To identify these kinds of phrases, the following kind of rules would be helpful. 'come $+\mathrm{of}+\mathrm{Nx}$ ' is a phrase where the word of takes the equivalent 'nuñci')

No lexical equivalent required in target language:
Ex. 2.
I reserved them by phone yesterday in the name of Kittu.
...kiṭṭū pērupai phōnlō rijarv cēsānu.
Ex.3.
Much blood has been spilled in the name of religion. mataṃ pērupai cālā raktaṃ cimmindi.

Usage of inflections in the target language:

Ex. He sent me some flowers by way of an apology. ataḍu kṣamāpaṇalaku gurtugā pūvulu pampiñcāḍu.

Some issues in the translation of the structure $\mathrm{N}+\mathrm{of}+\mathrm{N}$ :
While translating the nouns from source language (here English) into the target language (here Telugu) the following issues have to be considered:

1. For some nouns target language may have local equivalent,
2. Sometimes transliteration is needed,
3. Some typical situations are there where the word order remains the same in the target language,
4. Sense difference may be there in different places (countries, states) and languages (Hini, Telugu), etc

When we tried to enumerate the functional equivalents for the English word of in Telugu, the following (21+1) functional equivalents are found:
yokka, pu, koddi/lādi, Iō, Iōki, ḍu, lāṇṭi/lāgā, aṃṭē, kala/gala, nu, ādi, tō, (t)ū, gā, guriñci/gūrci, ku, nuñci/nuṇdi, kaṇṭē, niki/naku, ē, valla and plural oblique la.

## Some specific observations:

1. No lexical equivalent needed for English word of for noun+of+noun structure (but there are some exception are seen) in Telugu.
2. The oblique stem of the noun fulfills the function of genitive in Telugu. But some nouns have no explicit oblique forms, ceț̣u, medaḍu, guḍḍu etc.
3. Sometimes one of the homonyms takes oblique form according to their meaning, pannu - 'tooth' and 'tax'.
4. Within a synonym set, some words take oblique form and others do not, bāludu bāluḍi, abbāyi - abbāyi.
5. Some times the syntax of the phrase shows the influence on the oblique form, pustaka puṭa, pustakaṃ mundu puṭa.
6. Proper nouns do not take oblique form except 'ḍu' ending, as in rāmuḍi, krṣṇuḍi.
7. We may write rule that 'lu' ending nouns take oblique form 'la', but it fails in the example like manumarālu (granddaughter), 'la' is the oblique form of this noun. So while framing rules this point should be keep in mind.
8. Other cases (verb + of + noun) like instrumental, ablative etc needed an explicit equivalent for the word $o f$.

Ex. Died of something,
Made of something.
9. In some cases change of syntax is not necessary: ex. a kilo of mangos - kilo māmiḍi pa!!u. (where a quantifier occurs in pre nominal positions)
10. Usage: there is a possibility of substitution/interchangeability of words:

Ex. Do you know of/about a good doctor? heard of/about someone/something
11. Dialectal influence on equivalents/translation:

Ex. I'm sick of his excuses - atani sākulatō/aṃṭē visugu cendānu (causal/quotative marker)
12. The functional equivalent for of can be causative, instrumental, adverbial particle, quotative, etc.
13. Phrasal verbs are usually used informally in everyday speech as opposed to the more formal Latinate verbs, such as 'to get together' rather than 'to congregate', 'to put off' rather than 'to postpone', or 'to get out' rather than 'to exit'. Here we have an issue related to the translation: whether informal words of source language can be translated by using formal words in the target language. Because of this issue a translator should see whether the source text allows giving formal equivalents in target language.

All the above mentioned issues should be solved to get effective machine translation. This information should be given to the computer using a proper methodology. Some of the popular methods are Rule Based Method, Example/Parallel Corpus Based method, etc. Apart from these, dictionary can also be used to solve some of the issues related to the phrasal entries. The result of the dictionary method is given below.

## Dictionary Based Method:

Listing all the phrases into the dictionary is not possible. The following results confirms that point.

Here, some sentences which contain phrasal nouns, idioms, phrasal verbs etc. are taken and mapped with the dictionary entries. Following are the details.
a. Phrasal Noun analysis

Number of input sentences: 65 .
Input Sentences matched with the data: 43.
Percentage of match: 66.1\%
b. Idioms \& phrases

Number of input sentences: 351.
Input sentences matched with the data: 112 .
Percentage of match: 31.9\%
c. Others

Number of input sentences: 37 .
Input sentences matched with the data: 14.
Percentage of match: 37.8\%
d. Phrasal verbs

Number of input sentences: 77.
Input sentences matched with the data: 0 .
Percentage of match: 0\%

Some of the possible problems with the dictionary entries are given below:

1. Number: (singular-plural)
2. Extra information in data base (explanation etc)
3. Spelling mistakes: (human error)
4. Short form of usage (house-house of commons)
5. Capitalization of the entry (House-house)
6. No entry in the data base.
7. Singular form in the dictionary (arm- arms of sth).
8. Capital forms: there may be a conflict between the input and the data files with capitalization of the initials.
9. Data may have extra information i.e. Other than the main entry.
10. Complex structure of the phrasal nouns ( $n+o f+n+n+n$ or $n+o f+a d j+n$, etc)

Ex. index of leading economic indicators.
12. Clipping usage: the Fall (of Man).
13. Hyphenated usage: Jack-of-all-trades.

Some issues with phrasal verbs in the above method:
There are three major problems to identify the phrasal verb unit.

1. The tense of the verb (base form, 's' form, 'ing' form, 'ed' and the irregular past forms).
2. The complement of the phrasal verb. The complement of the phrasal verb can be anything like a noun, noun phrase, or clause etc. Identifying the phrasal verb's complement and giving the proper equivalent for that unit is a challenging task for machine translation because it is not practicable to put all the variables in a dictionary. For example in the following examples something (sth) can be any thing:
admit of sth:
admit of modification. - single word and singular form
admit of several interpretations - adjectival and plural form
allow of sth
allows of no exceptions - negative and plural form allows of only one interpretation - determiner and singular noun
become of sth
(Whatever) became of that parcel (you sent?) - determiner and singualr
dream of/about sth
(I) dream of one day working for myself and not having a boss. - a clause
3. And the third one is the homonymous prepositions:
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get out of sth (avoid)
get out of sth (stop)
get sth out of sth (enjoy)
get sth out of sb (persuade) etc
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## Rule Base Method:

Rule Base Method may be needed by both the phases of translation. (identifying the meaning unit in the source language and giving equivalent in the target language).

As we have mentioned earlier, the word of found in around 35 syntactic contexts. These structures include complements, idioms, stranded cases etc. Extracting these structures is a challenging task for a machine translation.

In computer programming, Regular Expressions are an extremely versatile tool for the extraction of lexical items and syntactic patterns from electronically stored text. But there are certain limitations are found here:

For example, by allowing up to three elements to occur before the nominal element, the precision of the search result of rule based method will be lowered. This is due to the fact that instances will be retrieved where a syntactic boundary is located between the first prepositional element and the noun. One example of this, which features the PNP-construction 'in need of', is shown in the example below.

Ex.

The beginning of this trend, in which the fundamental need of parents is to be happy in parenthood, can be seen in two ways.

After pattern extraction, ambiguity, polysemy issues should be resolved afterwards we need to give the proper functional equivalents to these patterns. As we discussed above lot of issues have to be considered for this process.

Identifying the oblique forms of nouns is very much important in this context of identifying the functional equivalent for the English word of, because most of the times, in Modern Telugu, oblique form fulfills the function of genitive etc.

I tried to limit the rule on the basis of attributive features. According to my data, only a limited number of structures take the functional equivalent for the word of. Instead of trying to generalize the structures, it is better to give direct structures and get the output according to the requirement. For some patterns, where it is not possible to write rules, other methods like example/parallel corpora method can be used.

Example/Parallel corpus based method:
Giving the possible equivalents in the target language in the form of rules is not fully possible. We need some supportive methods to solve this kind of problem. The possible method would be Example based or Parallel Corpora method.

In the Example/Parallel corpus method we take full sentences with their translation and list in a file. When input sentence has a match with these sentences it retrieves that sentence's translation as an output. We can put all the sentences in this file and extract this wherever needed. The great limitation is the processing speed of the computer. This method takes a lot of time to search the corpus file, mostly because of the size of the file. This is not at all acceptable for normal usage of a system. But this system can work efficiently if we get high speech computer. Another limitation is that lacking of discourse level parallel corpora. To solve this problem we may need some rules. Therefore it is a kind of cyclic process.

## Concluding remarks:

Though the hyper word of is the most frequent word in English, only a limited number of contexts in Telugu needs explicit equivalents for it, like in idioms, in phrases etc. All phrasal nouns containing of can be listed in a dictionary because these units are constant in nature, and do not yield for analysis of the structure. Listing the idiomatic expressions and phrases is also important, because writing rules for these structures is not recommended. We can maintain a database for these units. For other structures we can use Rule Based Method. Even though this method has limitations it works fast, in term of computing. Identifying nouns which take oblique forms is very important to find the correct functional equivalent for the word of. Because, some nouns in Telugu do not take oblique forms and some do, sometimes even according to the context. Example/parallel corpus method is more effective and natural. But the big limitation is that this method takes longer time to retrieve output. If we get faster computers then this method works very well.

It is not the shape or size of the word, but it is the function of the word which matters. Even a smallest unit of a language needs a whole range of study in translation particularly in machine translation. Here whole range means $100 \%$ not less than that.

## Appendix 1: list of example sentences

(some of the following example sentences have spelling errors - its a part of the experiment)

## Appendix 1.a:

## Example sentences used in the analysis of phrasal nouns:

1. Socialism was an article of faith with his parents.
2. The child was just a bag of bones when we found her.
3. Both countries have a vested interest in maintaining the balance of power.
4. Mis together 250 g plain flour and a teaspoon of bicarbonate of soda and then add to the cake mixture.
5. The county Board of Education has decided to cancel high school gymnastics and golf programs.
6. In a speech to captains of industry, she predicated economic growth of $3.5 \%$ next year.
7. The queen is the head of the Church of England.
8. The tobacco companies may be guilty of contempt of court for refusing to produce the documents.
9. The increase in interest rates will raise the cost of living.
10. Parents are holding a council of war to decide what to do about the threatened closure of the school.
11. Society is challenging the traditional sexual division of labout.
12. She skated a perfect figure of eight.
13. They always register their ships under a flag of convenience.
14. There has been much gnashing of teeth about the proposal to close the hospital.
15. The Prime Minister was guest of honour at the dinner.
16. You really know you've made it when they enshrine you in the Rock ' $n$ ' Roll Hall of Fame.
17. My father is quite old now and he's increasingly hard of hearing.
18. The mood was sombre as the Commons sat down on Wednesday to debate the crisis.
19. The mood was sombre as the House of Commons sat down on wednesday to debate the crisis.
20. Fire fighters used the Jaws of Life to free the trapped victims.
21. He was accused by his opponents of being a man of straw and lacking in decisiveness.
22. The government estimates that its borrowing requirement this year could reach $\$ 150$ billion, subject to a wide margin of error.
23. He spoke in a very matter-of-fact way about the accident.
24. They adopted a sensible, middle-of-the-road policy on defence spending.
25. Many people oppose the death penalty because of the possibility of miscarriages of justice.
26. We cannot release the names of the soldiers who were killed until we having informed their next of kin.
27. The country's debt this year will be of the same order of magnitude as it was last year.
28. I would like to taise a point of order.
29. From a medical point of view, there was no need for the operation.
30. Throughout the play, Macbeth struggles with the powers of darkness.
31. When the gunmen came into the bank, she had the presence of mind to press the alarm.
32. Pedestrians have right of way at this turning.
33. Everyone is subject to the rule of law.
34. Half the vote has been counted, and our candidate is still in the running.
35. He have a fairly run-of-the-mill speech.
36. There are several schools of througt about how the universe began.
37. She has a seat-of-the-pants ability to find the best way out of a crisis.
38. She became Secretary of State for Education after spending three years as Environment Secretary.
39. Was the conference a success, Foreign Secretary?
40. Her re-election to the committee was defeated on a show of hands.
41. What sign of the Zodiac are you?
42. What sign are you?
43. Most of these conjuring tricks depend on sleight of hand.
44. What low-down son of a bitch took my clothes?
45. I'm going to beat the sonofabitch if it kills me!
46. The standard of living in many developing countries is low.
47. After the floods the government declared a state of emergency.
48. The control panel uses all the newest technology and is considered state-of-the-art.
49. The soldiers have just completed a six-month tour in the Philippines.
50. His natural supporters are the urban poor, and educated people of a liberal turn of mind.
51. 'Significant other' meaning 'partner' - now that's an interesting turn of phrase.
52. The government held a vote of confidence and lost/won it.
53. The new Chairperson stood up and proposed a vote of thanks to the retiring Chair for all her hard work.
54. He was efficient at his job and well-thought-of by everyone.
55. It's a well-thought-of school.
56. The thieves stole several valuable works of art.
57. The Queen is the head of the Church of England.
58. The Prime Minister was guest of honour at the dinner.
59. You really know you've made it when they enshrine you in the Rock 'n' Roll Hall of Fame.
60. He finished it inside of two hours.
61. Most women go through the memopause between the ages of 40 and 50 .
62. The fraud depnded on hundreds of bank accounts being opened on behalf of straw men.
63. The idea that national identity will be lost as a result of European integration is just a man of straw which he is wasting his time fighting.
64. Make a file for these documents and write 'finance' on the tab.
65. Insert Tab A into Slot A and glue, before standing the model upright.

## Appendix 1.b:

## Example sentences used in the analysis of idioms and phrases:

1. She came of her own accord. No one asked her to come.
2. I hope my teacher will take into account the fact that I was ill just before the exams when she marks my paper.
3. A good architect takes into account the building's surroundings.
4. Britain's tax system takes no account of children.
5. I think you have to take into account that he's a good deal younger than the rest of us.
6. The government stands accused of eroding freedom of speech.
7. She came within an ace of winning the match.
8. I'm afraid the TV's out of action.
9. Jackson's torn ligaments will keep him out of action for the rest of the season.
10. Now research has proved that the drug is effective everyone wants a slice of the action.
11. She arrived in advance of everyone else.
12. What's all this shouting in aid of?
13. In the last two years the book has sold all of 200 copies.
14. We had any amount of people applying for the job.
15. He was, in this matter at least, firmly on the side of the angels.
16. His youngest daughter was the apple of his eye.
17. The repair work will cost in the area of $\$ 200$.
18. Her hat was straight out of the ark.
19. As of next month, all the airline's fares will be going up.
20. Simon always makes a complete ass of himself when he's had too much to drink.
21. They live in some village in the back of beyond.
22. It's been at the back of my mind to call Jose for several days now, but I haven't got round to it yet.
23. The advertising agency secured the contract on the back of their previous successful campaigns.
24. They have carried on their business operations by riding on the back of established firms.
25. For Tony, owning a big car was a badge of success.
26. Come and stay with us - we've got bags of room.
27. Don't panic, there's bags of time yet.
28. When the election is over, this will be the party holding the balance of power.
29. I was given a million-dollar project to manage in my first month - it was a real baptism of fire.
30. "He's a bit serious isn't he?" "Yeah, not exactly a barrel of laughs."
31. It was the beginning of the end for their marriage when he started drinking.
32. He told me she was just a friend, but I don't believe a word of it!
33. She wore a dress of crimson silk to the dinner and was the belle of the ball.
34. I didn't know whether his story was true or not, but I decided to give him the benefit of the doubt.
35. Our car is slow even at the best of times.
36. There was wonderfull food, good company and, best of all, a jazz band.
37. Best of luck with your exams!
38. We would like to wish you the best of luck with your move to the States.
39. She works in the city and lives in the country, so she gets the best of both worlds.
40. Shall we play the best of five?
41. I think we've already had the best of the hot weather this summer.
42. We'll have to spend the night here, so we might as well make the best of it.
43. Just do the job to the best of your ability.
44. To the best of my knowledge, the chemicals which were found are not dangerous.
45. He can dance with the best of them.
46. He fought fiercely, but his opponent easily got the better of him.
47. He is responsible beyond a shadow of a doubt.
48. You can spare me an hour next week? That's really big of you!
49. He'll get on well with Anthony - they're birds of a feather.
50. Have you seen his latest bit of skirt?
51. I thought he would be sorry, but not a bit of it.
52. He missed a medal in the 100 m , but will get a second bite of the cherry in the 400 m .
53. The unemployed are tasting the bitter fruits of the market economy.
54. The ground was covered by a thick blanket of snow.
55. The garden is a blaze of colour in autumn.
56. His book was launched in a blaze of publicity.
57. He didn't take a blind bit of notice of what I said.
58. In the blink of an eye, he was gone.
59. Persuading Chris to buy a round of drinks is like getting blood out of a stone.
60. One day, out of the blue, she announced that she was leaving.
61. However did Mina manage to bluff her way into that job?
62. He's one of those people who is very good at bluffing their way out of trouble.
63. The news of his marriage was a bolt from the blue.
64. With a courage born of necessity, she seized the gun and ran at him.
65. The desire for money is at the bottom of much of the world's voilence.
66. When I said I loved you, I meant it from the bottom of my heart.
67. I'm not sure what is causing the problem, but I'm determined to get to the bottom of it.
68. The fire started deep in the bowels of the ship.
69. He plays football, drinks a lot of beer and generally acts like one of the boys.
70. Suddenly we heard a screech of brakes and saw the car swerve to miss the cyclist.
71. The cinema was in breach of the Health and Safety Act for having no fire doors.
72. We've broken the back of it now and we should be finished by Friday.
73. There wasn't a breath of air in the room.
74. I need a breath of fresh air.
75. Angela's so cheerful and lively - she's like a breath of fresh air when she visits.
76. Send in your poems and we'll publish the pick of the bunch.
77. Three days after the birth, Paul and Sandra took their precious bundle of joy home.
78. He's not exactly a bundle of laughs, is he?
79. Sorry for shouting - I'm a bundle of nerves these days.
80. The intelligence service is not in the business of routinely monitoring the activities of law-abiding citizens.
81. Stop pestering me, it's none of your business!
82. You can't expect to get everything you need at the push of a button.
83. Everyone should have a fair slice of the cake.
84. Corruption is a serous problem, but nobody has yet been willing to open up that can of worms.
85. The Opposition is making a lot of political capital out of the Government's failure to invest in education.
86. Take good care of thta girl of yours, Patrick she's very special.
87. Don't worry about me, I can take care of my self.
88. If you can sort out the drink for the party, I'll take care of the food.
89. All the travel arrangements have been taken care of.
90. No, you paid for dinner last time, let me take care of it.
91. "Bye, Melissa." "Goodbye Rozzie, take care."
92. You look as if you have all the cares of the world on your shoulders.
93. The law will apply equally to men and women except in the case of maternity leave.
94. She doesn't want to work full-time, it's a case of having to.
95. I was trying to keep the party a secret, but Mel went and let the cat out of the bag.
96. She's the centre of attention everywhere she goes.
97. Queen Victoria died at the turn of the century.
98. She'd been with the same company for too many years and felt she needed a change of scene, so she applied for a job as a stage manager.
99. She was going to sell her house but had a change of heart at the last minute.
100. She's going through the change.
101. The whole trip was a chapter of accidents.
102. Many more businesses are feeling the chill wind of the recession.
103. As a long-distance runner, she's in a class of her own.
104. I can't play chess with him. He's completely out of my class!
105. He's been given a clean bill of health by the doctor.
106. Julia finally made a clean breast of it and admitted that she had stolen the money.
107. Do that once more and I'll come down on you like a ton of bricks!
108. Suntanned and relaxed, looking calmly about the room, he appeared completely in command.
109. I don't think you have any concept of the pain you have caused her.
110. The results of the election are of concern to us all.
111. The money was of little consequence to Tony.
112. The papers took my remarks completely out of context.
113. She had invited relatives from the four corners of the world to her 80th birthday party.
114. I saw something move out of the corner of my eye.
115. I could count the number of times he's paid for a round of drinks on the ingers o one hand.
116. On the count of three, I'd like you all to stand up.
117. Although many of his policies were unpopular, he had the courage of his convictions to see them through.
118. I expect they plan to have children in the course of time.
119. With the course of time, I've learned to live with my disability.
120. "Can you help me?" "Of course."
121. May I have a look at your newspaper?" "Of course you can."
122. "Have you written your English essay yet?" "Of course, I finished it last week."
123. The Second World War ended, of course, in 1945.
124. We arrived at the restaurant 30 minutes late so, of course, our reservation had been cancelled.
125. "Where did you get the money? Did you steal it?" "Of course not. I borrowed it from Carol."
126. Phil Collins appears on the album courtesy of Virgin Records.
127. We'll have to leave at the crack of dawn.
128. Fossil records indicate that Africa was the cradle of early human evolution.
129. The cream of this year's graduates have gone abroad for jobs.
130. He had become the creature of the secret police.
131. My father's such a creature of habit - he always has to have a biscuit and a cup of tea at bedtime.
132. Mrs Singh is still riding the crest of a wave of popularity.
133. His presentation was a crock of shit.
134. Thanks for inviting me, but ballet isn't really my cup of tea.
135. "Bye - don't work too hard!" "There's no danger of that!"
136. Adults are fond of telling children that their years at school are the best days of their life.
137. You're going to get into serious trouble one of these days.
138. It's just been one of those days.
139. Don't jump out on me like that! You scared the living daylights out of me!
140. The fire broke out in the dead of night.
141. The failure of the family business was the death of him.
142. That child will be the death of me!
143. We're just discovering the delights of being retired.
144. Where have you been? We've been deprived of your company for far too long!
145. I was out of my depth in the advanced class, so I moved to the intermediate class.
146. I'm not a strong swimmer so I prefer not to go out of my depth.
147. He was in the depths of despair/depression about losing his job.
148. The company was started in the depth of the recession of the 1930s.
149. Boats of every description were entering the harbour.
150. His efforts are certainly deserving of praise.
151. He's the despair of his parents because he shows no interest in getting a job.
152. We had the devil of a job/time trying to find this place!
153. Did you hear what happened to Anna yesterday - oh, speak of the devil, here she is.
154. I almost/could have died of embarrassment.
155. They had a difference of opinion about/over their child's education.
156. I take a dim view of this kind of behaviour.
157. Which way is it? - I have no/a lousy sense of direction!
158. Do you think Tess will reach the dizzy heights of Senior Editor before she's 30?
159. She's all of a doodah about the wedding arrangements.
160. The medicine went through me like a dose of salts.
161. My father is very generous, but I wouldn't dream of actually asking him for money!
162. Win the house of your dreams in our fantastic competition!
163. People tend to regard drug addicts as the dregs of society.
164. People will file lawsuits at the drop of a hat these days.
165. Within two minutes of walking into the classrom, she had the kids eating out of her hand.
166. We eventually found the answer by a process of elimination.
167. If you don't want the job, there's no end of people willing to take your place.
168. Of course I'll listen to what she has to say but at the end of the day, it's my decision.
169. We've struggled on for as long as we could, but now we're at the end of the line.
170. When the bank refused to lend us any more money we realised we'd reached the end of the road.
171. This woman is innocent - end of story.
172. I'm really hoping to win, but it won't be the end of the world if I don't.
173. The prices were very roughly calculated - it looked as though he'd done them on the back of an envelope.
174. Her hair is the envy of the office.
175. Twenty-five people hav replied to the invitation, but I've erred on the side of caution and put out 30 chairs.
176. Not telling the staff before they read the news in the papers was an error of judgment.
177. In any of these discussions, of course, honesty is of essence.
178. Time is of the essence.
179. In the event of a strike, the army will take over responsibility for firefighting.
180. I hope I didn't make an exhibition of myself last night.
181. Would you stop making jokes at my expense?
182. Parents of young children need to have eyes in the back of their heads.
183. She left home in the face of strong opposition from her parents.
184. I said no! Now get out of my face!
185. Poor quality is the unacceptable face of increased productivity.
186. The whole tribe seem to have disappeared off the face of the earth.
187. On the face of it, it seems like a bargain, but I bet there are hidden costs.
188. Going bald is just a fact of life.
189. No I don't work. In fact, I've never had a job.
190. "Have you always lived here?" "As a matter of fact I've only lived here for the last three years".
191. Cases of leukaemia in the area near the nuclear reactor have risen by a factor of four.
192. We always used to go on holiday at the fag end of the holiday season.
193. It's only right that all the candidates should be given a fair crack of the whip.
194. Manufacturers may fall foul of the new government guidelines.
195. Things were going well for her till she fell of the director.
196. Freud was the father of psychiatry.
197. Laksha sat inside, in fear of her life, until the police came.
198. Malcolm knows the city well, so there's no fear of us getting lost.
199. They wouldn't let their cat outside for fear it would get run over.
200. I didn't want to move for fear of waking her up.
201. Once you get the feel of it, using a mouse is easy.
202. My father was a man of few words, but when he spoke it was worth listening to.
203. She wanted to win the race with every fibre of her being.
204. Before this course I'd always fought shy of technology.
205. He's no longer in the first flush of youth.
206. His stories had them in fits of laughter.
207. He hit me with the flat of his hand.
208. Andy is certainly flavour of the month with the boss.
209. He was talking about cycling across the US or was that just another fight of fancy?
210. I found her in floods of tears in the toilets.
211. He died in the very flower of his youth.
212. The flower of the nation's youth were killed in the war.
213. Peter was coming round for dinner and I was all of a flutter.
214. This is an argument that seems to fly in the face of common sense.
215. I got a bit drunk and made a fool of myself.
216. Some of the greatest geniuses in history had feet of clay.
217. I was so tired that I could hardly put one foot in front of the other.
218. Poverty and ignorance, the bishop said, were the forces of evil in our society today.
219. The two leaders have laid the foundations of a new era in cooperation between their countries.
220. He helped to lay the foundations of English drama.
221. The most important thing is to go into the exam in a positive frame of mind.
222. How can Christians and atheists ever come to understand each other when their frames of reference are so different?
223. There's parking space in front of the hotel.
224. Please don't swear in front of the children.
225. I've nver known anyone be so full of beans before breakfast.
226. "Did the kids enjoy their trip to the zoo?" "Oh, yes, they were full of it when they got back this afternoon."
227. Since he got his new job, he's been very full of his own importance.
228. I can't stand her - she's so full of herself.
229. He bounced into the office, full of the joys of spring.
230. Everything will become clear in the fullness of time.
231. I ran but just for fun.
232. The other children were always making fun of him because he was fat and wore grasses.
233. She has a fund of knowledge on the subject.
234. She doesn't see her grandchildren very often so she makes a real fuss of them when she does.
235. I could hear gales of laughter coming from downstairs.
236. Jonson has run the gamut of hotel work, from porter to owner of a large chain of hotels.
237. The party leadership contest has let the genie of change out of the bottle.
238. They haven't got a ghost of a chance of winning.
239. She's got the gift of the gab - she should work in sales and marketing.
240. The actor's wedding took place in the full glare of publicity/the media.
241. She's really making a go of her new antique shop.
242. I can't see him ever making a go of accountancy.
243. What good is sitting alone in your room?
244. The new law met with a good deal of opposition at local level.
245. By the grace of god, the pilot managed to land the damaged plane safely.
246. He's been called the grand old man of cricket.
247. 'Modern Times' is a classic comedy starring Charlie Chaplin, the grandaddy of comic film actors.
248. I sometimes think I'd be happier teaching in Spain. Oh well, the grass is always greener on the other side!
249. The country is currently in the grip of the worst recession for twenty years.
250. The tables were positively groaning with food.
251. It's yet another novel set in the groves of academe.
252. "I hear things aren't going too well at work." "You don't know the hal of it!"
253. How many people have died at the hands of terrorist organizations since the voilence began?
254. Moving to London is certainly a possibility - I wouldn't dismiss it out of hand.
255. "I'v never used a word processor before." "Don't worry - you'll soon get the hang of it."
256. The children will be here soon - you'd better put that plate out of harm's way.
257. I asked him to help out, but he wasn't having any of it.
258. Even as a tiny baby, she had a thick head of hair.
259. I can't make head nor tail of these instructions on the packet.
260. I've got a whole heap of work to do.
261. If Linda gets that promotion, we'll never hear the end of it.
262. She has a heart of gold.
263. I didn't want to believe it, but in my heart of hearts I knew that it was true.
264. We both heaved a sigh of relief when she left.
265. She's making such heavy weather of that report she's writing.
266. It's a heck of a long way to the nearest shop from here.
267. This country would never submit to living under the heel of a foreign power.
268. For Walter, disaster followed hard on the heels of his initial success.
269. August is the height of the tourist season.
270. At the height of the violence/crisis we were left without any help.
271. I didn't know what I wanted to do, so I drove my van round Europe, just for the fell of it.
272. The house was in a/one hell of a mess.
273. Let's get the hell out of here, before any shooting starts.
274. He jumped out from behind a wall and scared the hell out of her.
275. The whole house was a hive of activity on the day before the wedding.
276. Where can I get hold of some stamps?
277. How can I get ahold of Chris?
278. Would you do me the honour of accompanying me to the New Year Ball?
279. It may be childish but I have a horror of worms.
280. Then I went to the toilets and, horror of horrors, discovered that my zip had been undone.
281. The police are trying to stop out-of-hours drinking.
282. They keep ringing me up at all hours.
283. She helped me in my hour of need.
284. Is this your idea of a joke?
285. I can't turn up at a funeral in a pink jacket. What an idea!
286. She's the spitting image of her mother.
287. She's been in and out of hospitals ever since the accident.
288. I came within an inch of losing my life on the rocks below.
289. Every inch of her bedroom wall is covered with photos of pop stars.
290. Of course I'll help you, there's no need to make an issue of it.
291. I'm not going to let him repair my bike again because he made a really bad job of it last time.
292. The dry cleaner's did a good job of removing that oil stain from my shirt.
293. I put my shoulder out of joint last weekend lifting heavy boxes.
294. Our whole schedule was put out of joint by the designs arriving a week late.
295. He tried to make a joke of the fact that he hadn't passed the exam.
296. The news about Sam's illness jolted her into action.
297. In keeping with tradition, they always have turkey on Christmas Day.
298. The modern furniture was out of keeping with the old house.
299. Having knowledge is one thing but being able to communicate it to others is another kettle of fish.
300. We can't release his name until we have informed his next of kin.
301. "You said I was fat." "I didn't say anything of the kind!"
302. It was kind of strange to see him again.
303. The school had a swimming pool of a kind, but it was too small for most classes to use.
304. Rain is the kiss of death for a barbecue.
305. The rise in mortgage rates really knocked the bottom out of the housing market.
306. I know this area like the back of my hand.
307. He's always working on his car - It's a labour of love.
308. She was partying till the early hours, so I don't imagine she'll be in the land of the living before lunchtime.
309. Jamie's in the land of nod at last.
310. Many Mexicans regard the United States as a land of milk and honey.
311. The doctors have done everything possible for him, so his recovery now is in the lap of the gods.
312. I paid them $\$ 100$ for the damage and I hope that's the last I'll hear of it.
313. You haven't heard the last of this! - I'll see you in court.
314. He's horrible - I really hope we've seen the last of him.
315. We'll never hear the last of it if they win that competition.
316. We haven't spoken of late.
317. She's pleased with her promotion but she'll be laughing on the other side of her face when she sees the extra work.
318. The proposal will be laughed out of court.
319. We hope for a world where the rule of law, not the law of the jungle, governs the conduct of nations.
320. With one stunning performance, Chelsea have laid to rest the ghost of their humiliating defeat at Old Trafford last season.
321. Maybe I should take a leaf out of Rick's book and start comming in at ten every morning.
322. He was so good-looking and so popular that I felt he was out of my league.
323. Leave go of my arm!
324. You can't take the children out sailing in this weather! Have you completely taken leave of your senses?
325. Her comments came out of left field.
326. She travelled the length and breadth of Ireland looking for her missing brother.
327. But allowing a criminal to go free is perhaps the lesser of two evils if the alternative is imprisoning an innocent person.
328. I took the liberty of booking theatre seats for us.
329. The whole report is a pack of lies.
330. I can't remember her name for the life of me.
331. The market for those dreadful compilation records you see advertised on TV is just another of life's great mysteries.
332. As the exams approached, she felt that at last she could see the light at the end of the tunnel.
333. In the light of recent incidents, we are asking our customers to take particular care of their personal belongings.
334. It is easy to make light of other people's problems.
335. The cannon can be linked to the line of sight of the gunner so that it points in the same direction that he is looking in.
336. I was thinking of doing a meal along the lines of that dinner I did for Annie and Dave.
337. They're campaigning for the electoral system to be reformed along the lines of the one in Germany.
338. It was made quite clear to me that if I stepped out of line again I'd be out of a job.
339. Their predictions were hopelessly out of line with the actual results.
340. This year alone eight police officers have been killed in the line of duty.
341. He made little of his ordeal.
342. Who said they were cheaper - what a load of rubbish!
343. He liked the second series and I thought it was a load of crap.
344. Get a load of that, lads! Very nice.
345. You can't escape the long arm of the law.
346. The long and the short of it is that they are willing to start the work in January.
347. By the look of things, we won't be able to take our holiday till the autumn.
348. I'm worried that we're losing sight of our original objectives.
349. The plane crashed with serious loss of life.
350. "Do you have any tuna sandwiches?" "You're in luck - there's one left."
351. You can't choose who you play against - it's just the luck of the draw.

## Appendix 1.c:

## Example sentences used in the analysis of other phrasal structures:

1. the end-of-season play-offs
2. The train was delayed because of bad weather.
3. He spoke in a very matter-of-fact way about the accident.
4. They adopted a sensible, middle-of-the-road policy on defence spending.
5. An apple rolled out of the bag.
6. Professor Aitchison is out of town this week.
7. The patient is now out of danger.
8. The coffee machine is out of order.
9. Both she and her husband are out of work.
10. The dress was made out of velvet.
11. She dresses like a character out of a 19th centurary novel.
12. I paid for the computer out of my savings.
13. I took the job out of necessity because we had no money left.
14. You might like to come and see what we're doing out of interest.
15. Nine out of ten people said they liked the product.
16. No one got 20 out of 20 in the test.
17. He missed two practice sessions so he's out of the team.
18. I'm out of the habit of cycling to work.
19. My lawyer wants to settle out of court.
20. That radio looks so out of date.
21. an out-of-date phone directory
22. I have a map but I'm afraid it's out-of-date.
23. All out-of-pocket expenses will be reimbursed by the company.
24. an out-of-town shopping centre
25. Half the vote has been counted, and our candidate is still in the running.
26. She has a seat-of-the-pants ability to find the best way out of a crisis.
27. We in the West enjoy a standared of living undreamed of by the majority of people in the world.
28. These two lads from a remote village in Norway have enjoyed undreamed-of success with their first album.
29. It was not all that long ago that it was almost unheard-of for an unmarried couple live together.
30. Upwards of fifty thousand people assembled in the main square.
31. He was efficient at his job and well-thought-of by everyone.
32. It's a well-thought-of school.
33. The control panel uses all the newest technology and is considered state-of-the-art.
34. It's a helluva nice place.
35. We're going to have a helluva problem.
36. The new faster trains can do the journey inside two hours.
37. He finished it inside of two hours.

## Appendix 1.d:

## Example sentences used in the analysis of phrasal verbs:

1. The present schedule does not admit of modification.
2. The latest events admit of several interpretations.
3. The rule allows of no exceptions.
4. The evidence allows of only one interpretation - he was murdered by his wife.
5. Employees should avail themselves of the opportunity to buy cheap shares in the company.
6. The men claimed that the police had beaten the confession out of them.
7. Whatever became of that parcel you sent?
8. And Mickey Adams - I wonder what became of him.
9. She claimed that her cousin had ceated her out of her inheritance.
10. Did anything come of all those job applications?
11. I hope something good can come out of this mess.
12. She's been complaining of a bad back recently.
13. The team consists of four Europeans and two Americans.
14. It's a simple dish to prepare, consisting mainly of rice and vegerables.
15. I ate so much of it one day I was sick and that cured me of my addiction.
16. How did they dispose of the body?
17. It took a mere five minutes for the world champion to dispose of his opponent.
18. There is a growing movement to divest the monarchy of its remaining constitutional power.
19. She divested herself of her cumbersome attire.
20. Thousands of pensioners have been done out of millions of pounds as a result of the changes.
21. You never tell me how you feel - I always have to drag it out of you.
22. I dream of one day working for myself and not having a boss.
23. The minister was drummed out of office when it was discovered that he had been taking bribes.
24. You can't duck out of your responsibilities.
25. He dedicated his life to freeing the world from famine and disease.
26. I'd like to free myself of some of the responsibilities of this job.
27. I reckon her backache was just a way of getting out of the housework.
28. If I can get out of going to the meeting tonight I will.
29. I must get out of the habit of finishing off people's sentences for them.
30. If you get out of a routine, it's very hard to get back into it.
31. It was a really boring course and I don't think I got much out of it.
32. He was determined to get the truth out of her.
33. He wants to join the army when he leaves school, but I hope he'll grow out of the idea.
34. The idea for the story grew out of a strange experience I had last year.
35. I wanted to pay but she wouldn't hear of it.
36. I'd never heard of him before he won the prize.
37. It's a tiny country that most people have never heard of.
38. We haven't heard anything of Jan for months.
39. I prefer to keep out of arguments about money.
40. Keep me out of this!
41. Any creativity I had was soon knocked out of me at school.
42. Do you know of a god doctor?
43. Can you make anything of this information?
44. What do you make of the new boss?
45. I don't know what to make of it. Even the police seem baffled.
46. I think we make too much of the benefits of Western society.
47. He's so secretive - you'll have a hard time prizing any information out of him.
48. His promotion reeks of favouritism.
49. May I relieve you of that heavy bag?
50. The pickpocket delicately relieved him of his wallet.
51. Following the scandal, he was relieved of his post as deputy finance minister.
52. The committee's chairperson is to be relieved of her duties.
53. The general was relieved of his command in 1941.
54. Your hair and eyes remind me of your mother.
55. Our aim is to rid this government of corruption.
56. His behaviour does rather savour of hypocrisy.
57. We'll screw every last penny out of him.
58. Slip your shirt off and I'll listen to your heart.
59. The whole affair smacks of mismanagement and incompetence.
60. He just can't snap out of the depression he's had since his wife died.
61. Now come on, snap out of it. Losing that money isn't the end of the world.
62. During the negotiations, the union managed to squeeze several concessions from the management.
63. It's better to stay out of their arguments.
64. You don't know anything about this, so just stay out of it!
65. He was stripped of his knighthood after he was convicted of stealing from the company.
66. With some difficulty, he was able to talk his way out of paying the fine.
67. We'll have to think of a pretty good excuse for being late.
68. I think of him as someone who will always help me.
69. What do you think of my new dress?
70. I thought of you immediately when they said they wanted someone who could speak English.
71. He was thinking about the time he spend in the army.
72. This is the kind of toy that children will soon tire of.
73. He nevver tires of playing games on his computer.
74. Although they had signed the contract they tried to weasel out of the deal later.
75. He wasn't going to tell me, but I managed to worm it out him.
76. He promised he'd help me decorate, but now he's trying to wriggle out of it.

## Appendix 2: list of phrases

## Appendix 2. a <br> List of phrasal nouns:

1. affairs of state
2. article of faith
3. bag of bones
4. balance of payments
5. balance of power
6. the Bank of England
7. bicarbonate of soda
8. bill of fare
9. bill of rights
10. bird of paradise
11. bird of passage
12. bird of prey
13. the Black Hole of Calcutta
14. block of flats
15. board of education
16. captain of industry
17. centre of gravity
18. chamber of commerce
19. chamber of horrors
20. Chancellor of the Exchequer
21. chest of drawers
22. chief of staff
23. the Church of England
24. coat of arms
25. cock-of-the-walk
26. code of practice
27. C of E
28. comity of nations
29. the Commonwealth (of Nations)
30. communion of saints
31. contempt (of court) (DISOBEYING)
32. cost of living
33. cost of living index
34. council of war
35. court of inquiry
36. cream of tartar
37. crime of passion
38. the Day of Atonement
39. the Day of Judgment
40. day of reckoning
41. the Democratic Republic of Congo
42. Director of Public Prosecutions
43. division of labour
44. the Fall (of Man)
45. figure of eight
46. figure of fun
47. figure of speech
48. flag of convenience
49. the Former Yugoslav Republic of Macedonia
50. the Fourth of July
51. Friends of the Earth
52. front-of-house
53. the garden of Eden
54. gnashing of teeth, at gnash
55. Group of Eight
56. guard of honour
57. guest of honour
58. hall of fame
59. hall of residence
60. head of state
61. High Court of Australia
62. the holy of holies (RELIGIOUS PLACE)
63. the House of Commons
64. house of correction
65. house of God
66. the House of Lords
67. the House of Representatives
68. the Houses of Parliament
69. index of leading economic indicators
70. the Inns of Court
71. jack-of-all-trades
72. Jaws of Life
73. the Joint Chiefs of Staff
74. Justice of the Peace
75. letter of credit
76. lily of the valley
77. line of scrimmage
78. maid of honour
79. man of God
80. man of letters
81. man of straw (WEAK)
82. man of straw (IMAGINARY)
83. margin of error
84. Marshal of the Royal Air Force
85. Master of Arts
86. master of ceremonies
87. Master of Philosophy
88. Master of Science
89. atter-of-factness, at matter-of-fact
90. Member of Parliament
91. milk of magnesia
92. miscarriage of justice
93. mother-of-pearl
94. next of kin
95. order of magnitude
96. part of speech
97. peer of the realm
98. pieces of eight
99. the Pied Piper (of Hamelin)
100. place of worship
101. plaster of Paris
102. point of no return
103. point of order
104. point of view
105. port of call
106. power of attorney
107. the powers of darkness
108. presence of mind
109. the Prince of Darkness
110. Prince of Wales
111. prisoner of conscience
112. prisoner of war
113. rate of exchange
114. the Republic of Congo
115. right of way (DRIVING)
116. right of way (WALKING)
117. rite of passage
118. roll of honour
119. the rule of law
120. in/out of the running, at run
(POLITICS)
121. run-of-the-mill
122. school of thought
123. Secretary of State
124. show of hands
125. sign of the Zodiac
126. sleight of hand
127. soldier of fortune
128. son of a bitch
129. son of a gun
130. standard of living
131. Star of David
132. state of emergency
133. Stations of the Cross
134. stick of rock
135. stream of consciousness
136. survival of the fittest
137. tour (of duty)
138. the Tropic of Cancer
139. the Tropic of Capricorn
140. tug-of-love
141. tug-of-war
142. turn of events
143. turn of mind
144. turn of phrase
145. the United States of America
146. Vicar of Christ
147. vote of confidence
148. vote of no confidence
149. vote of thanks
150. work of art
151. block of flats, at apartment building/block
152. balance of trade, at balance of payments
153. C of E, at the Church of England
154. the Garden of Eden, at Eden
155. rate of exchange, at exchange rate
156. guest of honor, at guest of honour
157. Hall of Fame, at hall of fame
158. the Day of Judgment, at Judgment Day
159. The Former Yugoslav Republic of Macedonia, at Macedonia
160. man of the cloth, at man of God
161. the change (of life), at menopause
162. man of straw, at straw man (CRIME)
163. man of straw, at straw man (ARGUMENT)
164. tab of acid, at tab
165. undreamt of, at undreamed of
166. the Day of Atonement, at Yom Kippur

## Appendix 2.b:

List of Idioms and phrases.

1. of your own accord
2. take account of
3. stand accused of sth
4. come within an ace of sth
5. be out of action
6. out of action
7. a man of action
8. a piece/slice of the action
9. in advance of sth/sb
10. come of age
11. the age of consent
12. in aid of $\mathrm{sb} / \mathrm{sth}$
13. What's sth in aid of?
14. all of sth
15. any amount of
16. be on the side of the angels
17. apple of sb's eye
18. in the area/region of
19. be/come out of the ark
20. the Ark of the Covenant
21. be the armpit of sth
22. as of/from
23. make an ass of yourself
24. the back of beyond

25 . at/in the back of your mind
26. on the back of sth
27. on the back of $\mathrm{sb} / \mathrm{sth}$
28. be a badge of sth
29. bags of sth
30. hold the balance of power
31. a baptism of/by fire
32. be a barrel of laughs/fun
33. bed of nails
34. bed of roses
35. the beginning of the end
36. not believe a word of it
37. be the belle of the ball
38. give sb the benefit of the doubt
39. the best of a bad bunch/lot
40. at the best of times
41. best of all
42. best of luck
43. the best of both worlds
44. the best of (five)
45. have had the best of
46. make the best of
47. to the best of your ability
48. to the best of my knowledge/belief
49. with the best of them
50. get the better of sb
51. beyond a shadow of a doubt
52. be big of sb
53. birds of a feather
54. Birds of a feather flock together.
55. be a bit of all right
56. bit of fluff/stuff/skirt
57. not a bit of it
58. another/a second bite of the cherry
59. the bitter fruits of sth
60. paint a black picture of $\mathrm{sth} / \mathrm{sb}$
61. a blanket of sth
62. a blaze of sth
63. In the country of the blind, the oneeyed man is king.
64. not take a blind bit of notice
65. in the blink of an eye
66. get blood out of/from a stone
67. out of the blue
68. bluff your way into/out of sth
69. a bolt from/out of the blue
70. a bone of contention
71. born of sth
72. in the bosom of sth
73. be at the bottom of sth
74. the bottom drops/falls out of the market
75. from the bottom of your heart
76. get to the bottom of sth
77. be out of bounds
78. the bowels of sth
79. life is just a bowl of cherries.
80. one of the boys
81. screech/squeal of brakes
82. breach of the peace
83. be in breach of sth
84. break the back of sth
85. a breath of air
86. a breath of (fresh) air
87. a breath of fresh air
88. the best/pick of the bunch
89. a bunch of fives
90. a bundle (of joy)
91. a bundle of laughs
92. a bundle of nerves
93. burden of proof
94. not be in the business of
95. be none of sb's business
96. at the push of a button
97. the slice/share of the cake
98. call of nature
99. can of worms
100. make capital out of sth
101. take care of sb/sth
102. take care of sth
103. take care (of yourself)
104. have all the cares of the
world on your shoulders
105. in the case of
106. a case of
107. let the cat out of the bag
108. centre of attention
109. the turn of the century
110. change of scene
111. change of heart
112. the change (of life)
113. be a chapter of accidents
114. be of good cheer
115. the chill wind of sth
116. a/the gathering of the clans
117. be in a class of your own
118. be in a class by itself/of its own
119. be out of your class
120. clean bill of health
121. make a clean breast of it
122. come out of the closet
123. come down on sb like a ton of bricks
124. comedy of manners
125. be in command (of yourself)
126. out of commission
127. not have any concept/have no concept of sth
128. be of concern
129. out of condition
130. of little/no consequence
131. not of any/much consequence
132. conspiracy of silence
133. out of context
134. all/the four corners of the world/earth
135. out of/from the corner of your eye
136. the corridors of power
137. could count on (the fingers of) one hand
138. on the count of $3 / 4 / 5$
139. have the courage of your convictions
140. in the course of time
141. in/with the course of time
142. of course
143. of course not
144. (by) courtesy of
145. at the crack of dawn
146. the cradle of sth
147. the cream of sth
148. be the creature of $\mathrm{sb} / \mathrm{sth}$
149. creature of habit
150. be riding/on the crest of a wave
151. a crock (of shit)
152. not be sb's cup of tea
153. cut sb out of your will
154. There's no danger of that!
155. the best/happiest days of your
156. one of these days
157. one of those days
158. frighten/scare the (living)
daylights out of sb
159. in the dead of night/winter
160. the death of sth
161.
162.
163. delusions of grandeur
164. deprive sb of your company
165. out of your depth
166. in the depth(s) of somewhere
167. in the depth(s) of winter

251. make a fool of sb
252. make a fool of yourself
253. have feet of clay
254. put one foot in front of the other
255. the forces of evil
256. force of habit
257. lay the foundations of/for
258. frame of mind
259. frame of reference
260. give sb the freedom of
261. in front of
262. the frontiers of sth
263. fruits of the earth
264. Out of the frying pan into the fire.
265. be full of beans
266. be full of sth
267. be full of your own importance
268. be full of yourself
269. be full of the joys of spring
270. in the fullness of time
271. for the fun of it
272. make fun of sb/sth
273. a fund of sth
274. make a fuss of/over sb
275. gales of laughter
276. run the gamut of sth
277. let the genie out of the bottle
278. not have a/the ghost of a chance
279. the gift of the gab
280. the gift of gab
281. the/a glare of sth
282. the gnomes of Zurich
283. make a go of sth
284. what's the good of
285. a good deal of
286. by the grace of God
287. There but for the grace of

God (go I).
288. the grand old man of sth
289. the grandaddy of sth
290. The grass is always greener on the other side (of the fence).
291. grind the faces of the poor
292. be in the grip of sth
293. groan with/under (the weight of) sth
294. the groves of academe
295. the changing of the guard
296. be within hailing distance of somewhere
297. the hair of the dog (that bit you)
298. not know the half of it
299. have not heard the half of it
300. at the hands of sb
301. out of hand
302. a safe pair of hands
303. get the hang of sth
304. out of harm's way
305. not have any of it
306. a full/good/thick head of hair
307. can't make head nor tail of
sth
308. a (whole) heap of sth
309. the bottom of the heap
310. hear tell (of)
311. will never hear the end of it
312. have a heart of gold
313. have a heart of stone
314. in your heart of hearts
315. If you can't stand the heat, get out of the kitchen.
316. heave a sigh of relief
317. make heavy weather of sth
318. a heck of a
319. under the heel of sth or sb
320. come/follow hard/hot on the
heels of sth
321. the height of sth
322. for the hell of it
323. hell of a
324. get the hell out of somewhere
325. annoy/frighten/scare the hell out of sb
326. beat the hell out of sb
327. a hive of activity/industry
328. get hold of
329. get ahold of
330. make an honest woman (out)
of sb
331. do sb the honour of doing sth
332. be on the horns of a dilemma
333. have a horror of sth
334. horror of horrors
335. out of hours
336. at all hours (of the day and
night)
337. in sb's hour of need
338. house of cards
339. your idea of sth
340. The idea of it!
341. be the (living/spitting) image
of sb
342. be in and out of somewhere
343. come within an inch of sth
344. every inch of sth/somewhere
345. make an issue of sth
346. Jack-of-all-trades, master of none.
347. do/make a good/bad job of
sth
348. put sth out of joint
349. put sth out of joint
350. make a joke of sth
351. jolted sb into/out of sth
352. It's just one of those things.
353. in/out of keeping (with sth)
354. be another/a different kettle
of fish
355. a pretty/fine kettle of fish
356. next of kin
357. of the kind
358. kind of
359. of a kind
360. kiss of death
361. the kiss of life
362. knock the bottom out of sth
363. know sth like the back of
your hand
364. not that I know of
365. labour of love
366. a bit of a lad
367. Lamb of God
368. the land of the midnight sun
369. the Land of the Rising Sun
370. be in the land of the living
371. be in the land of nod
372. land of milk and honey
373. in the lap of luxury
374. in the lap of the gods
375.
376. hear/see the last of sth
377. not hear the end/last of sth
378. of late
379. be laughing on the other side
of your face
380. laugh out of the other side of your mouth
381. be laughed out of court
382. the law of the jungle
383. the law of averages
384. lay the ghost of sth (to rest)
385. take a leaf out of sb's book
386. be out of your league
387. leave go/hold of sth
388. leave of absence
389. take leave of your senses
390. come out of/in left field
391. the length and breadth of somewhere
392. the lesser of two evils
393. the letter of the law
394. take the liberty of doing sth
395. the lie of the land
396. the lay of the land
397. be a pack of lies
398. be a tissue of lies
399. for the life of you
400. life and soul of the party
401. be one/another of life's great mysteries
402. be (all) part of life's rich tapestry/pageant
403. lead/live the life of Riley
404. scare/frighten the life out of sb
405.
406.
407. in the light of sth
408. in light of

| 409. | make light of sth |
| :---: | :---: |
| 410. | be of like mind |
| 411. | line of sight |
| 412. | along the lines of sth |
| 413. | step/be out of line |
| 414. | be out of line with sth |
| 415. | in the line of duty |
| 416. | make little of sth |
| 417. | a load of |
|  | nsense/rubbish |
| 418. | Get a load of that! |
| 419. | the long arm of the law |
| 420. | the long and the short of it |
| 421. | by the look(s) of things |
| 422. | by the look of it |
| 423. | lose sight of sth |
| 424. | loss of life |
| 425. | there's a lot of it about |
| 426. | the lowest of the low |
| 427. | be in/out of luck |
| 428. | be the luck of the draw |
| 429. | with a bit of luck |
| $430 .$ | have a good/healthy pair of |
| 431. | make a |
|  | ght/evening/weekend of it |
| 432. | what sb is (really) made of |
| 433. | be made of money |
| 434. | of your own making |
| 435. | be the making of sb |
| 436. | have (all) the makings of sth |
| 437. | make much/a lot of sb |
| 438. | Do you want to make |
|  | ing/anything of it? |
| 439. | make a man (out) of sb |
| 440. | in the manner of sth |
| 441. | in a manner of speaking |
| 442. | not by any manner of means |
| 443. | all manner of sth |
|  | many happy returns (of the |
| 445. | on the margins of sth |
| 446. | marriage of convenience |
| 447. | the mass of sth |
| 448. | the man/woman of the match |

449. be a matter of confidence/luck/waiting
450. as a matter of course
451. be a matter of life and/or death
452. be a matter of opinion
453. That's a matter of opinion.
454. be a matter of record
455. be (only) a matter of time
456. make a meal (out) of sth
457. a man/woman of means
458. have the measure of $\mathrm{sb} / \mathrm{sth}$
459. give sb a dose/taste of their own medicine
460. a meeting of minds
461. in memory of sb
462. merchant of doom/gloom
463. be at the mercy of sb/sth
464. make a mess of sth
465. be in the middle of sth
466. (in) the middle of nowhere
467. in the midst of sth
468. the milk of human kindness
469. make mincemeat of sb
470. get sth out of your mind
471. 
472. 
473. 

474
475.
mind
476.
477.
478.
479.
480.
481.

482
483.
484.
485.
486.

487
488.
489.
490. make a monkey out of sb

| 491. | month of Sundays |
| :---: | :---: |
| 492. | be in one of your moods |
| 493. | mortification of the flesh |
| 494. | make the most of sth |
| 495. | the mother of all sth |
| 496. | a mountain of sth |
| $497 .$ | make a mountain out of a 11 |
| 498. | Out of the mouths of babes cklings. |
| 499. | make a muck of sth |
| 500. | cover/hide a multitude of sins |
| 501. | by the name of sth |
| 502. | go by the name of sth |
| 503. | in the name of sb |
| 504. | in the name of sth |
| 505. | in the name of sb/sth |
| 506. | in the name of God/heaven |
| 507. | the name of the game |
| 508. | under the name of |
| 509. | a nasty piece of work |
| 510. | be in the nature of things |
| 511. | be the nature of the beast |
| $512$ | Necessity is the mother of on. |
| 513. | this/our neck of the woods |
| 514. | in the neighbourhood of sth |
| 515. | have nerves of steel |
| 516. | a new lease of life |
| 517. | in the nick of time |
| 518. | nine times out of ten |
| 519. | ninety-nine times out of a |
|  |  |
| 520. | have none of sth |
| 521. | make (a) nonsense of sth |
| 522. | north of sth |
| 523. | keep your nose out of sth |
| 524. | put sb's nose out of joint |
| 525. | take note of sth |
| 526. | nothing of the sort/kind |
| 527. | be nothing short of... |
| 528. | from/out of nowhere |
| 529. | make a nuisance of yourself |
| 530. | any number of things |
| 531. | by (sheer) force/weight of |
|  |  |

532. 
533. 
534. 
535. 
536. of the old school
537. be one of a kind
538. the order of the day
539. of the order of
540. in the order of
541. out of
542. out of it
543. out of your mind/head
544. outside of
545. page in/of history
546. on/under pain of death
547. paint a bleak/gloomy/rosy picture of sth
548. have sb in the palm of your hand
549. have sb eating out of the palm of your hand
550. sb couldn't act/argue/fight
their way out of a paper bag
551. be part and parcel of sth
552. part of the furniture
553. the best/better part of
554. parting of the ways
555. pass the time of day
556. the patience of Job
557. have the patience of a saint
558. the patter(ing) of tiny feet
559. be in the pay of sb
560. a pearl of great price
561. of all people
562. man/woman of the people
563. in the person of sb
564. out of perspective
565. pervert the course of justice
566. in phase/out of phase
567. the pick of sth
568. the pick of the bunch
569. be the picture of
health/innocence
570. out of the picture
571. piece of cake
572. give sb a piece of your mind
573. piece of ass
574. make a pig's ear of sth
575. make a pig of yourself
576. take the piss (out of) sb or sth
577. pissed out of your
brain/head/mind
578. pit of your stomach
579. in place of sb/sth
580. out of place
581. take the place of $\mathrm{sb} / \mathrm{sth}$
582. in/out of play
583. pluck sth out of the air
584. out of plumb
585. in/out of pocket
586. point sb towards/in the direction of sth
587. make a point of doing sth
588. be on the point of (doing) sth
589. think poorly of sb/sth
590. your eyes pop out of your head
591. pound of flesh
592. do sb a power of good
593. make a practice of sth
594. An ounce of prevention is worth a pound of cure.
595. price yourself out of the market
596. prick the bubble (of sth)
597. be the pride of
somewhere/sth
598. have/take pride of place
599. in/out of print
600. be in the process of doing sth
601. The proof of the pudding (is
in the eating).
602. prophet of doom
603. blow sth out of proportion
604. vanish/go up/disappear in a
puff of smoke
605. pull sth out of the bag/hat
606. quality of life
607. be a question of doing sth
608. be out of the question
609. be no question of (doing) sth
610. at a rate of knots
611. ray of sunshine
612. a reach of the imagination
613. within the realms of possibility
614. by reason of
615. to the best of my recollection
616. in the region of
617. a reign of terror
618. in a good/bad state of repair
619. the path of least resistance
620. the line of least resistance
621. in respect of sth
622. as a result of sth
623. by return (of post)
624. ride (on) a wave of sth
625. by right of
626. ring of truth
627. a riot of colour
628. get a rise out of
629. take a rise out of
630. at the risk of doing sth
631. run the risk of doing sth
632. rivers of sth
633. Get out of the road!
634. come to the end of the road
635. not a bed of roses
636. round of applause
637. rule of thumb
638. the run of sth
639. run sb out of town (on a rail)
640. run of
641. run out of steam
642. be on the lowest/bottom rung of the ladder
643. be sacrificed on the altar of sth
644. be the salt of the earth
645. take sth with a pinch of salt
646. take sth with a grain of salt
647. the sands of time are running out
648. Sarcasm is the lowest form of wit/humour.
649. to say nothing of ...
650. ahead of schedule
651. the scheme of things
652. school/university of life
653. school of hard knocks
654. scrape (the bottom of) the barrel
655. the scum of the earth
656. seal of approval
657. in search of sth
658. out of season
659. the season of goodwill
660. by the seat of your pants
661. seat of learning
662. can't see further than the end
of your nose
663. see the colour of sb's money
664. see the back of $\mathrm{sb} / \mathrm{sth}$
665. see the last of
something/someone
666. see the point of
667. not see hide nor hair of
668. see the light of day
669. sell sb a bill of goods
670. be of service (to sb)
671. shades of grey
672. be in/under the shadow of sth
673. be a shadow of your former
self
674. shaft of light
675. in two shakes (of a lamb's
tail)
676. a couple of shakes
677. die of shame
678. in the shape of
679. the shape of things to come
680. have your (fair) share of sth
681. come out of your shell
682. bring sb out of their shell
683. the shit out of $\mathrm{sb} / \mathrm{sth}$
684. make short work of sth
685. short of breath
686. not be short of a bob or two
687. make short shrift of sth
688. the other side of the coin
689. come down on one side of the fence or other
690. on the right/wrong side of the law
691. on the right/wrong side of number
692. the wrong/other side of the tracks
693. this side of
694. get on the right/wrong side of sb
695. keep on the right side of sb
696. Get out of my sight!
697. out of sight
698. lose sight of
699. Out of sight, out of mind.
700. sign of the times
701. You can't make a silk purse out of a sow's ear.
702. sinews of war
703. sing the praises of $\mathrm{sb} /$ sth
704. sit at the feet of sb
705. six of the best
706. six of one and half a dozen of
the other
707. that's about the size of it
708. by the skin of your teeth
709. jump/leap out of your skin
710. a slice of life
711. slice of the cake
712. slip of the tongue
713. come up/out smelling of roses
714. snatch victory (from the jaws of defeat)
715. be something of a sth
716. somewhat of
717. (and) that sort of thing
718. of sorts
719. of a sort
720. be out of sorts
721. sort of
722. sort of
723. sow the seeds of sth
724. in/within a short space of time
725. in/within the space of six weeks/three hours
726. none to speak of
727. no sth to speak of

| 728 | make a spectacle of yourself | 767 | tale of woe |
| :---: | :---: | :---: | :---: |
| 729 | spin out of control | 768 | talking of sb/sth |
| 730 | be the spitting image of | 769 | speaking of sb/sth |
| 731 | the spit (and image) of | 770 | be the talk of somewhere |
| 732 | spur-of-the-moment | 771 | be the talk of the town |
| 733 | the staff of life | 772. | beat/knock/whale the tar out |
| 734 | stand in the way of sth/sb | of sb |  |
| 735 | stand the test of time | 773 | teeter on the brink/edge of sth |
| 736 | can't stand the sight of | 774 | terms of reference |
| 737 | steer clear of | 775 | in terror of your life |
| 738 | a few/couple of steps | 776 | at the end of your tether |
| 739 | out of step | 777 | thin end of the wedge |
| 740 | step out of line | 778 | out of thin air |
| 741 | made of sterner stuff | 779 | a thin time (of it) |
| 742 | take the sting out of | 780 | make a big thing (out) of sth |
| 743 | stop short of sth | 781 | (just) one of those things |
| 744 | It's/That's the story of my | $\begin{aligned} & 782 . \\ & 783 . \end{aligned}$ | a thing of the past think better of sth |
| 745 | like a streak of lightning | 784 | think nothing of sth |
| 746 | on the strength of sth | 785 | to sb's way of thinking |
| 747 | by no stretch of the ation | $\begin{aligned} & 786 . \\ & 787 . \end{aligned}$ | think highly/well/a lot of sb think the world of sb |
|  | not by any stretch of the ation | $\begin{aligned} & 788 . \\ & 789 \end{aligned}$ | not think much of sb/sth be under threat of sth |
| 749 | stretch the length of sth | 790 | on the threshold of sth |
| 750 | strike at the heart of sth | 791 | a matter/question of time |
| 751 | of every stripe | 792 | of all time |
| 752 | at the stroke of a pen | 793 | Time is of the essence. |
| 753 | at/on the stroke of sth | 794 | be (all) out of time |
| 754 | beat/kick/knock the stuffing | 795 | have a lot of time for sb |
| out of sb |  | 796 | run out of time |
| 755 | knock/take the stuffing out of | 797. | ahead of time |
| b/sth |  | 798 | at your time of life |
| 756 | as if it is going out of style | 799 | give sb the time of day |
| 757 | all of a sudden | 800 | ahead of your time |
| 758 | think the sun shines out (of) | 801 | the time of your life |
| sb's arse/backside |  | 802 | be on the tip of your tongue |
| 759 | lord/master/mistress/king/que | 803 | tip of the iceberg |
| en of all you survey |  | 804 | the toast of |
| 760 | get into the swing of it/things | 805 | like a ton of bricks |
| 761 | sword of Damocles | 806 | too much of a good thing |
| 762 | in/out of sync | 807 | tool of the trade |
| 763 | get sth out of your system | 808 | be on top of sth |
| 764 | table of contents | 809 | on top of sth |
| 765 | take it out of sb | 810 | on top of the world |
| 766 | take a lot out of sb | 811 | off the top of your head |

812. at the top of your voice
813. be in/out of touch
814. a tower of strength
815. be on the track of $s b /$ sth
816. in the tradition of $\mathrm{sb} / \mathrm{sth}$
817. be on the trail of sb/sth
818. be a trick of the light
819. trick of the trade
820. the trooping of the colour
821. a turn of the screw
822. speak/talk out of turn
823. in the twinkling of an eye
824. be of two minds
825. be two of a kind
826. That makes two of us.
827. the unacceptable face of sth
828. be (of) no use
829. be (of) (any/some) use
830. make use of sth
831. the use of sth
832. What's the use of...?
833. this vale of tears
834. Variety is the spice of life.
835. on the verge (of)
836. to the verge of
837. in the vicinity of
838. be a victim of your own
success
839. in view of sth
840. villain of the piece
841. make a virtue (out) of sth
842. in the wake of
843. walk of life
844. clouds of war
845. wash your hands of sth
846. waste of space
847. talk your way into/out of sth
848. go out of your way
849. be out of the way
850. way of life
851. by way of
852. weapons of mass destruction
853. of the week
854. well out of sth
855. have a whale of a time
856. whale of a
857. What of it?
858. come within a whisker of (doing) sth
859. be wide of the mark
860. in the wilds (of somewhere)
861. get wind of sth
862. take the wind out of sb's sails
863. go out (of) the window
864. not get a wink of sleep
865. wipe sth off the face of the earth/globe
866. with the wisdom of hindsight
867. not be beyond the wit of man/sb
868. frighten/scare sb out of their wits
869. frighten/scare the wits out of sb
870. be out of the woods
871. come/crawl out of the woodwork
872. by word of mouth
873. in words of one syllable
874. take the words out of sb's mouth
875. man/woman of your word
876. be in work/out of work
877. in a world of your own
878. a man/woman of the world
879. out of this world
880. the ways of the world
881. a world of difference
882. make a world of difference
883. Worship at the shrine/altar of
sth
884. get the wrong end of the stick
885. for a man/woman/person of
his/her years
886. of the year
Appendix 2.c
List of other phrases
887. be
888. end-of-season
889. because of
890. end-of-terrace
891. hard of hearing
892. left of centre
893. matter-of-fact
894. matter-of-factly, at matter-of-fact
895. middle-of-the-road
896. out of (NO LONGER IN)
897. out of (MADE FROM)
898. out of, at out of (MADE FROM)
899. out of (BECAUSE OF)
900. out of (FROM AMONG)
901. out of (NOT INVOLVED)
902. out-of-court
903. out-of-date
904. out-of-pocket expenses
905. out-of-town
906. seat-of-the-pants, at seat (BOTTOM
PART)
907. unheard-of
908. undreamed of
909. undreamt of
910. unheard-of
911. upward(s) of
912. well-thought-of
913. state-of-the-art
914. hell of a, at helluva
915. inside of, at inside (TIME)
916. left of center, at left of centre
917. of, at out of (MADE FROM)

## Appenix 2.d

List of phrasal verbs

1. admit of sth
2. allow of sth
3. avail yourself of sth
4. beat sth out of sb
5. become of sb/sth
6. cheat sb out of sth
7. come of sth
8. come out of sth
9. complain of sth
10. consist of sth
11. cure sb of sth
12. dispose of $\mathrm{sb} / \mathrm{sth}$
13. divest sb of sth
14. do sb out of sth (CHEAT)
15. drag sth out of sb
16. dream about/of sth
17. drum sb out of sth
18. duck out of sth
19. free sb from/of sth
20. get out of sth (AVOID)
21. get out of sth (STOP)
22. get sth out of sth (ENJOY)
23. get sth out of sb (PERSUADE)
24. grow out of sth (CLOTHES)
25. grow out of sth (INTEREST)
26. grow out of sth (IDEA)
27. hear of sth (NOT ALLOW)
28. hear of sb/sth (KNOW)
29. hear sth of sb (RECEIVE NEWS)
30. keep (sb/sth) out of sth
31. knock sth out of sb
32. know of sb/sth
33. make of $\mathrm{sth} / \mathrm{sb}$ (OPINION)
34. make sth of sth (VALUE)
35. prize sth out of sb
36. reek of sth
37. relieve sb of sth (OBJECT)
38. relieve sb of sth (JOB)
39. remind you of $\mathrm{sth} / \mathrm{sb}$
40. rid $\mathrm{sb} / \mathrm{sth}$ of $\mathrm{sth} / \mathrm{sb}$
41. savour of sth
42. screw sth out of sb
43. slip out of sth
44. smack of sth
45. snap out of sth
46. squeeze sth out of sb
47. stay out of sth
48. strip sb of sth
49. take sb out of themselves
50. talk sb out of sth
51. think of sth (IDEA)
52. think of sth/sb (OPINION)
53. think of/about sb/sth (IMAGINE)
54. tire of sth/sb
55. tire of sth
56. weasel out of sth
57. worm sth out of sb
58. wriggle out of sth
59. wring sth from/out of sb
60. write sb out of sth

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[^0]:    Sources: Weekley's " An Etymological Dictionary of Modern English"; Klein's "A Comprehensive Etymological Dictionary of the English Language"; "Oxford English Dictionary (second edition)"; "Barnhart Dictionary of Etymology"; Ayto's " $20^{\text {th }}$ Century Words"; and Chapman's "Dictionary of American Slang".

