Extraction and Formalization of Support Verb Paraphrases from Corpora

Applications in Machine Translation

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Outline

- Aim of the Study, Goals and Best Scenario

- Motivation
  - Why Bilingual Paraphrases?
  - Why Support Verbs?
  - Importance of Multi-word Identification for Machine Translation

- Background
  - Task Definition
  - The Corpus
  - Overview on Machine Translation
  - Overview on Paraphrasing

- Methodology
  - Starting Point

- Conclusions and Prospectives
This study performs linguistic analysis and computational formalization of constructions where **bilingual short paraphrases** occur, with the main purpose of using them in MT.

Examples:

- *make a call* = *fazer um telefonema* = *fazer uma chamada* = *telefonar*
- *make a living of N* = *governar a vida de N* = *viver de N*

- *fazer uma investigação* = *make an investigation* = *perform an investigation* = *investigate*
- *fazer uma visita* = *pay a visit* = *visit*
1. assemble a bilingual corpus of lexicalizations “verb + complement” where the main verb has a weak semantic value, the so called “support verbs”, or “light verbs”, such as “take” in “take a walk” (EN) or “fazer” in “fazer uma apresentação” (PT)

2. identify and build EN-PT and PT-EN syntactic-semantic correspondence rules for support verb constructions (SVCs) and study transfer mechanisms between the two languages.

3. create rules and requirements to find short paraphrases.
General Goals

- Create sharable bilingual lexical resources (compile sets of SVCs translations and equivalent paraphrases for a pair of languages)
- Build a tool for automated extraction of short paraphrases
- Make methodology be suitable for anyone working on MT or bilingual lexicography
- Apply results to an MT system
Value of the Results

- **Machine Translation**
  - valuable resource for PT-EN or EN-PT MT system translation pairs
  - high significance for similar work on other languages or language pairs

- **Paraphrase-lexica represent a valuable resource for many other NLP-applications**
  - Information Extraction (IE)
  - Text Mining (TM)
  - Information Retrieval (IR)
  - Summarization (S)
  - Question-Answering (Q&A)
Value of the Results

Importance of Paraphrases in Related Fields

- Literature
- Translation
- Linguistics
- NLP
Why Paraphrases?

Literature

- Closely related to analysis, interpretation and synthesis
- Recognized as repeating content but conveying it with different expressions

Translation

- Translation theories are deeply concerned with and involved in the field of paraphrasal existence and use as well. In general terms, free translation is a set of paraphrases which represent the same idea conveyed from a source language into a target language
Central to many linguistic theories which consider it both an integral part of a speaker’s linguistic competence and a central tool for language modeling.

Associated with synonymy. At the lexical level, synonymy concerns words and phrases. At the syntactical level, synonymy means keeping the same meaning in a sentence with a different structure.

Barzilay & McKeown, 2001 pointed out: “Many linguists (Halliday, 1985; de Beaugrande and Dressler, 1981) agree that paraphrases retain “approximate conceptual equivalence”, and are not limited only to synonymy relations.”
Linguistic Theories

- **Meaning-Text Theory (MTT) (cf. Mel’čuk, 1988)**
  - views language as a “translation system”, a series of modules through which a meaning is converted into a well-formed sentence
  - Paraphrasing rules ensure that all the sentences one can produce to express a particular meaning are semantic equivalents of one another

  Milićević, 2005
  - proposes new types of paraphrasing rules capable of handling paraphrase-semantic equivalence rules, operating at the semantic level of utterances representation

  - transformation are instances of paraphrasal representation where paraphrases are surface structures for the same deep structure
  - Ex: transformational rules such as active to passive voice
As initially stated, the study of paraphrases also plays a very important role in natural language interpretation and generation and is used in many different NLP applications.

Some of today’s NLP systems use automated methods to collect paraphrases.
NLP Relevant Work

- Proceedings of the ACL 2003 Workshop on Paraphrasing
- Other thesis
  - Mark Dras (1999)
- Papers
  - Barzilay & McKeown, 2001
  - Dolan et al., 2004
  - Poibeau, 2004
  - Pang et al., 2003
  - Barzilay & Lee, 2003
  - Shinyama, 2003
  - Quirk et al., 2004
  - Bannard & Callison-Burch, 2005
  - Resnik, 2005
  - Satoshi, 2005
- People
  - Dekang Lin, Lillian Lee, Kevin Knight, Satoshi Sekine, Yusuke Shinyama, Hua Wu
**Paraphrase** *(within the scope of this work)*

- substitute technique to express the same meaning in a phrase
- replacement by semantic-equivalent phrase or word
Why Support Verbs?

SVCs present translation difficulties for several reasons:

1- SVerbs in EN and PT are of different type (eg. *fazer adiamentos* => *to give extensions*; *fazer perguntas* => *to ask questions*; *fazer o exame* => *to take the exam*; *fazer uma visita* => *to pay a visit*). Even though some SVerbs can be translated literally (eg. *fazer dinheiro* => *to make money*), most of them have no literal translation (eg. *fazer uma operação* => *to have an operation*; *fazer perguntas* => *to ask questions*).

2- Some SVCs are frozen in one or in both languages, being considered fully idiomatic (collocations) (eg. *fazer boa figura* => *to do well*; *fazer o sangue subir à cabeça* => *make the blood rush to one’s head*; and less common *fazer o papel de pai* => *to play the father*).

3- Several expressions in PT either require SVerbs or the SVC is more often used and/or preferred, simply corresponding in EN to a lexical verb (eg. (preferred) *fazer publicidade = publicitar* => *to advertise*; (preferred) *fazer um esboço = esboçar* => *to draft*; *fazer compras* => *to shop*; (preferred) *fazer a barba = barbear* => *to shave*).

4- Many SVCs match with lexical verb variations, expressing exactly the same meaning (eg. *tirar fotocópias = fotocopiáar* => *to make copies* = *to xerox = to photocopy*; *fazer uma doação = doar* => *to make a donation/donations* = *to donate*).
Why Support Verbs?

- Support verbs are interesting to our research because they often represent phrasal alternatives = paraphrases

  Simple example

  \textit{to pay a visit} = \textit{to visit}

- The importance of studying these constructions is based on their abundance in language and their study is essential for MT

- An MT system cannot ignore the the meaning of “\textit{pay}” in “\textit{pay attention}”, for instance.

- We assume the fundamental principle that elementary sentences/phrases and not the words carry units of meaning (meaning is not compositional). We also assume the relation of nominalization as defined by Harris, 1964
Relevant Work on SVCs/Light Verbs

- The problem of the translation of SVCs is known and being tackled since the sixties.
- Dras, 1995 (Anglo-Saxon school).
- Mel’čuk, 2003 (paraphrasing widely published in French).
  - Mel’čuk notion of "lexical function" (= formalism for description and use of combinatorial properties of individual lexemes) allows for an elegant solution of the problem by shifting the work load to the compilation of monolingual collocation dictionaries.
Relevant Work on SVCs/Light Verbs

- Lexical functions are used, e.g., in the wide-coverage MT-system ETAP; see the numerous publications by Apresjan, Boguslavsky and their co-workers.
- The Grenoble MT-group is also working with LFs across languages (e.g., the project Papillon).
- Thierry Fontanelle and the Decide project.
- FrameNet.
- Central references such as Allerton and Grimshaw.
Importance of multi-word for MT

State of the Art MT

- MT nowadays – are we there yet?

- Studies analyzing MT progress and comparative evaluations of systems from the 1970’s with today’s systems don’t conclude that the new systems are significantly better than the old ones (see Hutchins, 2003)

- Where & why MT still fails and what we must DO See Challenges for MT (Barreiro & Ranchhod, 2004)
Several MT outputs

English sentence: *Then the operatives are more likely to make mistakes when set-ups are constantly changing.*

Manual translation from Compara: *E os mecânicos estão mais sujeitos a cometerem erros quando os sistemas estão constantemente a mudar, e isso conduz a um aumento de desperdício.*

MT outputs:

<table>
<thead>
<tr>
<th>Translation Engine</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>FreeTranslation</td>
<td>Então o operativo são mais possível <strong>cometer erros</strong> quando organizações constantemente mudam.</td>
</tr>
<tr>
<td>Systran</td>
<td>Então os operatives são mais prováveis <strong>fazer erros</strong> quando as instalações estão mudando constantemente.</td>
</tr>
<tr>
<td>E-T Server</td>
<td>Então os operadores são mais prováveis para <strong>tornar erros</strong> quando as situações estão mudando constantemente.</td>
</tr>
<tr>
<td>Amikai</td>
<td>Então as operações são mais provável <strong>cometer erros</strong> quando jogo-ups constantemente está mudando.</td>
</tr>
</tbody>
</table>

Questions to Be Answered

1. How research into one linguistic phenomenon would be of interest to anyone but another linguist?

2. How would a study of paraphrases based on SVCs and their lexical equivalents benefit MT?

Exs:  take(vt) place = occur(vi) = happen(vi)

“most of the action must take place in the same studio set” => “a maior parte da ação deve desenrolar-se no mesmo espaço cênico”

make(vt) reparation = compensate(vi)

“It was not too late to make reparation for that. => Não era tarde demais para recuperar o mal cometido.”
Methodology

- Methods for identifying candidate constructions in corpora
- How are the paraphrases arrived at?
- How are these pairs constructed?
Methods for SVC Extraction and Treatment

Monolingual SVC extraction and treatment
- EN Corpora
- PT Corpora
- EN SVCs
- PT SVCs
- Automatic mapping + hand correction

Bilingual EN-PT and PT-EN extraction and treatment
- EN-PT Parallel Corpora
- PT-EN Parallel Corpora
- EN SVC → PT SVC
- PT SVC → EN SVC
- Automatic mapping + hand correction
<table>
<thead>
<tr>
<th>SVC Grammar to a Monolingual Text</th>
<th>Results of Application of a Simple Nooj SVC Grammar to a Monolingual Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>concerned in it were</td>
<td>taking their pleasure/ quietly, and they were not of the sex which is supposed to</td>
</tr>
<tr>
<td>re over, and he was</td>
<td>taking the rest/ that precedes the great rest. He had a narrow, clean-shaven</td>
</tr>
<tr>
<td>sion Ralph Touchett</td>
<td>took no interest/ whatever; he stood with his hands in his pockets, looking g</td>
</tr>
<tr>
<td>in she prepared to</td>
<td>take her departure/ . &quot;Your sister must be a great gossip. Is she accustomed to</td>
</tr>
<tr>
<td>argument; you always</td>
<td>take the opposite ground/ I don't see what you've against her except that she's so o</td>
</tr>
<tr>
<td>; she has evidently</td>
<td>taken a great fancy/ to her.&quot; &quot;What is it you wish her to do?&quot; Edmund Ludlow as</td>
</tr>
<tr>
<td>s as well as resolute,</td>
<td>took his way back/ to his lodging with the feeling of a man defeated. He was n</td>
</tr>
<tr>
<td>American school and</td>
<td>took a degree/ at an American university, after which, as he struck his fa</td>
</tr>
<tr>
<td>tant, remounted and</td>
<td>took his departure/ before dinner; and an hour after this meal was ended Mr. an</td>
</tr>
<tr>
<td>dea that she hadn't</td>
<td>taken the trouble/ to listen to it. Of course I talk like an American--I can't</td>
</tr>
<tr>
<td>unted them. I never</td>
<td>took much notice/ of the classes. That's the advantage of being an American h</td>
</tr>
<tr>
<td>new. I've heard you</td>
<td>take such opposite views/ .&quot; &quot;I'm on the side of both. I guess I'm a little on the si</td>
</tr>
<tr>
<td>pon her, and Isabel</td>
<td>took a fancy/ to the young ladies, who appeared to her to show a most ori for th</td>
</tr>
<tr>
<td>hat centre that she</td>
<td>took the train/ the station nearest to Gardencourt, where Isabel and Ra</td>
</tr>
<tr>
<td>&quot;So few people will</td>
<td>take the trouble/ .&quot; Miss Stackpole, in this undertaking, appeared to shrink of</td>
</tr>
<tr>
<td>I see. And then?&quot;</td>
<td>Take right hold/ something.&quot; &quot;Well, now, what sort of thing?&quot; &quot;Anything after</td>
</tr>
<tr>
<td>n!&quot; CHAPTER 11 He it. He was about to</td>
<td>took a resolve/ after this not to misinterpret her words even when Miss Sta</td>
</tr>
<tr>
<td>they stopped and he</td>
<td>took a step/ which would astonish all his friends and displease a great</td>
</tr>
<tr>
<td>it seems to me I'm</td>
<td>took her hand/ . &quot;Ah, Lord Warburton, how little you know me!&quot; Isabel said</td>
</tr>
<tr>
<td>infinitely yet; I've</td>
<td>taking the best way/ . If you'll be my wife, then I shall know you, and when I te</td>
</tr>
<tr>
<td>ung man from Boston</td>
<td>taken a little time/ to think of it, because that seems more respectful. But I s</td>
</tr>
<tr>
<td>rsecute her he must</td>
<td>take positive possession/ of her. The sentiment in which she sought refuge after</td>
</tr>
<tr>
<td>d Ralph Touchett to</td>
<td>take the consequences/ read</td>
</tr>
<tr>
<td>girl she was. She's</td>
<td>take a walk/ ; foremost among which was his being left to perceive how li with</td>
</tr>
<tr>
<td>u don't know how to</td>
<td>taking different views/ her in the garden, and when he had assented with that</td>
</tr>
<tr>
<td>nize; but it so far</td>
<td>take such ideas/ , a different colour, and turning away from her old ideals.</td>
</tr>
<tr>
<td>reality and he had</td>
<td>took the edge/ . Mr. Goodwood does, however; and that's what I like about h</td>
</tr>
<tr>
<td>hat his imagination</td>
<td>taken no pains/ from too sharp a recognition that, in spite of his suspecti</td>
</tr>
<tr>
<td>of course if you'll</td>
<td>took a flight/ to ask questions the answers to which would involve only th</td>
</tr>
<tr>
<td>say. If you do, you</td>
<td>take a companion/ and that he remained in his chair a long time beyond the ho</td>
</tr>
<tr>
<td>for being quick to</td>
<td>take a great responsibility/ --some decayed gentlewoman, with a darned cashmere</td>
</tr>
<tr>
<td>n waves, her glance</td>
<td>take a hint/ and dyed</td>
</tr>
<tr>
<td>enquired. &quot;Yes, we</td>
<td>took a backward flight/ .&quot; &quot;You frighten me a little, but I think I'm right,&quot; said</td>
</tr>
<tr>
<td>due to any one who</td>
<td>take the train/ that was meant as good advice. His advice had perhaps helpe</td>
</tr>
<tr>
<td>surance the visitor</td>
<td>took the tone/ . It rested upon two figures which, in spite of increasing d</td>
</tr>
</tbody>
</table>
| re. Ralph Touchett               | took his leave/ again. We've so much to do la-bas." "Are you not tired?"
| ther well enough to              | took his refreshment/ of authority; and she was a passive spectator of the operat |
| w, the golden light              | take their ease/ |
| no talents even; I               | took a deeper tone/ ; after which Isabel fully expected her friend would scold h |
| Madame Merle's eyes              | took my measure/ wherever he could find it, and he would not have forgotten |
|                                 | took the same direction/ ; but every now and then Isabel heard the Countess, at somet |
|                                 | ; then she looked serenely at her neighbour. "You know I nev |
EN-PT Parallel Corpora

- COMPARA
  http://www.linguateca.pt/COMPARA/
  (cf. Frankenberg-Garcia & Santos, 2003)

- corpus based on Portuguese-English and English-Portuguese source texts and translations (literature)
- over one million words for each language
Results of your search

You are welcome to use the results of your COMPARA search queries for research and education, provided the source is acknowledged. To cite specific texts from the corpus, click on the blue code next to them for their full reference. To cite the corpus as a whole, please refer to COMPARA 6.7.1 anotado http://www.linguatera.pt/COMPARA/ [14-Feb-2006]

Short description of the corpus used in the present search:

<table>
<thead>
<tr>
<th>Portuguese words</th>
<th>English words</th>
<th>Alignment units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1347280</td>
<td>1491766</td>
<td>90001</td>
</tr>
</tbody>
</table>

23 instances found.

Concordance

Search string: "took" "place".

**ERDLA**(929): Sutcliffe tapped the side of his long nose with his index finger as he uttered these words, dodging his spectacles and causing them to crash into his tea-cup -- for this conversation took place in the Senior Common Room, not long after Robyn's arrival at Rummidge.

**ERDLA**(1253): It took place on a fine October day.

**ERK1A**(1260): A certain sequence of events took place earlier this evening, and as a consequence, when I last left Mr Brodsky a few hours ago, he was sipping a small glass of whisky.

**ERK1A**(307): So much so that after his arrival at Darlington Hall, even the brief exchanges necessary to communicate information relating to work took place in an atmosphere of mutual embarrassment.

**ERNG3**(43): It did not so much as occur to her that it could have been possible to talk to other women about what was asked in the conversations with her husband that never took place.

**ERNG3**(43): Ao princípio da noite verifica-se uma certa sequência de acontecimentos e, como resultado disso, quando deixei o Sr. Brodsky, há poucas horas, ele estava a beber um pequeno whisky.

**ERK1A**(307): A tal ponto que, depois da sua ida para Darlington Hall, até as breves trocas de palavras necessárias para transmitir informações relacionadas com o trabalho se faziam numa atmosfera de embargo muito.
<table>
<thead>
<tr>
<th>EN: Sutcliffe tapped the side of his long nose with his index finger as he uttered these words, dislodging his spectacles and causing them to crash into his tea-cup -- for this conversation <strong>took place</strong> in the Senior Common Room, not long after Robyn's arrival at Rummidge.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT: Sutcliffe esfregara de lado o seu comprido nariz com o dedo indicador ao proferir estas palavras, deslocando os óculos e fazendo-os cair na chávena de chá, pois esta conversa <strong>teve lugar</strong> na sala dos professores, pouco tempo depois da chegada de Robyn a Rummidge.</td>
</tr>
<tr>
<td>EN: It <strong>took place</strong> on a fine October day.</td>
</tr>
<tr>
<td>PT: <strong>Realizou-se</strong> num belo dia de Outubro.</td>
</tr>
<tr>
<td>EN: I don't know what <strong>took place</strong>.</td>
</tr>
<tr>
<td>PT: Não sei o que <strong>se passou</strong>.</td>
</tr>
</tbody>
</table>

**Figure 4: COMPARA search results**
More EN-PT Parallel Corpora

- Europarl

- NATools
NOMLEX Extension

1. Identification of the support verbs
2. Mapping support verb arguments to nominalization arguments
3. Categories of support verbs – semantic content
   - Special complements of support verbs plus nominalizations
   - Classification of support verbs
4. Dictionary build
NOMLEX Extension

Co-occurrence of nominalizations with support verbs:

"launch an attack"
"take a walk"

- Design extended nominalization entries to capture information about these support verbs (Proteus Project Memorandum)
- Annotate all the nominalizations in the Penn Tree Bank
- Extend and validate the entries in NOMLEX
NOMLEX entry for destruction
Some SVC Classes

PT Nouns Semantic Groups Co-occurring with Support Verbs

- **MOVEMENT**
  - With DAR - caminhada, curva(s), passeio, salto, volta, cambalhotas, pulos, etc.
  - With FAZER - pirueta, desvio, entrada, saída, pausa, etc.

- **PHYSICAL AGGRESSION**
  - With DAR - estalo, bofetada, sova, surra, golpe, cornada, pancada, murros, etc.

- **DISEASES AND SYMPTOMS**
  - With TER - acne, anemia, diabetes, lesão, ataque, infarte, gripe, constipação, depressão, crise, diarreia, febre, enjoo, sofoco, vertigem, arrepio, etc.
  - With APÁNHAR - gripe, constipação, depressão, etc.

- **ACTIONS RELATED WITH SENSES**
  - With DAR - abraço, beijo, gemido, grito, lambidela, olhada, sopro, suspiro, arroto, etc.

- **PSYCHOLOGICAL AND EMOTIONAL**
  - With DAR - ânimo, alegria, tristeza, desgosto, vontade, gosto, pânico, pena, satisfação, susto, terror, vergonha, etc.
  - With TER - angústia, cobardia, prejuízo, dúvida, fobia, inquietude, moléstia, nostalgia, preocupação, receio, suspeita, emoção, etc.
  - With FAZER - medo, impressão, tentativa(s), etc.

- **POWER AND INFLUENCE**
  - With DAR - aprovação, autorização, aviso, ajuda, benefício, conselho, consentimento, cumprimentos, exemplo, licença, ordem, orientação, etc.

- **MORAL AND FEELINGS**
  - With DAR - afecto, amor, amparo, carinho, compreensão, consolo, escândalo, graças, prémio, presente, prenda, etc.
Some SVC Classes

PT Nouns Semantic Groups Co-occurring with Support Verbs

- **BODY CARE**
  - With TOMAR - banho, duche, etc.
  - With FAZER - penteado, maquilhagem, barba, etc.
  - With DAR - banho, etc.

- **INFORMATION-OPINION**
  - With DAR - assessoria, pormenores, explicações, informações, interpretação, mostras, opinião, orientação, resposta, declarações, etc.
  - With FAZER - relato, perguntas, advertência, juízo, raciocínio, recomendação, reflexão, sugestão, valorização, votos, recomendação, reflexão, acordo, raciocínio, declarações, etc.
  - With TOMAR – decisão
  - With TER - ideia, impressão, etc.

- **GREETINGS, CONDOLENCES, FELICITATIONS**
  - With DAR - bons dias, boas noites, boas tardes, parabéns, pêsames, saudação, honras, etc.

- **HOSTING**
  - With DAR - albergue, alojamento, asilo, hospedagem, refúgio, abrigo, etc.

- **REACHING A GOAL**
  - With DAR - alcance, captura, caça, etc.

- **FAST ACTIONS**
  - With DAR - pincelada, lavagem, esfregadela, etc.

- **USAGES**
  - With DAR - colocação, destino, emprego, encargo, etc.

- **OTHERS**
  - With DAR - alimento; calor, frio; início, origem; forma; força; leitura; vida; oportunidade; preferência, prioridade; realce; aso, riso; solução, etc.
## Some Support Verb Classes

### Dividing SVerbs by Semantic Content

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>:INCEP</td>
<td>beginning of event/state</td>
<td>began the evacuation&lt;br&gt;commence with the attack&lt;br&gt;commence with the attack</td>
</tr>
<tr>
<td>:CONTIN</td>
<td>continuation of event/state</td>
<td>proceeded with the evacuation&lt;br&gt;kept influence on John&lt;br&gt;kept influence on John</td>
</tr>
<tr>
<td>:FIN</td>
<td>completion of event</td>
<td>completed the evacuation&lt;br&gt;the attack ceased</td>
</tr>
<tr>
<td>:AFFIRM</td>
<td>content is affirmed</td>
<td>admit an accusation&lt;br&gt;maintain an accusation</td>
</tr>
<tr>
<td>:DISAFFIRM</td>
<td>content is disaffirmed</td>
<td>deny an accusation&lt;br&gt;reject an accusation</td>
</tr>
<tr>
<td>:NON-FACTIVE</td>
<td>state/action may not be a fact</td>
<td>promised John a gift&lt;br&gt;plan the murder</td>
</tr>
<tr>
<td>:NON-FACTIVE-INDEF</td>
<td>non-factive unless definite</td>
<td>intend an attack (non-factive)&lt;br&gt;intend the attack (factive)</td>
</tr>
<tr>
<td>:TRANSPARENT</td>
<td>does not fit in other category</td>
<td>make an attack&lt;br&gt;carry out an attack</td>
</tr>
<tr>
<td>:REALIZED</td>
<td>goal is achieved</td>
<td>the attack succeeded&lt;br&gt;approve an appeal</td>
</tr>
<tr>
<td>:NOT-REALIZED</td>
<td>goal is not achieved</td>
<td>the appeal failed&lt;br&gt;deny an appeal</td>
</tr>
</tbody>
</table>
Preliminary Conclusions

- SVCs and light-verb constructions refer to very particular phenomena, cross-categorisation with idioms

Verb-object combinations

- *take N/Pron/somebody for a ride* = *take advantage of N/Pron/somebody*

- *take a close look at* = *look carefully = (inspect) = (investigate)*

- *bring N/Pron/something to light* = *to reveal N/Pron/something*

- *hold Pron head high* = *be proud*
We propose a classification of paraphrases in several categories:

- Simple paraphrase
  
  \[ \text{make a confession} = \text{confess}; \]

- Implied meaning paraphrase
  
  \[ \text{make a good impression} = \text{impress} \text{ (where “good” is implied in the paraphrase)} \]

- Paraphrase with remote dependency
  
  \[ \text{make a barricade} = \text{barricade SELF in PL} \]

- Paraphrase with change in the POS of some elements, like adjective to adverb
  
  \[ \text{make a good scene} = \text{film N ADV well} \]
  \[ \text{make the right decision} = \text{decide AD\V$\_correctly} \]
  \[ \text{have a satisfactory answer} = \text{answer AD\V$\_satisfactorily} \]

- Paraphrase with complex transformations, requiring a “new” word
  
  \[ \text{make an important disclosure} = \text{disclose something important} \]
Feedback is welcome!
Thank you!

Anabela
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