UNIVERSITÉ DE STRASBOURG

Corpus et Outils en linguistique, langues et parole: Statuts, Usages et Mésusages

Using corpora to find relevant examples of Japanese honorific forms in order to generate exercises for intermediate learners of Japanese

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- Research context
- Why do we need corpus analysis ?
- Corpora and tools
- Adopted methodology for the use of corpora
- Future research perspectives

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- **Research context**
  - Goal: Generating sentences and exercises for intermediate learners of Japanese
  - Characteristics of Japanese
  - Japanese politeness language in a bird's eye view

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Research context

Goal: Generating sentences and exercises for intermediate learners of Japanese

- Learning aids for the Japanese learners through exercises on sentence structures (like "phrasebook" approach already used for beginners) : **Zock M.** and **Lapalme G. 2010 -** ***A Generic Tool for Creating and Using Multilingual Phrasebooks.***
- Target learners : intermediate level ⇔syntactically complex sentences which rely on semantic and contextual elements (e.g.: Japanese formal politeness language, also called the "honorific" system).

➔ Identifying and formalising "rules" or standard patterns to generate realistic sentences **It does not only consist of syntactic rules but also relies on the semantic/pragmatic constraints of the situation of uttering.**

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Research context
Characteristics of Japanese

- Writing systems :
  - Kanji :自然言語処理 (nouns, verb stems)
  - Syllabic scripts
    - Hiragana しぜんげんごしょり (furigana, grammatical words, inflections)
    - Katakana (フランス) (foreign words)
  - Latin script (romaji) (shizengengoshori)
- No space between words
- Word order (SOV) with case particles after the nouns
- No grammatical gender and number for nouns
- Examples :フランス人の学生が自然言語処理を勉強する。

➔ **Linguistic tools mainly designed for Western languages are not adapted to Japanese**

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Research context

Japanese politeness language in bird's eye view 1/5

- Focus = formal politeness system (generally regarded as complex for non native speakers)

- The sentence construction used reflects the location of speaker inside the Japanese inter-personal communication system Taiguhyougen 待遇表現)
  - Vertical relationship (jougekankei :上下関係)
    - Individual : superior/inferior (目上 (meue)/目下 (meshita))
    - Group (more important/ important)
  - Horizontal relationship
    - In-group (uchi : 内) (honne :本音)
    - Out-group (soto :外) (tatemae:建前)
    - Psychological distance (shinso : 親疎)

➔ **Contextual facts cannot be ignored to build up a correct sentence**

Research context
Japanese politeness language in a bird's eye view 2/5

Adressee-oriented politeness

- Plain form　(futsukei :普通形)
  - Neutral written language (日本語を学ぶ、きれいだ)
  - Familiar spoken language
- Polite form or Addressee honorifics (Teineikei :丁寧形)
  - Showing respect towards the addressee
    - (masu:　ます＝＞日本語を学びます) (desu:　です＝＞きれいです)
  - Exalted language : Emphasizing the speakers' willingness to show respect towards the addresee
    - (gozaimasu :ございます＝＞きれいでございあす);
    - (teorimasu : ております)

Research context
Japanese politeness language in bird's eye view 3/5

Referential politeness

Often referred as keigo：敬語

- **Subject honorifics, called *Sonkeigo*:** (尊敬語)

  The speakers elevate or show respect towards the subject of the utterance (appreciative towards the non speakers).

- **Non-subject honorifics, called Humility, or *Kenjougo*:** (謙譲語)

  The speakers humble themselves by showing respect to the non-subject referent, generally the object of the utterance (depreciative towards the speakers).

Japanese politeness language in bird's eye view 4/5

Subject honorifics – Main verbal construction

- Passive form
  - (RARERU/RERU) : 今朝の新聞をもう読まれましたか。
    - kesanoshimbun wo mou yomaremashitaka ?
- Honorific construction
  - O +[STEM FORM]+ NI NARU
  - 今朝の新聞をもうお読みになりましたか。
    - Kesanoshimbun wo mou oyomi ni narimashita ka?
- Specific honorific verbs
  - For instance : the use of the verb いらっしゃる (IRASSHARU) (come, go) instead of 来る *kuru* (come) or 行く *iku* (go)

Research context
Japanese politeness language in bird's eye view 5/5

Non-subject honorifics : Main constructions

- ageru （上げる）: as a completive auxiliary
  - 申し上げる （言う : say） 差し上げる (上げる: give）
- o-verbal stem + SURU/ITASU (お読みするoyomi suru : read) (お返し致すokaeshi itasu : return)
- go-verbal noun + SURU (ご案内する goannai suru : show around, guide）
- 拝 Hai (worship) + sino-japanese verb reading + suru
  - 拝見 (haiken) する（見る miru : see）、拝借(haishaku)する（借りる kariru : borrow）

- Research context
- **Why do we need corpus analysis ?**
- Corpora and tools
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Why do we need corpus analysis ?

- Existing formalising approaches = dedicated to a specific approach
  - The speaker
  - The hearer (the addressee)
  - The context of utterance

- Deeper study of the honorific forms taking in account the most relevant documents

- Identification of the most frequently used honorific forms within the same document gender

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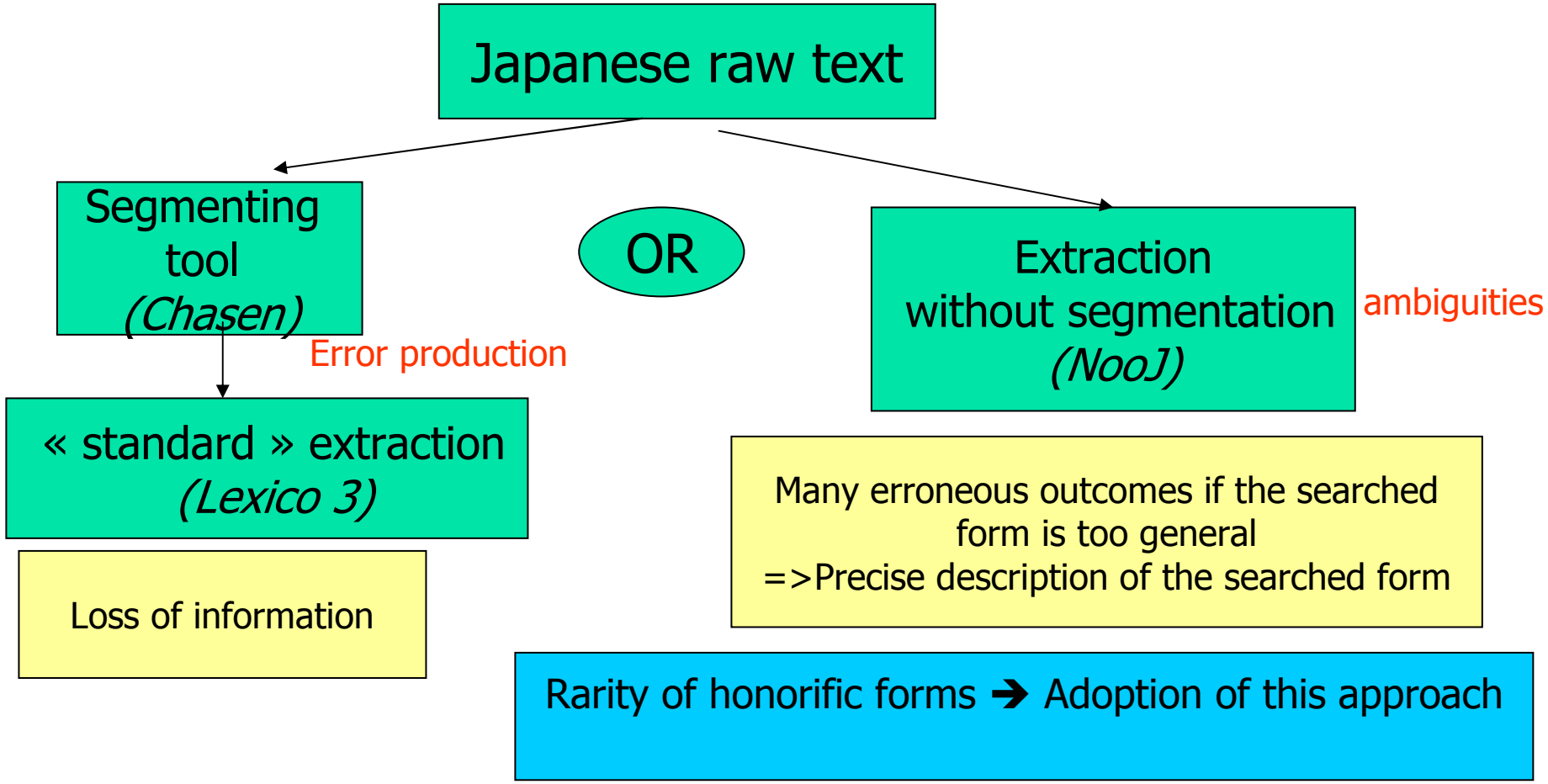
Corpora and tools: segmentation problem



- **Corpora and tools**
  - Segmentation problem
  - **Selected corpora and tools**
    - **BCCWJ (corpus)**
    - **SAGACE (corpus + tool)**
    - **NooJ (tool)**
  - Open search on the web

Corpora and tools
BCCWJ: Balanced Corpus of Contemporary Written Japanese

- BCCWJ is a corpus computed between 2005 and 2011, as a contemporary part of the KOTONOHA corpus of written Japanese. It contains more than 100 million words.
- Contents has various origins: but the main part was generated by a systematic sampling of books, newspapers, and official texts,
- It is organized in sub-corpora (texts 2001-2005, books from 1985, best-selling books, web, governmental papers, laws, …)
- On line access is available, to search KWiC. XML CDROM can also be obtained.

Corpora and tools
SAGACE

- SAGACE : a tool to extract morphological forms from non-segmented texts for Asian languages.

- On line tool is directly usable with Japanese corpora from several sources and genres.

Corpora and tools
NooJ

- Nooj enables word extractions from non-segmented texts and displays the results in a KWiC (Key Word in Context) environment.
- NooJ makes it possible the creation of graphs which describe parts of speech, inflectional and derivational forms (with the help of lexicons).
- Disadvantages : Necessity to implement these resources if not already existing

  ➔ Creation of linguistic resources for NooJ (Lexicon, inflectional and derivational rules)

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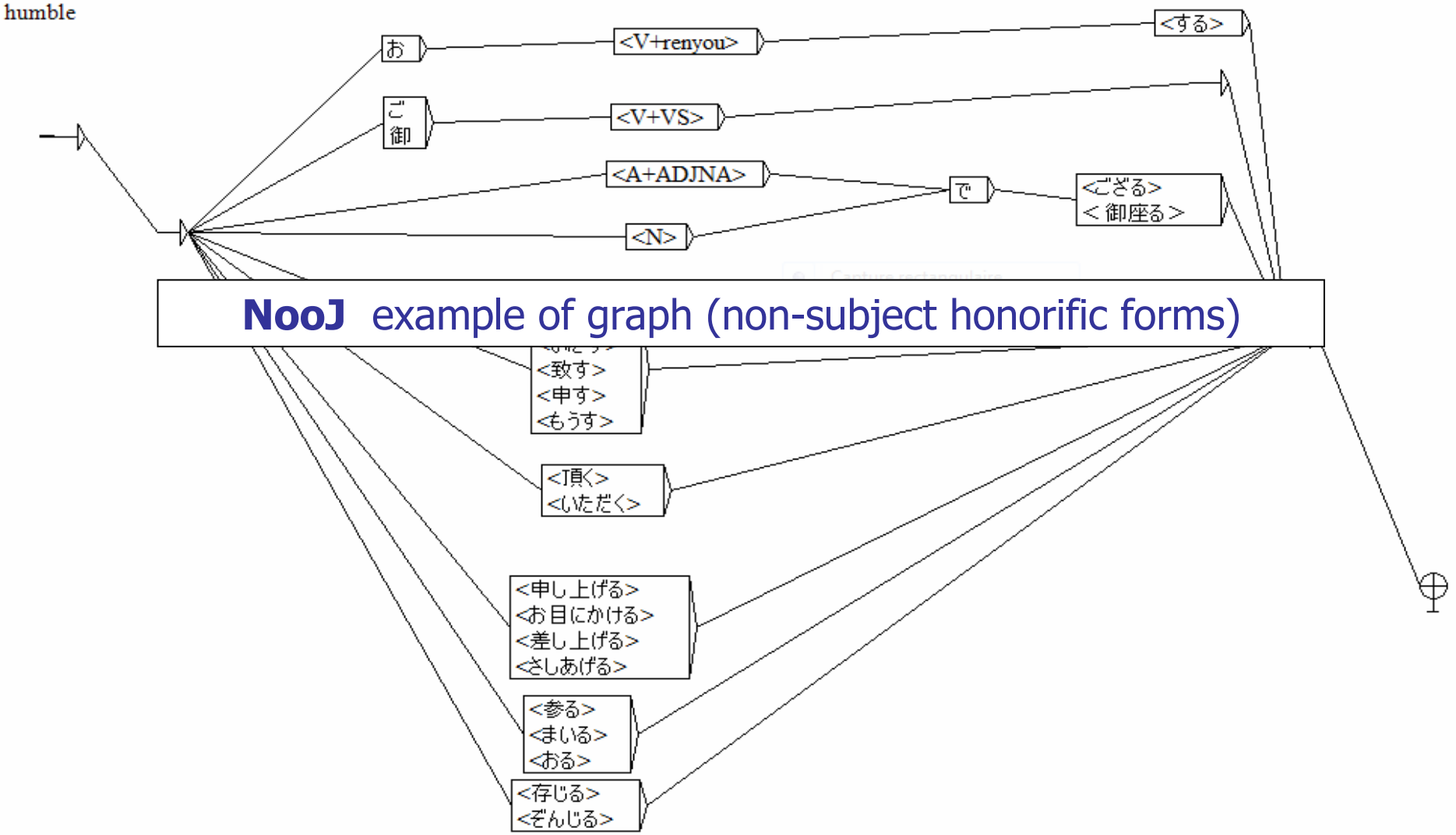

NooJ example of graph (non-subject honorific forms)

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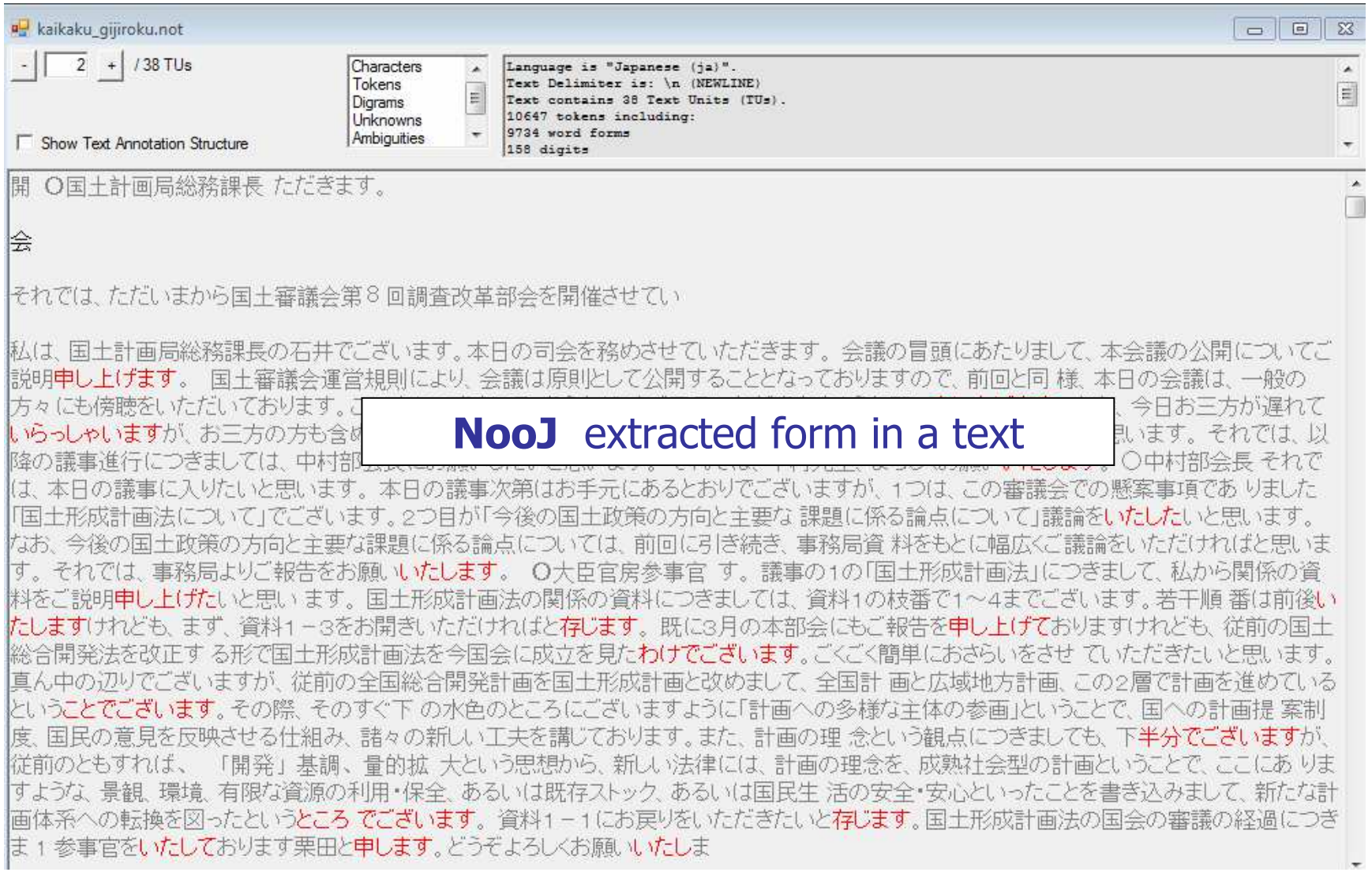

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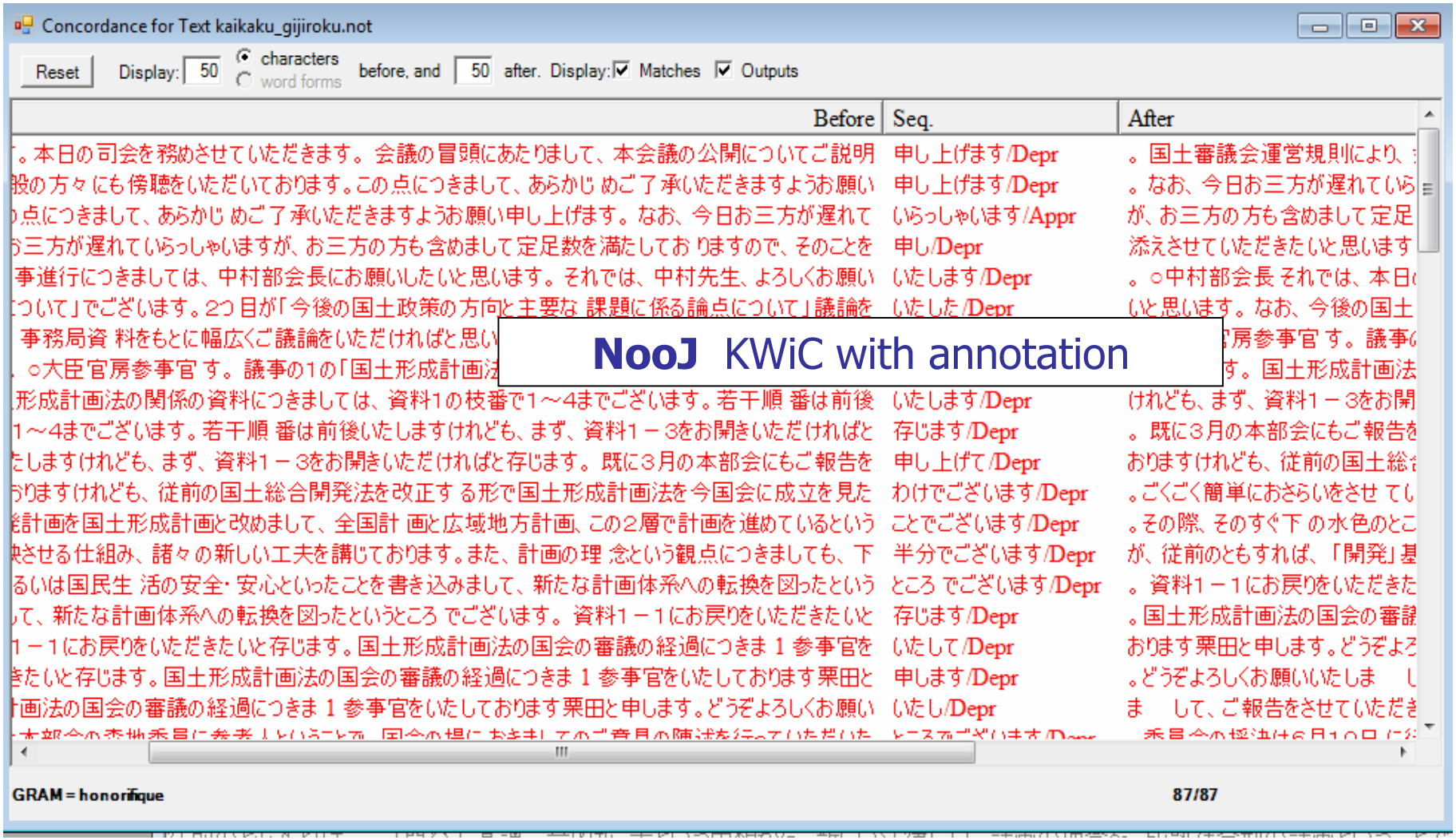

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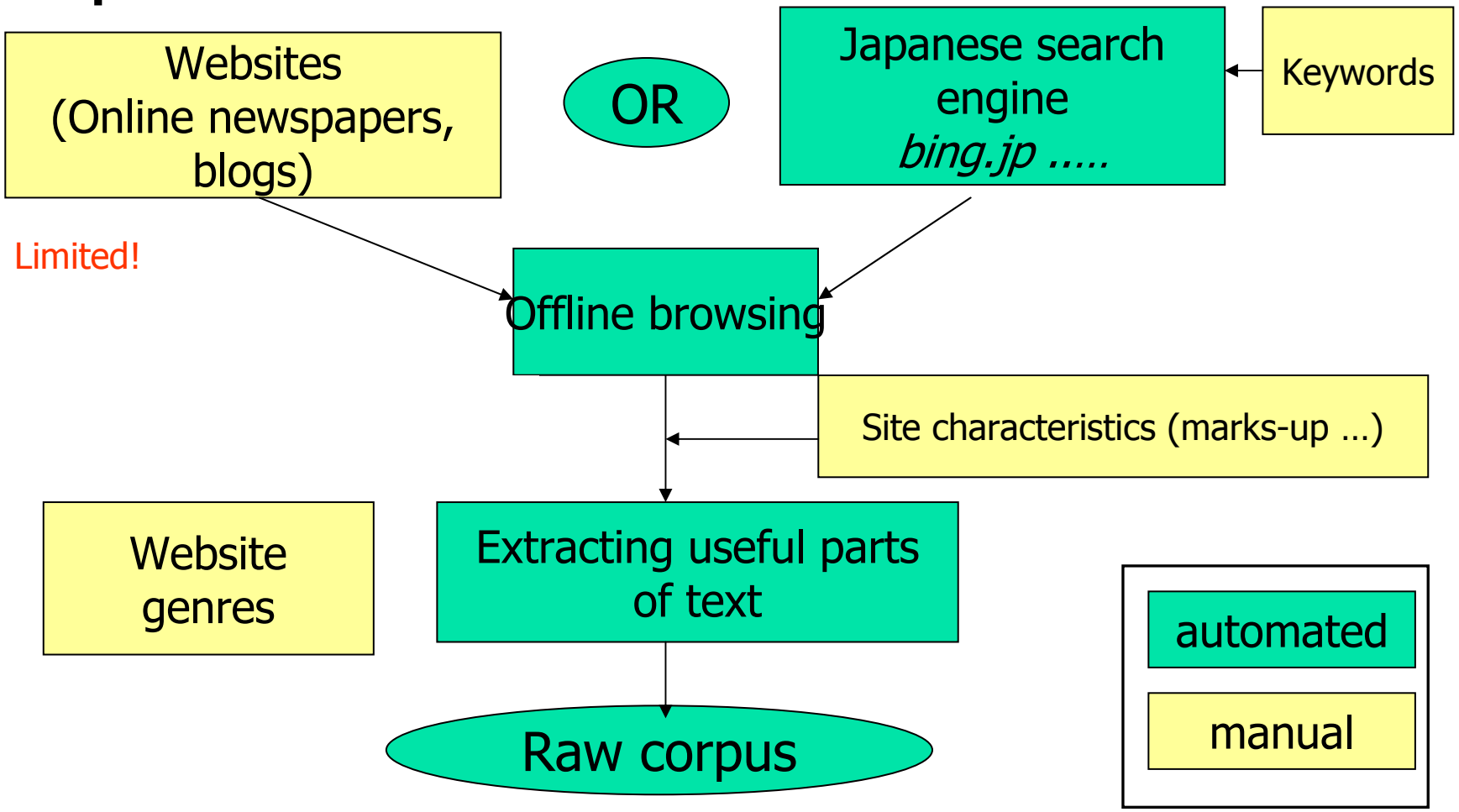

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Adopted methodology

- Identifying characteristic forms from other studies on honorifics
- Extracting these forms from Japanese corpus incorporated in parsing tools (Sagace, BCCWJ)
- Identifying the most frequently used honorific forms
- Doing further research on the Web (updates)
- Identifying text-genders and contexts of uttering
- Creating annotated corpus from the raw elements obtained
- Formalizing the rules of generation
- Validating of the generated sentences by native Japanese speakers

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Future research perspective

- Analysing other texts to increase the corpus size (identification and selection of contexts =a significant time-consuming manual phase)
- Classifying contexts of use and defining the data representation for context of the utterance (relational Database / ontology?) (Current prototyping in Prolog)
- Implementing the generated sentences in a e-learning environment
- Application to other linguistic contexts

Bibliography

- **Blin, R. 2001**. *Traitement automatique du japonais et études linguistiques*. Histoire Epistémologie Langage vol 23 n° 1 p. 33-48.
- **Kishimoto, H. 2010.** *Possessor Raising and Two Types of Honorification*, NANZAN Linguistics No.6, p 1-12.
- **Maekawa, K. 2007** "Design of a Balanced Corpus of Contemporary Written Japanese." *Proceedings of Symposium on Large-Scale Knowledge Resources (LKR2007)*, pp.55-58, 2007:03.
- **Rastier, F. (dir.) , 1995** *L'analyse thématique des données textuelles*, Paris : Didier, 1995 p. 223-249.
  Texte légèrement remanié.)
- **Schikowski, R. 2008** *Skript zum Strukturkurs Japanisch*. LMU Munich, Institute of General and Typological Linguistics, winter term 2007/08
- **Shimamori, R. 2001** *Grammaire japonaise systématique*, volume II - Edition Jean Maisonneuve Paris 12ème édition, 2001

Bibliography

- **Siegel M. 2000.** *Japanese Honorification in an HPSG Framework,* Proceedings of the 14th Pacific Asia Conference on Language, Information and Computation. p. 289-300.
- **Sugimura, R. 1986.** *Japanese honorifics and Situation Semantics* International Conference on Computational Linguistics COLONG. p. 507-510.
- **Terrya, K. 2007**. *Interpersonal grammar of Japanese* in A Systemic functional grammar of Japanese**,** Vol 2, Ch 4**,** p135-205.
- **Trusty, A. / Truong, K 2011** *Augmenting the Web for Second Language Vocabulary Learning Conference on Human Factors in Computing System (CH)., pp 3179-3188*
- **Wlodarczyk, A. 1996**. *Politesse et Personne – Le japonais face aux langues occidentales*. Editions L'harmattan.
- **Wlodarczyk, A. 2007**. *Towards a Unified Treatment of Linguistic - Person and Respect - Identification* Japanese Linguistics – European Chapter Tokyo.
- **Zock M. / Lapalme G. 2010** *A Generic Tool for Creating and Using Multilingual Phrasebooks.* Natural Language Processing and Cognitive Science.

Merci vielmol fers zuhere