

# Semantic Annotation in Japanese FrameNet: Comparing frames in Japanese and English

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## Findings

- Based on semantic annotation of the **Balanced Corpus of Contemporary Written Japanese (BCCWJ)**
- 1. **Perspectives and aktionsarts of English words reflected in existing FrameNet (FN) semantic frames** may be different from those of Japanese words
- 2. In most cases where Japanese FrameNet (JFN) defined new semantic frames for a word, the frame did **not involve culture-specific** scenes

## The Japanese FrameNet project

- Compatibility with FrameNet
  - JFN databases and software: compatible with those of FN
  - JFN semantic frames: most imported from FN
  - Attention to contrasts between Japanese & English (cf. Ohara & Sato 2010)
- Background: Frame Semantics
  - JFN Semantic annotation: Identifying **structure and knowledge necessary for producing and understanding sentences (semantic frames)** and its **semantic components (frame elements (FEs))**
  - FEs: More **fine-grained than often used semantic roles** (e.g. Agent, Instrument, Object) based on so-called case frames
  - Lexical units (LUs)** evoke semantic frames, related to one another through **frame-to-frame relations**



## Existing semantic frames: Often assume English perspective & lexical aspects

- Many existing semantic frames have **transitive** perspective
- Many **Japanese** verbs: **intransitive/inchoative** perspective
  - Transitive counterparts: often derived by suffixing a causative morpheme
- Few cases in which FN semantic frames are defined from **intransitive/inchoative and transitive** perspectives

- (1) a. sakura no hanabira ga tiru Motion  
 cherry.blossom GEN petals NOM be.scattered  
 'Petals of cherry blossoms get scattered.'
- b. sakura no hanabira o tirasu Dispersal  
 cherry.blossom GEN petals ACC scatter  
 '(Somebody) scatters petals of cherry blossoms.'

THEME starts out in **SOURCE** and ends up in **GOAL**, having covered some **PATH**

An **AGENT/CAUSE** disperses/scatters **INDIVIDUALS** from the **SOURCE**, a relatively confined space, to the **GOAL\_AREA**, a broader space

## “Missing” semantic frames: Very few are culture-specific

- Existing FN semantic frames: Could be used for **87 %** of Japanese LUs in Core Data of Book Genre in BCCWJ
- One-to-one correspondence** between frames needed for Japanese & English words

- muku.v* 'face' vs. *face.v*
- (2) a. minami o muku  
 south ACC face  
 '(somebody) **faces** south.'

- One-to-many correspondence** bet. frames for J & E
- simeru.v* vs. *make up, take up*

- (3) a. Zyosei ga zinkoo no 40 paa sento o simeru  
 women NOM population GEN per cent ACC make.up  
 'Women **make up** 40 per cent of the population.'
- b. kankoo kyaku ga robii no tyuuo o simeru  
 sightseeing guest NOM lobby GEN center ACC take.up  
 'Tourists **take up** the center of the lobby.'



