WHEN NONCE WORDS BEHAVE LIKE REAL WORDS

A CASE STUDY OF THE JAPANESE VERB OSO(WARER)U

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Goals: We want to

I. show the effectiveness in characterizing semantic interpretation (not only as co-composition of lexical meanings but also) as having the property

of attraction to the most

conceivable situation, adopting the Frame Semantics view that conceivable situation is something that the (cocomposed) meaning of a sentence is "evaluated" against.

2. show the usefulness of the "vector space" approach to the meaning representation at sentential and/or phrasal level as well as at lexical level.

Method

- I. Manually construct a Hierarchical Semantic Frame Analysis (HFNA) of the situations of harm-causation class, based on the analysis of a Japanese verb.
- 2. Determine the set of semantic features/characterisitics that account for the HFNA. In this study, we concentrated on investigation into attraction-tosituation effects by representing the expected meaning of a nonce word in a situation-evoking context.
- 3. Conduct a psychological experiment (Semantic Feature Rating: SFR) to evaluate the analysis/hypothesis.

般が年の終れを要った Wolves (attacked; ?*assaulted) a flock of sheep. スズメバチの終れが人を襲った A swarm of wasps (attacked; ?*assaulted) people サルの終れがMonoRive 表示と サルの終れが別の終れを表った A group of apes (attacked, hassaulted) another group. マフィアの投入版が別の機関の服長を奏った k hitman of a Mafia (attacked, assaulted) the leader of the opponents. 暴徒と化した民衆が警官隊を襲った nob {attacked; ?assaulted} the squad of police 貧しい国が石油の豊富な国を襲った A poor country {attacked; ?assaulted} the oil-rich country. 引ったくりが老婆を襲った。 A purse-snatcher {attacked; ?*assaulted} an old 三人組の男が銀行を襲った。 A gang of three {attacked; ??assaulted} the bank branch. A,B,C,D,E (=ROOT) 狂った男が小学生を襲った A lunaric {attacked, assaulted} boys at ele 男が二人の女性を襲った A man {attacked; assaulted; ??hit} a ye 地震がその都市を襲った An earthquake {*attacked; hit; ?*seized} the city F09,10(,11): ベストがその町を襲った The Black Death {?*attacked; hit; ?seized 大型の不泥がその国を養った A big depression (?*attacked; hit, ???keized] the country. 赤字がその会社を覆った he company (experienced; *suffered, went into) red figures (cf. Red figure; Cattacked; ?hit; ?sukeed) the company)) 痙攣が患者を襲っ The patient have a convulsive fit (cf. A convulsive fit {??attacked; ?seized him) 無力感が彼を襲った He {suffered from; was seized by} inertia (cf. The inertia {?*attacked; ?hit; ?seized} him 不安が彼を襲った He was seized with a sudden anxiety. (cf. Anxiety attacked him suddenly) (LT Level Sit (L2 Level Situations) 暴走トラックが子供を襲った The children got victims of a runaway truck (cf. A runaway truck {*attacked; ?*hit} childre F08: Misfortune

English translation of rated feature

X is a living thing.

X is visible

X is human.

X chose Y for its target.

X had an aim to do so.

X is a natural phenomenon

X is the name for a sickness

X is a collection of living things.

X's activity can kill Y.

Y is a living thing.

X did so to satisfy its desire or needs.

X planned to take off something from Y.

Y had a good chance to prepare for X's activity.

Y had some reason to be victimized by X.

X couldn't help doing it to Y.

Rated feature in Japanese

Xは目に見える実体である。

XがYを襲ったのは仕方のないことだった

Xは自分の欲求を満たすために襲った

XはYから何かを奪うつもりだった

XはYを襲って死なせることがある

YがXの襲撃に備えるのは簡単だった

YにはXに襲われる何らかの理由があった

Xは生き物の集まりである.

Xは生き物である

Xは人間である.

Xは病名である

Yは生き物である

XはYを選んで襲った

Xは目的を持って襲った

Xは自然現象である.

Results

Our predication was basically confirmed in that, in the context victim(Y) was attacked/hit/seized by harm-causer(X) (victim(Y)-ga harmcauser(X)-ni osowareta in Japanese),

1. The meaning of a nonce word for **X** and **Y** are predictable from the HFNA if the context evokes a particular situation strongly enough (selection among candiate is assumed).

- 2. Different nouns have different strengths of evocation, depending on the degrees of their representativeness for a potential situation-specific semantic role/frame element.
- 3. In general, the names of (typical instances of) harm-causer have stronger attraction effects than those of victim. (typicality of victimhood is rather hard to define.)
- 4. By and large, we found 4 classes of harm-causer: HCI, HC2, HC3, HC4

4. By and large, we found 4 classes of narm-causer: HC1, HC2, HC3, HC4.	Victim	4 Y is human.	Yは人間である.
5. While the locations of F03b, F07b and F08 are not well-predicted,	Victim	5 Y was aware of being victimized by X.	YはXに襲われる可能性に気づいていた
others situations have nice, predicted locations in the vector space.	Victim	6 X's activity on X may cause X to die.	YはXに襲われたのが原因で死ぬことがある.
others situations have flice, predicted locations in the vector space.	Victim	7 Y is the name for a place.	Yは場所を表す名前である.
(ucitive and a land of the lan	Victim	8 Y could avoid X's harm.	YはXに襲われるのを回避することもできた.
HC1: [+animate, +intentional, +selective] HC4: [-animate, -intentional, -selective]	Victim	The degree of Y's affectedness is greater than the individual scale.	Yの襲われ方は個人/個体の規模を越える.
	Victim	10 Y suffered a harm by X's activity on Y.	YはXに襲われて実際に被害を受けた.
PCA of responses to Y-ga X-ni osowareta (Y was attacked/hit/seized by X).	Victim	II Y has been targeted by X long before.	YはXに以前から狙われていた.
	Victim	12 Y itself might have invited X's activity on it.	YがXに襲われたのにはYにも責任がある.
The President - an assaging a a country - another a medicolutry a bark branch - a masked mer a woman - a pervert 1.5 passengers- by - a fundition men zatras - flors 1.0 children - wessex	HC3: [-anima	tte,intention, +selective] HC2: [+animate	e, –intention, –selective]
a family - a runaway truck (s. a a ara ara - a family - a runaway truck (s. a a ara - a family - a runaway truck (s. a a runaway truck		13: Long-term sickness	F08:Accident
a acty - influerzo	4 0	A main an amaignant tumor NW - NW - a maginant tumor 4	- A family - a runaway truck - WV - a runaway truck - WW - a runaway truck
an od lady - a purse snatcher 3 a young man - strong jealousy 2 o zebras - a masked man rs - an assasin	2 1 FIO: N:	atural disaster on large scale	FII: Spread of epidemic
or s - another armed country or s - a masked man rs - a pervert or s - a lunatic man rs - lions or s - lions	5 4 9	A local area - A typhoon 5 NW - NW - NW - NW - a large typhoon 4	A city - influenza
rs - a runaway truck rs - a hurnicane rs - cust of wind	2		
rs - a debacie rs - a debacie rs - cancer rs - a snarp pain rs - panic rs - a purse snatcher rs - a strong jealousy	The district of the state of th	The street of th	First of the control
t ns-ns	Fa 74 72	T - T - T - T - T - T - T - T - T - T -	ス ナ ス 」 で
PC score plot for patients in each sentence			

Class

Harm-causer

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