EBERHARD KARLS UNIVERSITÄT TÜBINGEN

Vera Hohaus, Toshiko Oda & Verena Hehl

東京経済大学 TOKYO KEIZAI UNIVERSITY

An Empirical Investigation of Japanese Comparatives

Summary

We present the results of an acceptability judgment study designed to test the **status of *yori*-constituents in Japanese comparatives**. On the basis of these results, we argue in favor of a **strictly compositional semantic approach** to the comparative in Japanese and thus against an analysis as **pragmatically anchored orphan constituents**.

Background

The Original Observation

Varying Acceptability of Comparatives

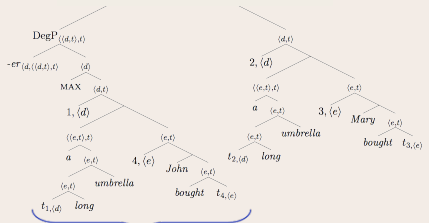
Japanese
(Ishii 1991; Beck, Oda & Sugisaki 2004)

✓ 健二は真理子が買ったよりも高いカサを買いました。
?/??/* 健二は真理子が買ったよりも長いカサを買いました。

Kenji-wa **[***Mariko-ga katta* ***yori***]
Kenji-top. Mariko-nom. bought
{✓***takai*** / ?/??/*/***nagai***} *kasa-o katta.*
expensive long umbrella-acc. bought
'Compared to what Mariko bought,
Kenji bought a {longer / more expensive} umbrella.'

English
Mary bought a {✓longer/ ✓more expensive} umbrella ***[than*** *John bought***]**.

[[*-er* **]]** = $\lambda d_{<d>}.\lambda D_{<d,t>}.$ MAX(D) > d
[[MAX **]]** = $\lambda D_{<d,t>}.$ ιd [∀d' [D(d') → d ≥ d']]



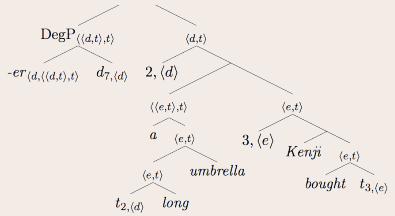
Crucially, the than-constituent in English is an argument of the comparative operator!

The Contextual Analysis

Yori-Constituents as Syntactic Orphans

The Proposal in Beck, Oda & Sugisaki (2004)
cf. also Oda (2008), Beck et al. (2009), Beck, Hohaus & Tiemann (2012)

In Japanese comparatives, the first argument of the comparative operator is a **free degree variable**. The *yori*-constituent is a syntactic orphan that provides material which helps infer a value for the variable.



[[[$_{DegP}$ -er $d_{7,<d>}$]]]^g = $\lambda D_{<d,t>}.$ MAX(D) > g(7,<d>)
[[[2 [[a $t_{2,<d>}$ long umbrella] 3 [Kenji bought $t_{3,<e>}$]]] **]]**^{g} = λd. ∃ x[umbrella(x) & length(x) ≥ d & bought(x)(Kenji)]

'The length of an umbrella which Kenji bought exceeds a contextually provided degree.'

contribution of the *yori*-constituent:
[[[MAX [1 [Mariko [bought $t_{1,<e>}$]]]] **]]**^{g} = MAX(λy. bought(y)(Mariko))

→ plausible value for contextual degree:
g(7,<d>) = LENGTH(MAX(λy. bought(y)(Mariko)))

Explaining the Variation in Acceptability

The inference from the maximal item in the set of items Mariko bought to their length as a value for the free degree variable is considerably less straightforward than the inference of their price. Speakers are **successful to varying degrees** when it comes to **inferring less plausible comparison values**.

Criticism against a Contextual Analysis

Kennedy (2009); Shimoyama (2012); Sudo (to appear:47)

"To conclude, I believe that the empirical status of the data is still quite nebulous."

The Acceptability Rating Study

Investigating the *Yori*-Constituent in Japanese Comparative Constructions

Methodology

We tested the predictions of the contextual analysis of *yori*-constituents in an **on-line acceptability judgment study** with 61 native speakers of Japanese. Subjects were asked to rate the acceptability of a target sentence in a specific context on a **scale from 1 (適切でない, 'not acceptable') to 5 (大変適切である, 'fully acceptable')**.

Table 1: Conditions for acceptability rating study

context	type of construction (comparative/ equative)	
plausibility (plausible/ implausible)	cond.1: plausible comparative	cond.2: implausible comparative
	cond.3: plausible equative	cond.4: implausible equative

The study compares the **effect of difficulty of the inference** of the required comparison degree, determined by its plausibility, on the comparative and a construction for which no contextual analysis is available. (Plausibility was determined by a pre-study with 26 subjects.) Two sets of fillers investigating phenomena at the semantics/pragmatics-interface were inserted.

Context:
昨日の午後、雨が激しく降り出したので、健二と真理子はカサが必要になりました。
'Kenji and Mariko badly needed an umbrella yesterday afternoon as it was raining heavily.'

cond. 1 (plausible, comparative):
健二は真理子が買ったよりも高いカサを買いました。
'Compared to what Mariko bought, Kenji bought a more expensive umbrella.'

cond. 2 (implausible, comparative):
健二は真理子が買ったよりも長いカサを買いました。
'Compared to what Mariko bought, Kenji bought a longer umbrella.'

cond. 3 (plausible, equative-like):
健二と真理子が買ったカサの値段は同じぐらいでした。
'Kenji and Mariko bought umbrellas whose price was about the same.'

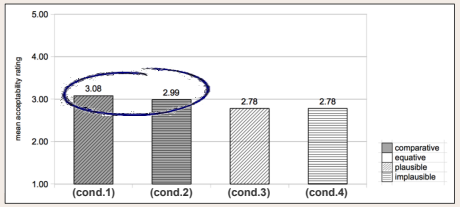
cond. 4 (implausible, equative-like):
健二と真理子が買ったカサの長さは同じぐらいでした。
'Kenji and Mariko bought umbrellas whose length was about the same.'

Predictions

Crucially, the contextual analysis predicts an **interaction between plausibility and type of construction**.

Results

Table 2: Mean acceptability ratings per condition



Data Analysis and Statistics

The data was analyzed as **linear mixed models**, on the basis of raw scores (and z-scores), using the R programming language and the program *lmer* (Bates 2005), with plausibility and type of construction as fixed, and subjects and items as random factors. Crucially, we observe **neither a main effect for plausibility (|*t*| = .009, *p* > .1) or for type of construction (|*t*| = 1.692, *p* > .05) nor the expected interaction between the two (|*t*| =. 510, *p* > .1)**. Both sets of filler items investigated yielded statistically significant effects, however.

Discussion

Despite the **difficulty of interpreting null results** like these, this data needs to be discussed as it casts doubt on the little data reported in the literature and on an analysis which is crucially designed to explain these kind of data.

Concluding Remarks

While further empirical research is needed, the acceptability ratings for Japanese comparatives with superficially clausal *yori*-constituents point towards the **need for a fully compositional analysis of the Japanese comparative**, which at the same time remains true to the **substantial differences between English and Japanese**.

Selected References

S. Beck, T. Oda & K. Sugisaki (2004), "Parametric Variation in the Semantics of Comparison," *JEAL* 13: 289-344. ::: S. Beck, S. Krasikova, D. Fleischer, R. Gergel, S. Hofstetter, C. Savelsberg, J. Vanderelst & E. Villalta (2009), "Crosslinguistic Variation in Comparison Constructions," *LVY* 9: 1-66. ::: C. Kennedy (2009), "Modes of Comparison," *CLS 43 Proceedings*, 141-165. ::: Y. Ishii (1991), "Operators and Empty Categories in Japanese," University of Connecticut Ph.D. thesis. ::: J. Shimoyama (2012), "Reassessing Crosslinguistic Variation in Clausal Comparatives," *NLS* 20: 83-113. ::: Y. Sudo (to app.), "Hidden Nominal Structures in Japanese Clausal Comparatives," *JEAL*.