

24.902 Problem set #4
(due: Wednesday, October 1)

1. Passive sentences in English and Japanese

Question 1: First, remind yourself (perhaps by reading the class summary posted on the web) what "numeral stranding" told us about scrambling in Japanese. To focus your mind, briefly retell the story in your own words, making reference to the data below (which expand on the data presented in class). The underlining indicates which NP is supposed to be modified by which numeral phrase. Recall that "cl" stands for classifier, the agreement marker on the numeral.

- (1) a. Gakusei-ga 2-ri piza-o katta.
students-SUB 2-cl pizza-OBJ bought
'Two students bought pizza.'
- b. *Gakusei-ga piza-o 2-ri katta.
students-SUB pizza-OBJ 2-cl bought
'Two students bought pizza.'
- (2) a. Gakusei-ga piza-o 2-tu katta
student pizza-OBJ 2-cl bought
- b. Piza-o 2-tu gakusei-ga katta.
- c. Piza-o gakusei-ga 2-tu katta
- (3) a. Doroboo-ga 2-ri kuruma-o nusun da.
thief 2-cl car-OBJ steal past
'Two thieves stole the car.'
- b. *Doroboo-ga kuruma-o 2-ri nusun da.
- (4) a. Doroboo-ga kuruma-o 3-dai nusun da.
thief car-OBJ 3-cl steal past
'The thief stole three cars.'
- b. Kuruma-o 3-dai doroboo-ga nusun da.
- c. Kuruma-o doroboo-ga 3-dai nusun da.

- (5) a. Kinoo, otoko-ga 2-ri gakusei-o korosi ta.
yesterday, man-SUB 2-cl student-OBJ kill past
'Yesterday, two men killed the student.'
- b. *Kinoo, otoko-ga gakusei-o 2-ri korosi ta.
[ok if *2-ri* modifies *gakusei*, yielding the reading 'The man killed two students'.]
- (6) a. Kinoo, ano otoko-ga gakusei-o 2-ri korosi ta.
yesterday, that man-SUB student-OBJ 2-cl kill past
'Yesterday, that man killed two students.'
- b. Kinoo, gakusei-o 2-ri ano otoko-ga korosi ta.
- c. Kinoo, gakusei-o ano otoko-ga 2-ri korosi ta.

Question 2: Passive sentences in English pose a problem for the locality of subcategorization and the universality of the \square -role/syntax mapping that is very similar to the problem posed by Japanese scrambling. Passive sentences are sentences like the following:

- (7) a. The suitcase was put under the desk (by Mary).
(compare: **Mary put under the desk.*)
- b. The pizza was purchased (by the student).
(compare: **The student purchased.*)
- c. The child was rewarded (by his parents) with a trip to the zoo.
(compare: **The parents rewarded with a trip to the zoo.*)
- (i) What is this problem?
(ii) Find two more English sentences that illustrate the same point.
(iii) Develop two contrasting hypotheses about the analysis of passive sentences in (7). Hypothesis I should have the property that both active and passive forms of a verb have the same subcategorization properties.¹ Hypothesis II should have the property that active and passive forms of a verb bear distinct subcategorization features.

[Assume that *the suitcase* and *the pizza* are in SPEC,IP in (7). Assume that *was* occupies I. Don't worry too much about the optional "*by*-phrase". Don't worry about the passive morphology on the verb.]

¹ Our discussion of Japanese scrambling is relevant (hint) but don't call the process involved in passive "scrambling". That term is reserved for Japanese-style word-order variation.

Question 3: The verb in a passive sentence in Japanese bears the suffix *-rare*. (There is no counterpart to the use of *be* in English passive sentences.) Given your answer to question 1, what do the following examples suggest about the analysis of Japanese passive? Do these examples help decide between Hypothesis I and Hypothesis II from question 2, in a Japanese context?

- (8) a. Kuruma-ga 3-dai doroboo-ni nusum-are-ta.
car-SUB 3-cl thief-by steal-PASS-Past
'3 cars were stolen by the thief.'
- b. Kuruma-ga doroboo-ni 3-dai nusum-are-ta.
'3 cars were stolen by the thief.'
- (9) a. Kinoo, gakusei-ga 2-ri [ano otoko]-ni koros-are ta.
yesterday student-SUB 2-cl that man-by kill-PASS-Past
'Yesterday, 2 students were killed by that man.'
- b. Kinoo, gakusei-ga [ano otoko]-ni 2-ri koros-are ta.
'Yesterday, 2 students were killed by that man.'

Assume that the passive suffix is just part of the verb, and that the past-tense morpheme *ta* is an instance of I. Ignore the adverb *kinoo*, and draw trees to illustrate your answer. [The passive of 'buy' sounds unnatural in Japanese, so we omit it here.]

Question 4: Consider the generalization about idioms that you developed in the second problem set (i.e. what kind of phrases in Dutch and English could participate in idioms). Extend the generalization to NPs that participate in idioms, and explain how the acceptability of the following pairs (yes, assume the b sentences are fine!) bears on your answers to questions 2 and 3:

- (10) a. Bill let the cat out of the bag.
b. The cat was let out of the bag (by Bill).
- (11) a. John really took the wind out of our sails.
b. The wind was really taken out of our sails (by John).
- (12) a. Sue kept close tabs on the opposition.
b. Close tabs were kept on the opposition (by Sue).
- (13) a. John kept a close eye on the opposition.
b. A close eye was kept on the opposition by (John).
- (14) a. Our programmers really dropped the ball on that one.
b. The ball was really dropped on that one (by the programmers).

Extra credit: What might you say about more complex sentences like *A close eye is sure to be kept on the opposition by the Democrats* or *The wind is likely to be taken out of their sails by the court's decision*? What about the contrast between these examples and **A close eye is eager to be kept on the opposition by the Democrats* and **The wind is happy to be taken out of their sails* -- which are acceptable, if at all, only with the weirdest of weird meanings. [Note: This question goes beyond anything discussed in class so far, but you do have the tools to discuss it intelligently.]