

## Container nouns and counting in Yudja

Suzi Lima (UMass, Amherst)

In Yudja (Tupi; Brazil) nouns that denote substances can be directly combined with numerals without intervening classifiers or container nouns (1a). I.e., container nouns such as 'bottles' are always optional in constructions with numerals (1b). Container constructions (e.g., spoons of flour) and locative constructions have the same morphosyntax, i.e., container nouns are always followed by postpositions (*he* 'in' as in *karaxu he* 'in spoons'). We aim to show that when a container noun is overt in a sentence (as in 1b) it will not necessarily refer to the individuation/counting unit. **Counting: analysis** Following Krifka (1995) and Kratzer (2007), we argue that nominal roots denote kinds. For a NP to denote a set of individuals, its nominal root must be combined with a silent functional head (cf. Kratzer 2007), which denotes a context sensitive atomic function. An atomic function F, which is relative to a context c, maps a kind k to a set of k-individuals (i.e. individuals that are instances of the kind k). In different contexts, the function may map the same kind to different sets of individuals – i.e. what counts as an individual that instantiates a kind may vary across contexts (cf. Rothstein 2010). **Container nouns** Three experimental studies with 20 Yudja adults and 26 Yudja children (8, 4-to-6-year-olds; 18, 7-to-12-year-olds) show that container constructions are ambiguous between measure, individuation and locative interpretations. **Study 1** we tested whether container nouns could be interpreted as simple locatives, indicating the location of a substance. **Materials:** 16 photos and 16 target sentences that included a numeral and container noun (2). 5 photos presented containers of the same size, but with different amounts of a given substance (2a); 6 photos presented containers of the same size that included small portions of a given substance (2b); 5 photos presented containers of different sizes, filled with the exact same substance (2c). **Methods:** photo/sentence matching. **Results** for 45 out of 46 participants the target sentences presented could describe all photos. That is, a locative interpretation of container nouns is widely accepted by Yudja speakers. **Study 2** we tested whether overt container nouns necessarily correspond to the individuation/counting unit. **Materials:** 12 critical items consisted of a target sentence and a drawing. Two types of scenarios were manipulated: overt individuation scenario (3): the unit being used for individuation/counting is overt in the sentence; covert individuation scenario (4): the unit being used for individuation/counting is provided by the context, but it is not overt in the sentence. **Methods:** picture/sentence matching. **Results** for all participants the sentences presented could describe both overt and covert individuation scenarios. Therefore, the unit for individuation/counting may be solely provided by the context. I.e. the unit of counting provided by the context may be different from the unit described by the container noun in a sentence. **Study 3** we tested whether container nouns functioning as measure units can be covert. **Materials** 12 critical items were counterbalanced in two lists (list A (5a) and list B (5b)). In each video two containers were manipulated: one being used for measuring and one being used as the recipient where the amounts of a substance x were placed. Only the recipient container was overt in all sentences. I.e., the container being used for measurement was covert in the target sentences (5c). **Method** video/sentence matching. **Results** All children accept a measure interpretation for covert container nouns. In the adults' group, eight speakers suggested that the unit being used for measurement must be overt (6). **Conclusions** we argued that nouns in Yudja are not distinct with respect to countability; all nouns need a context-dependent atomic function as in (3) to convert their basic denotation into atomic sets. In this language, container constructions are always optional. When overt, they do not need to determine the salient unit used for

individuation/counting. I.e. the unit of counting provided by the context may be different from the unit described by the container noun.

## Appendix

- |   |   |
|---|---|
| 1a Anana txabïu awïla wï<br>Anana three honey bring<br>'Someone brought three (containers of) honey' (lit: 'Someone brought three honey') | 1b Anana txabïu awïla karaha he wï<br>Anana three honey bottle in bring<br>'Someone brought three bottles of honey' |
|---|---|

## 2 Materials: study 1

- |                         |                     |                              |
|-------------------------|---------------------|------------------------------|
| 2a different quantities | 2b small quantities | 2c different size containers |
|-------------------------|---------------------|------------------------------|



Yauda uã karaha he  
two oil bottle in



Yauda puju xaa he  
two beans bowl in



Yauda awatxi'i xaa he  
two rice bowl in

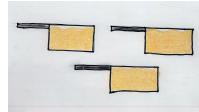
## Materials for Study 2

(3) 'overt individuation scenario': one container. The numeral modifies the container and its contents (i.e., the amount of honey and flour in 6a and 6a is as described in the sentence: three full pans and three full packages).

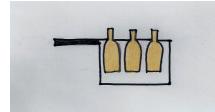
(4) 'The covert individuation scenario': two containers: one contained a substance *x* (henceforth 'substance-container') and the other held the containers filled with a substance *x* (henceforth 'container-container'). In this context, the numeral was always associated with the substance-container ('bottles', in 4a and in 4b).

*Awila* 'honey'  
txabïu awïla wã'ẽ he  
three honey pan in

3a overt individuation

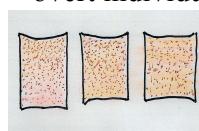


4a covert individuation

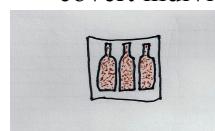


*Asa* 'flour'  
Txabïu asa duyãhã he  
Three flour package in

3b overt individuation



4b covert individuation



## Materials: Study 3

List A (5a): a man dropped two packages of rice inside a paper box (and at the end of the video, the empty packages are on the table, next to the paper box filled with rice)

List B (5b): a man dropped two packages of rice inside a paper box (and at the end of the video, the empty packages are not visible, we only see the paper box filled with rice)

- |                     |                            |                         |                                       |
|---------------------|----------------------------|-------------------------|---------------------------------------|
| 5c Target sentence: | Yauda awatxi'i<br>two rice | papera akalikali<br>box | he<br>in                              |
| 6                   | Yauda awatxi'i<br>two rice | seradu package<br>he in | yahã itutu drop (wã'ẽ he)<br>(pan in) |