

Early Development of Quantity Judgments "Without" Linguistic Supports

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Abstract:

There are different kinds of entities in the world, and each type seems to relate the way we count them differently. For example, solid items are discrete and individuated, thus focused on number for determining the quantity (3 pens are more than 1pen), whereas continuous entities with less solidity are focused on the volume for the quantity (a large puddle is more than a small puddle).

The present study is a first attempt to observe such early understanding of quantity across English and Japanese language learners. The selection of these target groups is based on the fact that Japanese language does not support syntax that is about solidity of objects whereas the English language supports the mass/count syntax which correlates with the solidity of objects.

The present attempt explores the quantity judgments of 36 month to 78 month old native English speaking children and native Japanese speaking in the absence of any supporting linguistic markers. The quantification system of Japanese and English indicates that native Japanese children will be more likely to base their judgments on default measures like number than native English speaking children, and native English speaking children will base more judgments on volume for non-solid items.