

Measurement and Paths in Indonesian with Reference to English

In this paper, we discuss the interpretation of measure phrases in certain kinds of sentences containing prepositional phrases in Indonesian with reference to English, and propose a syntactic analysis.

In English, when locative or 'Place' expressions are modified by measure phrases, the measurement is normally of the distance between the Figure and the Ground; thus 'The tree is six feet behind the house' means that the Figure (the tree) is six feet away from the Ground (the house) in a direction away from the back of the house. (Cf. e.g. Talmy on Figure-Ground, Landau & Jackendoff on Path & Place). Motion events can also include measure expressions to measure the distance traversed; thus 'The horse walked ten feet' means that the horse performed a walking action which covered ten feet of distance from beginning to end. This can be combined with an overt Path description, e.g. 'The horse walked ten feet to the water trough' can mean that the horse walked for a distance of ten feet, arriving at the trough. However, 'to' expresses simply that a Path ends up at the location of the Ground, without giving any further Place specification. In contrast, prepositions like 'into' and 'across' give richer information; 'into', for example, expresses that the Path ends in a container or enclosure. Thus sentences like 'The horse walked into the stable' combine Path and Place information. In such cases, an overt measure phrase normally measures not the extent of the Path, but the distance from the Figure to a relevant portion of the Ground. 'The horse walked ten feet into the stable' cannot be used to describe a situation in which a horse traverses a ten foot long path, part of which is outside the stable, and ends up inside the stable; in other words the measure cannot measure the Path. Instead, it can only mean that the horse ended up ten feet from wherever it entered the stable. The Path traversed may be longer than the distance expressed.

Indonesian shows a similar pattern when motion events include overt measure expressions, as in (1).

- (1) Tessa berlari tiga meter ke dalam rumah.
Tessa ber.run three meter to inside house
'Tessa ran three meters into the house'

Similar to English, the measure phrase in (1) does not measure the extent of the Path, but the distance from the Figure to a relevant portion of the Ground; the sentence means that Tessa ended up three meters from wherever she entered the house, according to most of the native speakers we have consulted.

We propose an analysis based on a syntactic decomposition which maps to an isomorphic compositional semantics in a straightforward way; a Place projection is dominated by a Path projection in the syntax, and in the motion descriptions, the Path is further dominated by a verbal projection. *ke* in Indonesian and 'to' in English in the description of 'into' path indicate that the Path is a transition, but the measure expression must measure something with a spatial extent. If Place provides such an extent, then the measure phrase obligatorily restricts that. In the absence of such content, the measure expression measures the extent of the event as described by the motion verb.

We further discuss other path prepositions in Indonesian which show patterns different from English. Path descriptions such as *ke belakang* 'to behind' and *ke seberang* 'across' in Indonesian give rise to ambiguity when they occur with measure expressions, as in (2).

- (2) Dalan berlari tiga meter ke belakang lukisan.
Dalan ber.run three meter to behind painting
a. 'Dalan ran three meters behind the painting' (measurement of Place)
b. 'Dalan ran three meters to behind the painting' (measurement of Path)

(2a) means that Dalan ended up three meters from the back of the painting, the measurement of Place, similar to the reading reported for (1). On the other hand, (2b) means that Dalan ran for a distance of three meters, arriving at the back side of the painting, measurement of the entire path traversed by the Figure. The two distinguished meanings are expressed by different path prepositions in English, as reflected in the translations, i.e., locative-path *behind* for Place measurement and *to behind* for Path measurement. We attribute the ambiguity of (2) to the ambiguity of the morpheme *ke*, which can potentially have three different meanings, Transition 'to', as in *ke dalam* 'into', (telic) Path 'to', and atelic Path 'toward'.