Deriving telic and atelic predicates via (non-)extensive measure functions in Korean

Korean aspectual verb constructions (aspectual V-V), traditionally known as auxiliary verb constructions, encode situation aspect (Smith 1991) in the form of two verbs: the main verb (V1), which provides the argument structure, and the aspectual verb (V2), which contributes aspectual meanings e.g., completion and iteration. Choi (2004a) proposes that aspectual classes such as activity and accomplishment (Vendler 1967) are expressed by verb verb (V-V) formations in Korean, and (a)telicity of the predicate (V-V) is determined by the second verb (V2).

In this paper, I claim that the telic (quantised) and atelic (cumulative) status of predicates (V-V) arise after the application of (non-)extensive measure functions, which are expressed by (a)telic-determining V2s in Korean. Telic predicates are derived by applying extensive measure functions (e.g., a litre of water, a pound of apples) which are expressed by a group of telic-determining V2s. Atelic predicates are derived by applying non-extensive measure functions (e.g., 18 carat gold, 90 degree Celsius water) which is expressed by a group of atelic-determining V2s. I argue that this is precisely the case for the verb-object complex in Korean. This is based on the fact that simplex verb constructions (i.e., verb + object) yield ambiguous interpretations in terms of (i) (in-)definiteness of the direct object, (ii) lexical semantics of a verb, and (iii) (non-)quantised status of the direct object with respect to (a)telicity of the sentence (2). These ambiguities do not arise in the aspectual V-V due to the presence of V2 (3).

Extending Choi (2004b), who proposes that, in the aspectual V-V, V2s, which behave as quantifiers, impose a temporal measure over input event descriptions of the first verb (V1), I argue that V2s denote specific temporal measurements (see (7)). Thus, any type of V2 can combine with V1 and yields different eventuality descriptions (e.g., state, activity, accomplishment, achievement). The supporting evidence for V2s as expressing specific temporal measurements comes from the fact that (i) the derived (a)telic V-V formations show certain restrictions in terms of [±stages] and [±telic], (ii) the (a)telic-determining V2s are compatible only with a particular type of temporal adverbs (3)-(4), (iii) atelic-determining V2s can be distinguished from each other by adverbs such as cwulcwuli 'in a line' (5); (iv) V2s can be stacked in a particular order, which influences the interpretation of direct object references (6). Based on these properties, I argue that telic-determining V2s correspond to extensive measure functions, which 'carve out' some 'portion' of the homogeneous input event descriptions of V1, and assign a certain temporal measure yielding telic (quantised) predicates. Thus, any sub-part of wipe up two tables in (3) cannot count as wipe up two tables. In addition, the sum of two contiguous wipe up two tables will amount to wipe up four tables. Atelic-determining V2s correspond to non-extensive measure functions, which measure some qualitative property of the predicate in question, and yield atelic (cumulative) predicates. I propose that the measured 'qualitative property' by atelic-determining V2s constitutes different time intervals, as shown in (7). Thus, any proper sub-part of keep on eating two apples at a time also counts as keep on eating two apples at a time. Also, the sum of two contiguous keep on eating two apples at a time amounts to keep on eating two apples at a time. Thus, the atelic-determining V2s differ from each other with respect to their frequency, and telic-determining V2s provide discrete temporal measurements. The derived (a)telic V-V formations via the application of (non-)extensive measure functions then encode their relation with respect to the input event description by means of morphological markings on the numeral determiner: -lul 'ACC' for telic V-V and -ssik 'each/bit by bit' for atelic V-V (see (3) and (5b)). I propose that the -lul marks its individuated status, and -ssik marks its part-of relation to the homogeneous input.

The proposed analysis for Korean aspectual V-V in which the (a)telic status of predicates arise after the application of (non-)extensive measure functions is in line with the claim that extensive measure functions can be used to define quantised predicates (Krifka 1998), and that simple predicates in natural language are typically cumulative (Krifka 1989, 1992, 1998). It is also in line with Rothstein's (2003) claim that telicity is to do with counting and the identification of atomic events. Furthermore, the composition of aspectual V-V resembles the distinction between count vs. bare plural/mass nominal references (Bach 1986) as well as the distinction, among noun phrases, between measure phrases (e.g., 2 kilos of gold) and substantive phrases (e.g., 9 carat gold) (Schwarzchild 2002).
(1) Telic and atelic determining V2s:

**Telic:**
- chiw 'clear'
- ka 'go'
- Peri 'throw away'

**Atelic:**
- tay 'supply'
- ssah 'pile'
- twu 'keep'

(2) a. Ai-ka sakwa-lul mek-ess-ta.
Child-NOM apple-ACC eat-PAST-DC
'The child ate an apple/the apple/apples.'

Child-NOM apple-ACC one.hour-for/in eat-PAST-DC
'The child ate the apple(s) in an hour.' or 'The child ate apples for an hour.'

c. Ai-ka sakwa(lul) twukay-lul hansikan-maney/tongan mek-ess-ta.
Child-NOM apple-ACC twu-ACC one.hour-in/for eat-PAST-DC
'The child ate two apples in an hour.' or 'The child ate two apples for an hour (not necessarily finishing them).'

Table-ACC two-ACC one.hour-in/for wipe clear-PAST-DC
'(someone) has completed wiping two the table(s).'</n
Table-ACC two-ACC one.hour-in/for wipe throw.away-PAST-DC
'(someone) has wiped the two table(s) instantly.'

Table-ACC two-SSIK one.hour-for/in wipe supply/pile-PAST-DC
'(someone) kept on/continuously wiping two tables at a time for an hour.'

Door-ACC one.hour-for/in open keep-PAST-DC
'(someone) kept doors/the door open for an hour.'

(4) Adverbs

V1+chiw/ka V1 + peri V1 + tay/ssah V1 + twu
(accomplishment) (achievement) (activity) (state)
ta/keuyta/wanchenhi pangkum/kumbang cakkwu/kaysok acikto/hangsang
'all/almost/completely' 'just now/instantly' 'repeatedly/continuously' 'still/all the time'

Children-NOM in.line run go pile/supply-PAST-DC
'The children continuously ran in a line (one line after another).'

Children-NOM some/little-SSIK run go supply/pile-PAST-DC
'The children kept on running a few at a time.'

(6) Derived telic to atelic: [V1 + chiw/ka] + tay/ssah Derived telic to telic: [V1 + chiw/ka] + peri
Derived telic to atelic: * [V1 + tay/ssah] + chiw/ka/peri

(7) ssah 'pile' 
... (|| = time intervals) peri 'throw away'

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\text{tay 'supply'} \quad \text{twu 'keep'} \quad \text{chiw 'clear'} \quad \text{ka 'go' (for distance)}
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(combines only with manner of motion V1)

Selected references

