The cartography of motion events in Cantonese, Mandarin and English

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This study proposes a base-generated word order of the components of (non-causative) motion events in Cantonese, Mandarin and English, from which the surface patterns can be derived with head movements (incorporations) and phrasal movements. I adopt the cartographic assumption that the (purely lexical) verb V generates at the bottom of the structure, which consists of a functional sequence (fseq) above it (Schweikert 2005; Cinque 2006, 2010b). I also assume that a monomorphemic verb consisting of more than one feature is the product of incorporation due to head movements. The fseq is to be figured out in the following procedure. First, based on the observations in (1), I decompose *walk, descend* and *fall* into V_{MOVE}, a Manner feature μ, and a Path feature α, in which incorporations are executed to obtain the full forms of the verbs (2):

(1) a. *walk* encodes Manner and no Path,
b. *descend* encodes Path and no Manner and,
c. *fall* encodes both (Zlatev & Yangklang 2004).

(2) a. *walk* spells out V_{MOVE} and μ: [$_{\mu}$ walk [$_{V}$ ~~walk~~]]
b. *fall* spells out V_{MOVE}, μ and α: [$_{\alpha}$ fall[$_{\mu}$ ~~fall~~ [$_{V}$ ~~fall~~]]
c. *descend* to spell out V_{MOVE}, μ (with 'neutral' as the 'default' value; referring to Cinque 1999, Section 6.1) and α: [$_{\alpha}$ descend [$_{\mu}$ ~~descend~~ [$_{V}$ ~~descend~~]]

Second, since in all the three languages the Path of the motion can be realized in the verb and the particle simultaneously, the two Path features are considered as from different projections. The first feature is incorporated in the verbs and the second is realized as post-verbal particles (1a, probably 1c) or adjectival resultatives (1b, probably 1c) (Cf. Ramchand 2008), labeled as π (following Hale & Keyser 2002):

(2) (a) *fall* vs. *fall down* [English]
(b) *gong* 'descend' vs. *gong dai* 'descend low' [Cantonese]
(c) *jiang* 'descend' vs. *jiang xia* 'descend down' [Mandarin]

Third, a deictic feature δ is recognized, which is realized in the main verb in English while as a post-verbal particle in Cantonese and Mandarin:

(3) (a) *come in* [English]
(b) *jap lei* 'enter come' [Cantonese]
(c) *jin lai* 'enter come' [Mandarin]

Fourth, a Path feature ρ, other than α and π, is proposed for *lok* in Cantonese and *xia* in Mandarin in the expressions below. Though both mean the particle 'down' in English, they behave differently from α in (1). Semantically they encode the trajectory of the motion. Thus, α, ρ and π can be interpreted as Init(iation)–. Proc(ess)–Res(ult) in the Ramchandian tripartite event structure (Ramchand 2008), though they are merged reversely in the syntactic structure proposed here.

(4) (a) *dit dai lok heoi* 'fall low down go' [Cantonese]
(b) *diao xia qu* 'fall down go' [Mandarin]

Given that the assumptions mentioned at the beginning and the Head Movement Constraint, the features contained in the monomorphemic verbs (products of incorporations) should be close enough to the bottom V_{MOVE}. In (3a) *come* (incorporation of V_{MOVE} +δ) preceding *in* (π) suggests that π merges latter than δ (otherwise head movement of V_{MOVE} to δ would be blocked by π). In (4) *dit* and *diao* 'fall' (V_{MOVE}+μ+α, refer to (1b)) preceding *lok* and *xia* (ρ) and then preceding *hoei* and *qu* suggests that ρ merges latter than α and μ, and δ merges latter than ρ. Therefore, a fseq is obtained:

(3) π > δ > ρ > α > μ > V,
i.e. Result > Deixis > Process > Initiation > Manner > Motion Root