Scope, order, and constituency

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Mismatches between semantic scope and affix order ("mirror principle violations") and/or between scope and constituent structure ("bracketing paradoxes") have been dealt with either (1) by generating and interpreting affixes where the semantics dictates, and moving them in the morphology (Embick 2007, Skinner 2008), or (2) by generating them *in situ* and moving them in the semantics (LF movement, Pesetsky 1985). Strict versions of lexicalism allow no morphological movement operations, and require that morphological combinations are phonologically and semantically interpreted as soon as they are formed, which precludes counter-scopal orders of affix introduction. We propose an approach which is consistent with strict lexicalism, and which explains several types of phonological and morphological locality violations commonly associated with morphological scope mismatches. The idea is that morphotactic requirements, such as alignment constraints, may force an affix to be inserted ("introfixed") below a previously added affix that it outscopes.
(1)
a. Regular prefixation/suffixation [Root] --> [[Root]Affix$_1$] --> [[[Root]Affix$_1$]Affix$_2$]
b. Introfixation
(i) [Root] --> [[Root] Affix$_1$] --> [[[Root] Affix$_2$] Affix$_1$] (apparent "mirror principle violation")
(ii) [Root] --> [[Root] Affix$_1$] --> [[Affix$_2$ [Root]] Affix$_1$] (apparent "bracketing paradox")
Nothing moves, either at LF or in the morphology. This correctly excludes the typological overgeneration of current approaches (e.g. "scopal metathesis", where two morphemes always appear in anti-scopal order, Ryan 2010).

The phonological evidence consists primarily of endocyclicity phenomena (as in the Cibemba case discussed by Hyman and Orgun 2005), e.g. where Root + Affix$_1$ undergoes phonological processes before a scopally higher Affix$_2$ splits them. In Sanskrit, the *ruki* rule applies to lexical prefix+root combinations before the higher-scoping tense-marking augment *a-* is introfixed between them, interrupting the conditioning *ruki* context: *abhi* + *siñc-* --> *abhi-Siñc-* --> *abhy-a-Siñc-a-n* 'poured on' (see (2a)).

The morphological evidence includes cases where Affix$_2$ selects for Root + Affix$_1$ but is morphologically attached to the root, as in the Sanskrit absolutive:

a.	*-tvA* after simple roots:	*sik-tvA*	'having poured'
b.	*-ya* after prefixed roots:	*abhi-Sic-ya*	'having poured on'

abhi- must be prefixed before *-ya* is suffixed, yet *-ya* forms a phonological and morphological constituent with the root. The order of affixation is scopal, constituency is anti-scopal (2b).

In the special case where both anti-scopally ordered affixes are inflectional, the phonological and morphological evidence converges to show that they are added *simultaneously*, in effect forming a single affix bundle. Examples are Finnish Case/Number and Possessive suffixes, Upper Sorbian Case and Number, and the "outward sensitivity" cases of Carstairs 1987 (Hungarian Plural and Possessive, Turkish Potential and Negative). For example, in Upper Sorbian, the dual ending stands anti-scopally outside case endings (see (3a)), but when they combine, each suffix has a fixed allomorph independently of declension class (see (3b)). The fact that such bundling occurs only with inflectional affixes recalls the well-known observation that cumulative exponence occurs only in inflection. Both generalizations are explained by the fact that the scope of derivational affixes is distinctive (e.g. the causative of an applicative is different from the applicative of a causative) whereas the scope of inflectional affixes is

intrinsically determined by the hierarchy of functional categories (case necessarily outscopes number).

(2) a. [abhi] [sic] --> [abhi] [Sic] --> [abhi] [a-Sic]
b. [abhi] [sic] --> [abhi] [Sic] --> [abhi] [Sic-ya]

(3) (a)

	Sg.	Du.
Nom.	nan	nan-aj
Instr.	nan-om	nan-om-aj

`father'

(b)

	Sg.	Du.
Nom.	myS	myS-i
Instr.	myS-u	myS-om-aj

`mouse'