There is one fine-grained functional sequence in morpho-syntax: Japanese complex verbs are like Slavic prefixes

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Synopsis. We report on a robust symmetry between the Polish and the Japanese sequence of projections in what superficially looks like belonging to different domains namely morphology: verbal prefixes (Polish) and syntax: multiple verbs (Japanese). This parallellism strongly supports the thesis that there exists one and only functional sequence of heads (fseq) in morpho-syntax which is invariantly ordered by UG (e.g. Cinque (1999)) and the surface differences among particular languages in the order of elements that instantiate this fseq result solely from movement (not from the variation in fseq itself). We demonstrate this thesis on the example of the sequence of syntactic heads behind the multiple verbal prefixes in Polish (in particular, but with a direct extension to other Slavic languages) and the multiple verb system in Japanese. This surprising tertium comparationis instantiates the same subset of fseq, as exemplified by the order of the distributive and saturative prefix in (1) and the distributive and saturative verbs in (2).[1]

(1)   DIST *po* > SAT *na* (Polish)

    a.   po-na-jadać się owoców   b.* na-po-jadać się
        DIST-SAT-eat self fruits   SAT-DIST-eat self
        'to eat some fresh fruits (to the point of satisfaction)'

(2)   SAT *makur* < DIST *nare* (Japanese)

    a.   Merii-ga posutaa-o hari-makuri-nare-tei-ru.
        Mary-NOM poster-ACC paste-roll.up-get.used.to-ASP-PRESENT
        'I got used to pasting up posters to the point that there is no poster left'

    b. * Merii-ga posutaa-o hari-nare-maku(r)-tei-ru.
        Mary-NOM poster-ACC paste-get.used.to-roll.up-ASPECT-PRESENT

We show that the surface sequence of Japanese multiple verbs turns out to constitute a mirror-image of the sequence of multiple verbal prefixes in Polish (as well as Russian). Given the roll-up movement of the Japanese clause and the lack of the roll-up in the respective area of the clause in Polish, the base-generation of Polish prefixes and Japanese multiple verbs instantiate the same fine-grained morpho-syntactic fseq with primitives such as 'distributive', 'repetitive', 'saturative', 'excessive', 'terminative' etc. heading their own projections in the verb morphology of Polish and the VP syntax of Japanese.

2. Functional sequence of Polish verbal prefixes. Within the often adopted classification of Slavic prefixes into superlexical (vP-external) and lexcial (vP-internal) in work like Svenonius (2004), a.o., Wiland (2012) argues that the vP-external prefixes in Polish lexicalize spans of the articulate sequence of aspectual heads generated on top of the vP as in (3):

(3)   [Dist^0 [Att^0 [Delim^0 [Cuml^0 [Sat^0 [Perd^0 [Exc^0 [Rep^0 [Compl^0 [Term^0 […
        | | | ⌣   ⌣ | |
     po *pod* *po*   *na*   *prze*   *do*   *od*

It is argued in Wiland (2012) that this fseq explains a constraint on syncretism and the order of multiple prefixes in front of a verb stem, as for instance in (4)-(7):

(4)   a.   po-prze-bijać oferty
       DIST-EXC-hit offers
       'to make better offers (several times)'
   b. * prze-po-bijać

(5)   a.   na-do-krajać chleba
       SAT-COMPL-cut bread
       'to slice even more bread'
   b. * do-na-krajać

(6)   a.   po-prze-pisywać
       DELIM-REP-write
       're-write something (a little bit)'
   b. * prze-po-pisywać

(7)   a.   na-prze-siadywać się
       DIST-PERD-sit self
       'to sit in some places for a long time'
   b. * prze-na-siadywać

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[1] Abbreviations: ATT - attenuative, COMPL - completive, CUML - cumulative, DELIM - deliminative, DIST - distributive, EXC - excessive, PERD - perdurative, REP - repetitive, SAT - saturative, TERM - terminative.

A generalization about Polish aspectual prefixes is that given any two vP-external prefixes that can stack in the order X>Y, the reversed order Y>X is ill-formed, without exception. As argued in Wiland (2012), only multiple prefixation patterns that observe the fseq in (3) are well-formed.

3. Japanese complex verbs. With the Polish paradigm of multiple verbal prefixes in mind, we show that the surface sequence of Japanese multiple verbs, called V-V compounds in the literature, turns out to constitute a mirror-image of the fseq of multiple prefixes found in Polish. While the previous literature on Japanese verbal compounds concentrates on cases comprising two verbal subconstituents, it turns out that the second verb of the V-V compounds can be further followed by another V to the effect that the complex comprises three verbs. This is illustrated in (8a), where the verb *makas*, which contributes an excessive reading to the complex, is followed by a distributive verb *nare*. The reversed order results in ill-formedness (in (8b)).

(8)　　EXC *makas* < DIST *nare* (vs. *nare < *makas*)
　　　a.　　John-wa Merii-o utai-makasi-nare-teir-u.
　　　　　　John-TOP Mary-ACC sing-exceed-get.used.to-ASP-PRESENT
　　　　　　'John is getting used to outsinging Mary'
　　　b.　* John-wa Merii-o utai-nare-makasi-tei-ru.
　　　　　　　John-NOM Mary-ACC sing-get.used.to-exceed-ASP-PRESENT

We show that just like Polish prefixes, multiple verb patterns that observe the fseq in (3) are well-formed, as for instance in (9a) where the distributive verb *nare-* stacks on top of saturative *makur-*, while the reverse order is ill-formed, as in (9b).

(9)　　SAT *makur* < DIST *nare* (vs. *nare < *makur*)
　　　a.　　posutaa-o hari-makuri-nare-tei-ru.
　　　　　　poster-ACC paste-roll.up-get.used.to-ASP-PRESENT
　　　　　　'I got used to pasting up posters to the point that there is no poster left.'
　　　b.　* hari-nare-maku(r)-tei-ru.
　　　　　　paste-get.used.to-roll.up-PAST
　　　　　　'I got used to to re-pasting posters.'

4. Surface morpheme order by roll-up. The mirroring order between the Polish multiple prefixes and constituents of Japanese complex verbs is best derived by (upward) roll-up that is well-known to apply to the sentential elements of the Japanese clause (as in Cinque (2006) and Koopmann (2005)) to the effect that the familiar fseq of projections MoodP>TP>AspP>VoiceP>vP ends up lexicalized as a sequence of verb stem-Passive-Asp-Tns-Mood in a root clause, as in:

(10)　narabe-rare-tei-ta-yooda
　　　　arrange-PASSIVE-ASP-TNS-MOOD　'(Things) seem to have been arranged.'

Given the roll-up in Japanese and the lack thereof in the respective area of the clause in Polish, Polish prefixes and Japanese multiple verbs instantiate a subset of the same fseq in (3).

5. Partial roll-up in Bulgarian. Istratkova (2004) shows that the surface order of multiple prefixes in Bulgarian follows the sequence ATT>INCP>TERM>COMPL>DIST>CUML>EXC>REP, which differs from the fseq in (3). However, on the basis of the fact that in Bulgarian some of the prefixes inner to the verbal stem fall in the scope of the outer prefixes, we argue that the surface order of Bulgarian prefixes is derived from the underlying fseq in (3) by successive-cyclic application of at least four movements, all of which target the bottom layers of the tree in (3). We conclude that there exists one and only universal fseq in morpho-syntax with differences between languages reducible to the mode of its lexicalization – as in the case of the fseq in (3) which it remains spelled out in Polish without roll-up, in Japanese in the mirror fashion (i.e. following a full roll-up) and in Bulgarian with only a partial roll-up.

Selected references: Cinque, G. 2006. *Restructuring and Functional Heads*, OUP. -- Istratkova, V. 2004. On multiple prefixation in Bulgarian, *Nordlyd* 32:301-321. -- Koopman, H. 2005. Korean (and Japanese) morphology from a syntactic perspective, *Linguistic Inquiry* 36:601-633. -- Svenonius, P. 2004. Slavic prefixes inside and outside VP. *Nordlyd* 32:205-253. -- Wiland, B. 2012. Prefix stacking, syncretism and the syntactic hierarchy, *Slavic Languages in Formal Grammar,* ed. M. Zikova & M. Docekal, Berlin: Peter Lang, 307-324.