Pseudo-ABA patterns and the generative power of Nanosyntax*

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Abstract

This paper discusses the limits of generative power of the Nanosyntactic theory with three-cell ABA patterns as the core focus. It is argued that the representations available in Nanosyntax (namely, movement-containing tress and pointers) allow the derivation of an ABA pattern where all three cells are portmanteaux. It is then shown that such patterns are attested using novel data on interaction between Russian analytic comparatives/superlatives and Russian suppletive adjectives. The contents of this paper, therefore, add to the growing body of evidence that portmanteux give rise to (pseudo-)ABA patterns, as suggested by Middleton 2021 and Davis 2021. They also suggest that the rarity of some ABA patterns should be given a 'third-factor' account, as suggested by Andersson 2018, should the variety of ABA phenomena lie within the reach of the generative power of our morphosyntactic theories.

1 Introduction

In linguistics, a theoretical proposal is often evaluated based on its generative power: what kinds of languages does the proposal predict to be possible and how does the prediction correspond to the observed cross-linguistic data. This paper is an exercise in such evaluations. The theory under the microscope is Nanosyntax, a late-insertion, syntax-all-the-way-down theory of morphosyntax.

The relevant property for the current evaluation is the possibility of generating the so-called pseudo-ABA patterns. In contemporary morphosyntax, it is assumed that ABA patterns are impossible. By ABA patterns I mean "morphological patterns in which, given some arrangement of the relevant forms in a structured sequence, the first and third [forms] may share some property "A" only if the middle member shares that property as well. If the middle member is distinct from the first, then the third member of the sequence must also be distinct." (Bobaljik & Sauerland 2018). Despite the ever growing body of evidence that *ABA restriction holds across many morphological domains (Caha 2009; Lander & Haegeman 2018; Middleton 2021; Sudo & Nevins 2022 among many others), problematic patterns for an across-the-board ban on ABA phenomena are found again and again, often dubbed "pseudo-ABA" phenomena (usually by the theorist that finds an unproblematic solution for the phenomenon).

Patterns of the form A-B-Ax are both attested and analyzeable in Nanosyntax using either backtracking (cf. Caha 2017) or Movement-Containing Trees (cf. Blix 2021). This paper's contribution is that Movement-Containing Trees, when combined with pointers, the Nanosyntactic tool to model suppletion,

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give rise to an ABA suppletion pattern where all three cells of the paradigm are portmanteaux, which would be a purely ABA suppletion pattern. The result add to the research arguing that Nanosyntactic pointers are powerful addition to the machinery: for example, Taraldsen (2019) explores that pointers can be used to derive ABA in multi-dimensional paradigm — this work shows that ABA patterns in one-dimensional paradigms are also within the reach of Nanosyntax with pointers.

Despite the result appearing as detrimental for the version of Nanosyntax discussed in this paper, I argue that such patterns are attested and provide evidence from a substandard Russian combination of analytic comparative/superlative forms with suppletive adjectives. I then discuss the inter-speaker variability with respect to the pattern, suggesting that the discussed ABA pattern is unstable, which may have to do with the learnability bias in the tendency for ABA patterns to be unattested (cf. Andersson 2018).

The paper proceeds as follows. In section 2, I give a quick introduction to the basic premises of Nanosyntax as understood in this paper, making sure to introduce every theoretical notion necessary for understanding my argument. Section 3 presents the theoretical discussion — first, I show how a pseudo-ABA pattern can be derived via both backtracking and Movement-Containing Trees (Blix 2021), using Malayalam pronominal paradigms as an example (Middleton 2021), and then I show how a putative ABA suppletion pattern is derived, using the combination of Movement-Containing Trees and pointers. Section 4 presents evidence from Russian that the predicted pattern is attested: I present the unexpected interaction between analytic comparatives/superlatives and suppletive adjectives and then argue that the pattern can only be understood as an ABA distribution of suppletive roots, providing support for the prediction of the Nanosyntactic model that ABA patterns with three portmanteaux are, indeed, possible. Section 5 concludes and discusses the large-scale implications of the argument presented in this paper.

2 The assumed version of Nanosyntax

As stated in the introduction, this paper examines the limits of the Nanosyntactic model. Nanosyntax (Starke 2009; Baunaz & Lander 2018) is a late-insertion, syntax-all-the-way-down theory of morphology. These descriptions mean that Nanosyntax views morphological units (affixes, stems, "words") as having complex internal structure (syntax all the way down), which is mapped onto observed forms via insertion rules that map syntactic objects onto morpho-phonological strings (late insertion).

However, these are the properties that Nanosyntax shares with the most prominent contemporary theory of syntax-morphology interface, Distributed Morphology (DM). The difference between Nanosyntax and DM lies in the modularity of morphology: DM assumes a modular post-syntax with a wide array of postsyntactic operations that render the underlying syntactic structure opaque. Although there are works arguing for the necessity of such operations (Arregi & Nevins 2012; Hewett 2023), Nanosyntax goes in another direction by deriving the morphological phenomena using syntactic machinery.

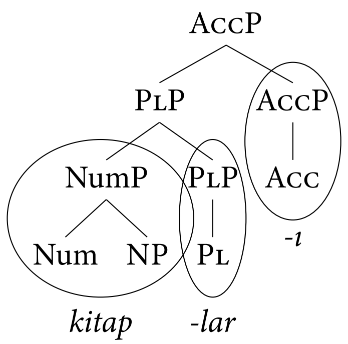
Nanosyntax follows the Cartography tradition in generative syntax in assuming a version of the One Feature-One Head principle of Kayne 2005, according to which syntactic terminals are not bundles of features but rather individual features themselves (see Boeckx 2014 for a forceful argument against the idea of bundles of features). It is rather uncontroversial, however, that most morphological exponents realize multiple syntactic features. To handle this fact, Nanosyntax employs Phrasal Spell-Out (insertion rules map whole syntactic phrases to exponents, not single terminals, like in DM). The idea is that exponence of multiple features (=heads) by a single affix is the result of those heads forming a constituent in the syntax. An immediate question then arises: how are syntactic feature-heads grouped into constituents that undergo insertion? The answer is that Nanosyntax achieves that using syntactic movement. To give substance to the overview, let me discuss a quick example. Consider nominal declension in Turkish, a fragment of which is presented in the table in (1). In Turkish, number and case features are exponed separately, meaning that the number feature-heads and case feature-heads are in different constituents.

(1) Nominal declension in Turkish (a fragment)

	SG	PL
NOM	*kitap*	*kitap-lar*
	book	book-PL
ACC	*kitab-ı*	*kitap-lar-ı*
	book-ACC	book-PL-ACC
DAT	*kitab-a*	*kitap-lar-a*
	book-DAT	book-PL-DAT

In Nanosyntax, the structure that corresponds to the form *kitap-lar-ı* 'books.ACC' is provided in the syntactic structure in (2), where the Pl head and the ACC head are found in different constituents. The idea is that two steps of movement have occurred: first, NumP has moved to Spec,PlP and then, the resulting PlP has moved to Spec,AccP. Note that I am working with a very simplified internal structure for nominals.

(2) Structure for the Turkish form *kitap-lar-ı* 'books.ACC'



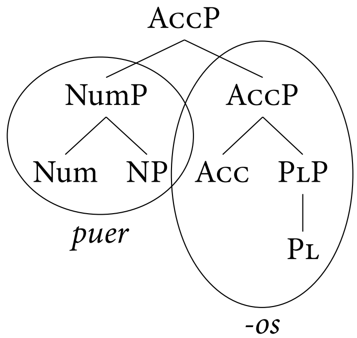
Now consider a language like Latin where the number and case features are exponed together, as shown in the table in (3) (I abstract away from the topic of declension classes for ease of exposition, see Caha 2021 and Blix 2021 for the configurational proposals about declension classes in Nanosyntax).

(3) Nominal declension in Latin (a fragment)

	SG	PL
NOM	*puer*	*puer-ī*
	boy	boy-NOM.PL
ACC	*puer-um*	*puer-os*
	boy-ACC.SG	boy-ACC.PL
DAT	*puer-ō*	*puer-īs*
	boy-DAT.SG	boy-DAT.PL

The fact that the Pl and Acc features are exponed together invites an analysis where the two heads form a constituent. The structure for the form *puer-os* 'boys.ACC' is provided in the syntactic tree in (4) with the idea being that, again, two steps of movement have occurred: first, movement of NumP to Spec,PlP and then movement of the NumP from Spec,PlP to Spec,AccP.

(4) Structure for the form *puer-os* 'boys.ACC'



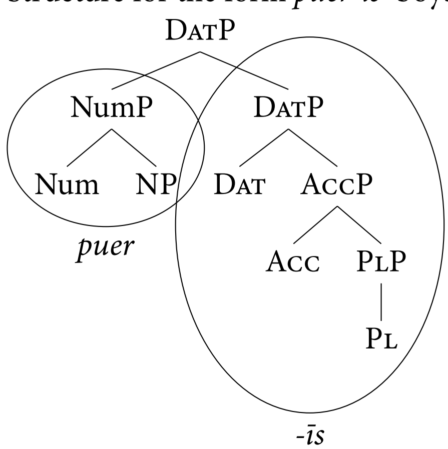
This exposition has introduced two main types of movement employed in Nanosyntactic derivations: Comp-to-Spec movement, which derives separate exponence, and Spec-to-Spec movement, which derives exponing something together. Nanosyntactic works employ an algorithm of lexicalization, which governs the order of these movements, provided in (5). The fourth step of the algorithm will be shown at work in the next section.

(5) Nanosyntactic spell-out algorithm

a. Merge F to XP and spell out
b. If (a) fails, move the constituent in Spec,XP to Spec,FP (Spec-to-Spec)
c. If (b) fails, move XP to Spec,FP (Comp-to-Spec)
d. If (c) fails, proceed to the next step in the previous cycle (backtracking)

The reliance of Nanosyntax on the spell-out algorithm is due to its commitment to the idea that spell-out of syntactic structure proceeds bottom-up (Bobaljik 2000). The derivational nature of Nanosyntactic analyses invites a relevant topic of discussion, namely, the notion of Cyclic Override (Starke 2009). Cyclic Override means that successful lexicalizations override previous lexicalizations. Let us return to the Latin example. Assuming the containment of accusative case in the dative case (Caha 2009), the lexicalized structure for the dative *puer-īs* 'boys.DAT' is given below in the tree in (6).

(6) Structure for the form *puer-īs* 'boys.DAT'



Derivationally, after Dat was merged, the NumP in the specifier of AccP has undergone movement to Spec,DatP and the constituent [Dat [Acc [Pl]]] is realized as /*īs*/. This step raises the following question: what has happened with the lexicalization of the constituent [Acc [Pl] as /*os*/? The idea is that the later lexicalization overrides the older lexicalization, which prevents the affix /*īs*/ from arising in the dative case form.

Another important property of Nanosyntax is the lack of the notion of contextual allomorphy: there is only one way to expone any given constituent and, thus, any difference in form found under the label of 'contextual allomorphy' implies exponence of different constituents. The exponence mechanism of Nanosyntax takes a constituent and matches it to a morpho-phonological representation: no context-sensitivity is possible. This is an important point of divergence between Nanosyntax and the main competing late-insertion syntactic approach to morphology, Distributed Morphology (see Halle & Marantz 1994; Bonet & Harbour 2012; Gouskova & Bobaljik 2020 for discussion of insertion in DM and see Caha 2018 for discussion of differences betwenn DM and Nanosyntax with respect to insertion).

To take stock, the main notions introduced in this section is that Nanosyntax is another member of the family of late-insertion syntactic approaches to morphology, that Nanosyntax employs mapping of whole phrases onto morphological exponents (Phrasal Spellout), that Nanosyntax is committed to a bottom-up, derivational approach to lexicalization of syntactic structures and achieves exponence of multiple feature-heads together via syntactic movement and nothing else (Caha 2018). In the next section, we will tackle the question of possibility of certain pseudo-ABA pattern given the basic Nanosyntactic commitments.

3 Nanosyntax and (pseudo-)ABA

This section discusses the derivation of certain pseudo-ABA patterns given the Nanosyntactic machinery outlined in the previous seciton. Firstly, we will discuss how Nanosyntax derives existing (and well discussed) cases of A-B-Ax patterns, taking Malayalam pronominal paradigm as an example (Middleton 2021; Blix 2021). Then, I will discuss how Nanosyntax treats root suppletion and show why a straightforward idea for deriving ABA patterns is untenable. Finally, building on discussion in the first two subsections, I argue that Nanosyntactic model nevertheless derives ABA patterns, albeit in a more intricate fashion than the option discussed in the second subsection.

3.1 Nanosyntax and A-B-Ax patterns: backtracking or Movement-Containing Trees

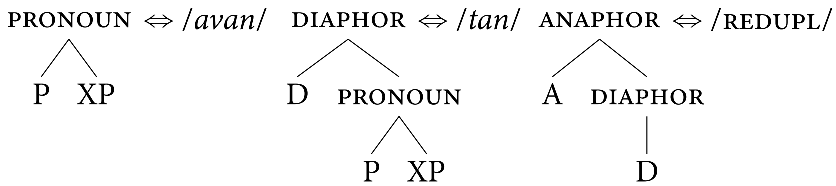
Ban on ABA patterns in morphology is one of the most remarkable discoveries of morphological theory in recent years and the one that has started a fruitful research programme of finding counterexamples and re-analyzing them in a way that does not lose the theoretical advancements triggered by the basic *ABA generalizations. Such counterexamples are sometimes dubbed "pseudo-ABA" patterns. This subsection discussed how Nanosyntax derives these pattern, using Malayalam pronominal paradigm (Middleton 2021) as an example. The paradigm itself is given in the table in (7). More precisely, Malayalam presents an A-B-Ax pattern where the two cells of the paradigm are portmanteux and the third cell is the first cell plus an additional affix (namely, a reduplicaton affix, assuming an item-and-arrangement approach to reduplication, see Marantz 1982, Raimy 1999).

(7) Malayalam pronominal paradigm

PRONOUN	DIAPHOR	ANAPHOR
avan	*tan*	*avan-avan*
PRON	DIAPH	PRON-/REDUPL/

This pattern can be derived in two ways. The first way to derive the A-B-Ax pattern is via 'backtracking'. Recall that the Nanosyntax spell-out algorithm specifies a step of going to the previous cycle of the algorithm, which is often referred to as 'backtracking'. Backtracking at work can be seen in the derivation with the lexicon specified in (8). Here, I assume Middleton's containment structure for pronouns, diaphors, and anaphors: [A [D [P XP]]].

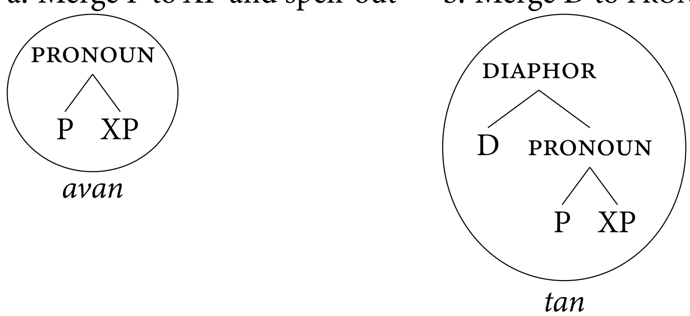
(8) Lexicon for Malayalam pronominal paradigm



Consider the derivation (assuming, again, the A»D»P f-seq) presented below. First, we merge P to XP, which matches to the lexical entry for /*avan*/ (9a). After we merge D(IAPHOR) to the pronoun structure, the resulting phrase matches to the lexical entry for /*tan*/ (9b).

(9) First two steps of lexicalization

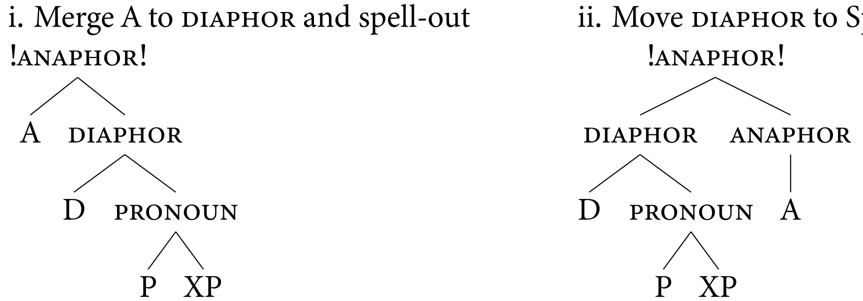
a. Merge P to XP and spell-out   b. Merge D to PRONOUN and spell-out



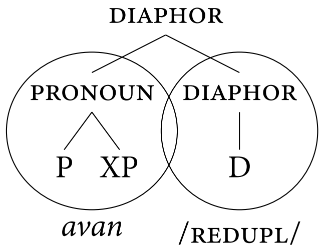
After we merge A to the diaphor structure, however, the resulting structure cannot be lexicalized (10a). Moving the diaphor structure to Spec,AP also does not result in a lexicalizeable structure (typographic convention is to mark a non-lexicalizeable structure by exclamation marks). According to the spell-out algorithm, one has to return to the previous cycle and move the pronoun structure to Spec,D(IAPHOR)P, as shown in (10b). The resulting structure can be lexicalized as /*avan*-REDUPL/ (since this is an intermediate lexicalization step in lexicalization of the anaphor, it is not a problem that the diaphor structure is realized as *avan-avan* and not *tan*).

(10) a. Current cycle does not result in a licit lexicalization

i. Merge A to DIAPHOR and spell-out   ii. Move DIAPHOR to Spec,AP



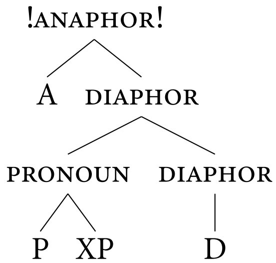
b. Backtracking. Move PRONOUN to Spec,DP



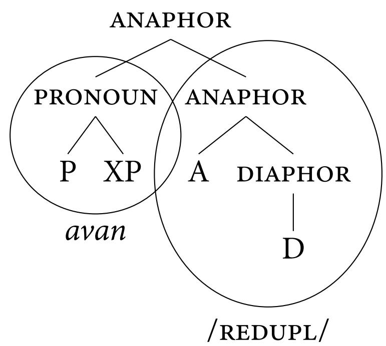
Then, when we merge A, although the resulting structure cannot be lexicalized, the next step of the algorithm (move the pronoun structure to Spec,AP) results in a structure the substructures of which match to the lexical entries of /*avan*/ and /REDUPL/, deriving the form *avan-avan* for the anaphor, both steps are shown in (11).

(11) Deriving the form *avan-avan* (*avan*-/REDUPL/)

a. Merge A on top of DIAPHOR

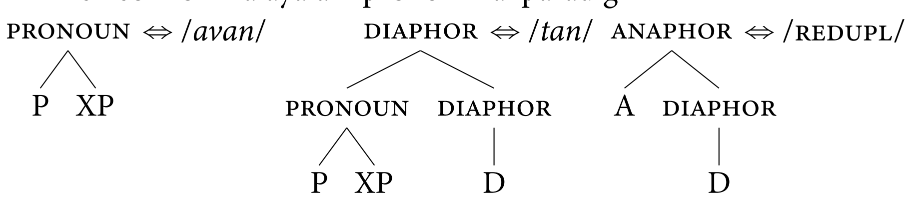


b. Move PRONOUN to Spec,AP



This case study shows that the Nanosyntactic spell-out algorithm and its representational means are expressive enough to derive pseudo-ABA patterns. However, Blix 2021 presents an alternative derivation for pseudo-ABA patterns that does not involve backtracking.[1] His idea is to push the notion of phrasal spell-out to its limits and introduce lexical entries with movement. His proposal for Malayalam lexical entries is given in (12). The lexical entry for diaphors is a movement-containing one: the lexical entry can be matched to the whole structure after movement of the pronoun phrase to Spec,D(IAPHOR)P.

(12) Blix' lexicon for Malayalam pronominal paradigm

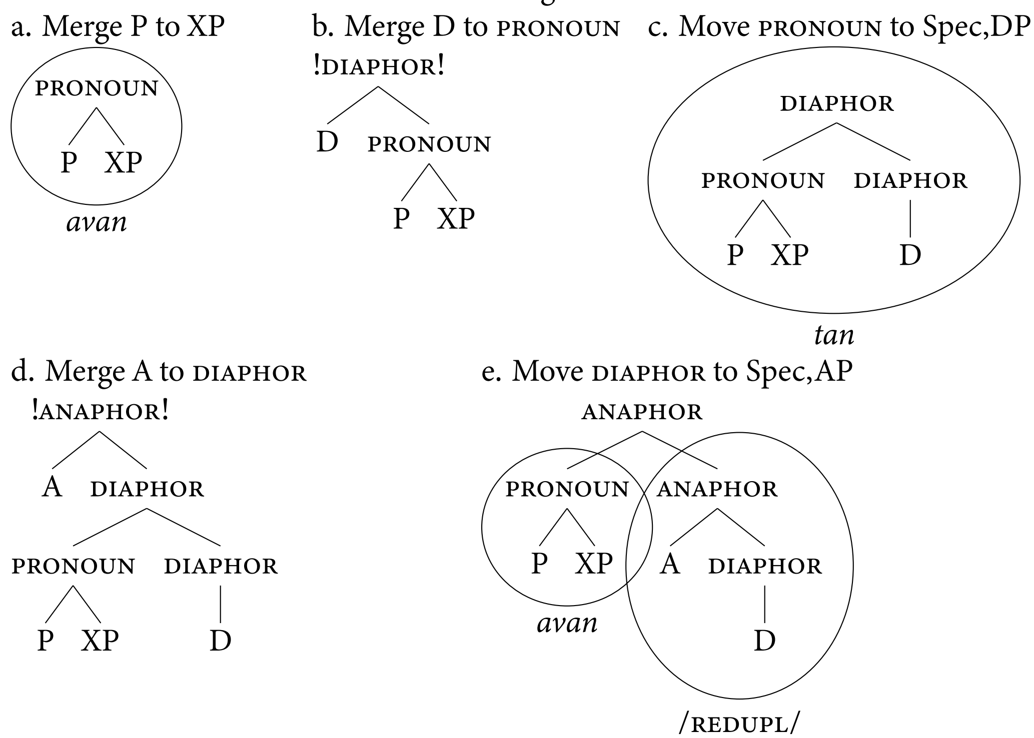


Consider the derivation with the provided lexicon. The first step would be to merge P(RONOUN) to XP and match the resulting structure with the lexical entry for *avan* (13a). The next step is to merge D(IAPHOR) to the pronoun structure and, unlike the previous derivation, the resulting structure cannot be lexicalized (13b). However, after movement of the pronoun structure to Spec,DIAPHORP, the resulting structure can be matched with the lexical entry for /*tan*/ (13c). Similarly, after merging ANAPHOR to DIAPHORP, the resulting structure cannot be lexicalized (13d), but after movement of DIAPHOR to Spec,ANAPHORP the

[1]Blix himself wishes to get rid of backtracking due to the computational complexity of the spell-out algorithm with backtracking. I abstain from the discussion and simply aim to present the representational device Blix uses to derive pseudo-ABA patterns without backtracking.

resulting structure's two substructures can be matched with the lexical entries for /*avan*/ and /REDUPL/ (13e).

(13) The derivation with movement-containing trees



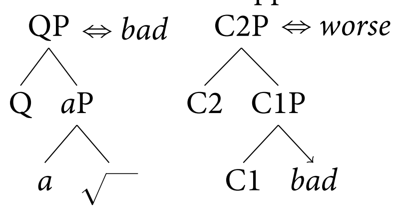
The aim of this subsection was to show that the model of Nanosyntax presented in the previous subsection has enough expressive power to derive pseudo-ABA patterns of A-B-Ax type. Although this section has discussed ABA distribution of a functional item, the derivations presented in this subsection can be replicated for root suppletion as well but this invites discussion of root suppletion in Nanosyntax, which is the topic of the next subsection.

3.2 Nanosyntax and root suppletion: pointers

Root suppletion is described as follows: the same abstract stem/root having different realizations in different cells of the paradigm. For example, English adjective *bad* has a suppletive form *worse*. This family of phenomena is rather problematic in the late-insertion syntactic approaches to morphology. It is often argued that the syntactic computation is 'blind' to the differences between different roots (given that the differences between roots appear to be either semantic, or phonological in nature, the sensitivity of syntax to the difference between roots appears to violate the commitments of generative grammar regarding modularity, see Vanden Wyngaerd, De Clercq & Caha 2021 for discussion). The problem is the restriction of, say, *worse* to the comparative form of *bad*, given the supposed syntactic indistinctness of the syntactic root for *bad* and the syntactic root for *good*.

One of the existing solutions to this problem is to abandon the indistinctness of roots, as argued for by Harley 2014. However, alternatives exist. One of them is the Nanosyntactic solution to the problem, proposed in Vanden Wyngaerd, De Clercq & Caha 2021. The solution has two parts. The first part is a part of technical machinery used to model root suppletion: pointers. Assuming the split structure for comparatives (Caha, De Clercq & Vanden Wyngaerd 2019), a Nanosyntactic lexicon for *bad* and *worse* is provided below. The restriction of *worse* to the comparative form of *bad* is achieved via stipulating in the lexical entry for *worse* that the structure can be realized as *worse* only if it is built on top of a structure previously lexicalized as *bad*.

(14) Pointers for root suppletion in Nanosyntax



The second part of the solution is the restriction of overriding previous lexicalization via the Faithfulness Principle. According to this principle, a lexicalization can override a previous lexicalization iff (a) the results of the lexicalizations are the same; (b) the lexical entry for the newer lexicalization contains a pointer to the older lexicalization. The Faithfulness Principle effectively restricts the 'free choice' of the root to the earliest stages of the derivation: the choice is free, but once it has been made, it is fixed.

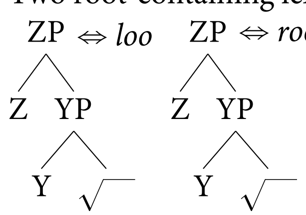
(15) Faithfullness Principle
/α/ can override previous lexicalization of /β/ iff

a. /α/ = /β/

b. L-tree for /α/ contains a pointer to /β/

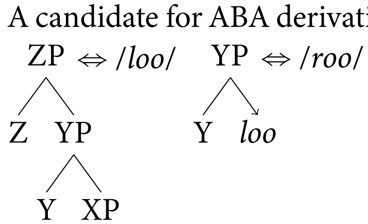
Faithfulness Principle rules out overriding given putative lexical entries such as those in (16). Given the indistinctness of roots, the system without a variant of the Faithfulness Principle does not rule out realization of YP as *loo* and ZP as *roo*. Faithfulness Principle, as said earlier, restrict the free choice: although the root can be realized via any root-containing lexical entry, the choice is set once made: override without pointers is rendered impossible by the Faithfulness Principle.

(16) Two root-containing lexical entries



To show the principle at work in a more relevant example, let me show how the Faithfulness Principle rules out an ABA pattern encoded in the lexicon provided in (17), which may seem as deriving an ABA pattern.

(17) A candidate for ABA derivation



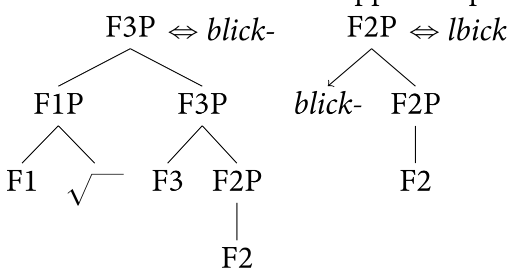
The idea is that XP can only be matched to the lexical entry for *loo*, YP matches to *roo* (since it consists of Y on top of a constituent previously lexicalized as *loo*), and ZP matches to *loo* again, deriving an ABA suppletion pattern. However, it is evident that the Faithfulness Principle rules out such derivations. Overriding the lexicalization of YP as *roo* by lexicalizing ZP is *loo* is illicit since the lexical entry for *loo* does not contain a pointer to *roo*. In general, it seems that pure ABA patterns of suppletion are illicit since they would require two lexical entries containing pointers to each other, a useless lexicon since none of the lexical entries would ever be used.

This argument appears to be a welcome result: pure ABA patterns of suppletion (where all three members of the paradigm are portmanteaux) are out. However, in the next subsection, I aim to argue that such patterns are nevertheless derived by the Nanosyntactic model under consideration in this paper, albeit the derivation requires more intricate lexical entries.

3.3 Nanosyntax and A-B-A patterns: Movement-Containing Suppletion

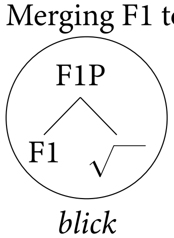
Consider the lexicon in (18). In this subsection, I wish to argue that the lexicon in (18), which is allowed by the representational rules of Nanosyntax, suffices to derive an ABA root suppletion pattern where all three cells of the paradigm are portmanteaux.

(18) Lexicon for an ABA root suppletion pattern



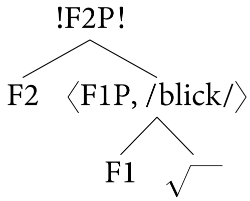
The derivation is rather similar to the derivation of the Malayalam pronominal paradigms as presented in Blix 2021. The first step is to merge F1 to the root, shown in (19). Given the Superset Principle, the lexical entry for *blick* matches to F1P, given that F1P is a subconstituent of the syntactic structure in the lexical entry for *blick*. For the clarity of pointer application, I will retain the lexicalization in next steps of the derivation by employing a pair ⟨SYN,PHON⟩ notation.

(19) Merging F1 to the root

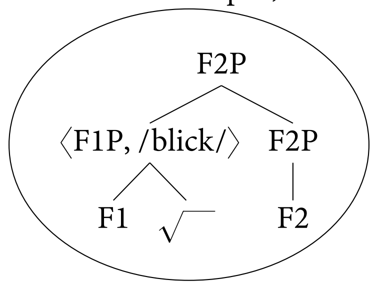


Then, F2 is merged. F2P in (20a) cannot be lexicalized: it is not a subconstituent of the lexical entry for *blick* and cannot match to the lexical entry for *lbick*, given that it does not contain a unary branching F2P. Since it is not lexicalized, the next step in the spell-out algorithm is to move the specifier of F1P to Spec,F2P. However, there is no specifier of F1P, which leads to the next step of the algorithm, namely, movement of the whole F1P to Spec,F2P (20b). The resulting structure matches to the L-tree for *lbick*: it contains a unary branching F2P whose (left) sister has been lexicalized as *blick* in the previous cycle of lexicalization.

(20) a. Merge F2 to F1P



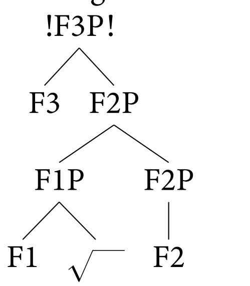
b. Move F1P to Spec,F2P



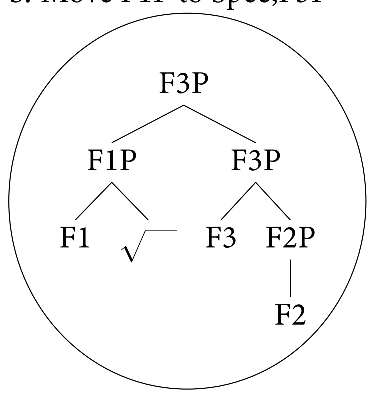
lbick

The crucial step is merging F3 to F2P. The immediate resulting structure (21a) does not match to either of the lexical entries provided in (18) and, thus, the next step in the lexicalization algorithm is to move the specifier of F2P to Spec,F3P, which results in the structure in (21b), which is a perfect match to the lexical etnry for *blick*.

(21) a. Merge F3 to F2P



b. Move F1P to Spec,F3P



blick

The resulting paradigm is provided in (22) and it is clear that the derivation outlined above results in an ABA root suppletion pattern. There are three cells of the paradigm, featurally represented as [F1], [F1+F2], [F1+F2+F3], exponed as *blick*, *lbick*, and *blick*, respectively. This is an ABA root suppletion pattern and it can be derived in Nanosyntax.

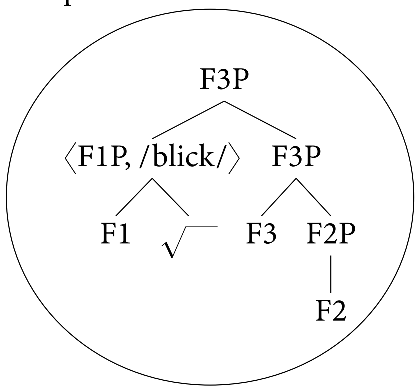
(22) The resulting paradigm

[F1]	[F1+F2]	[F1+F2+F3]
blick	*lbick*	*blick*

It is worth discussing why this derivation does not violate the Faithfulness Principle, unlike the putative ABA derivation discussed in the previous subsection. The idea is that, after movement of F1P to Spec,F3P, there is no constituent realized as *lbick* at all, so, no unfaithful override occurs. Note that the derivaiton outlined above complies with the Faithfulness Principle on any understanding of the Cyclic Override property of the Nanosyntactic lexicalization algorithm: if the derivation 'remembers' that F1P has been lexicalized as *blick* (the lexicalization of F3P as *blick* then overrides the previous lexicalization of F1P as *blick*, which complies with the Faithfulness Principle); and if the derivation 'deletes' all previous lexicalizations (no override then happens in the lexicalization of F3P as *blick*).

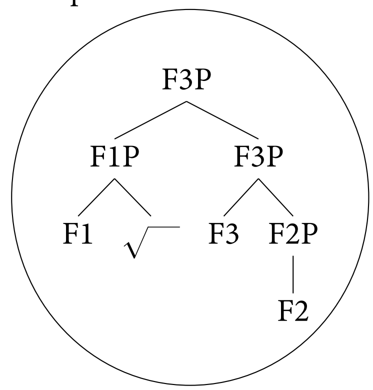
(23) Two options regarding Cyclic Override

a. If previous lexicalizations are remembered



blick

b. If previous lexicalizations are not remembered



blick

The result is clearly worrisome. Given the ubiquity of ban on ABA patterns across morphological domains, the result that the Nanosyntactic machinery seems to allow ABA root suppletion is a legitimate reason to worry and seek constraints on the generative power of the model. One could, for example, aim for a ban on pointers to specifiers, which would rule out such lexicons as the one discussed in this subsection. However, I wish to make a point that the prediction is welcome and supported by cross-linguistic data. The next section presents a puzzling pattern in Russian that presents a case of the ABA root suppletion pattern just like the ones argued to be possible in this section, given the Nanosyntactic machinery. If my characterization of the Russian case is correct, the derivation discussed in this subsection is then not an example of overgeneration, as one could potentially argue.

4 Support from Russian

This section presents some Russian data which presents a case of ABA portmanteaux pattern. If my characterization of the pattern is correct, the Russian data then shows that the generative power of the Nanosyntactic machinery with pointers is adequate and the conclusion achieved in the previous section should not be taken as detrimental to contemporary Nanosyntactic research.

4.1 The pattern and analytical options

This section is concerned with a puzzling interaction between Russian analytic superlatives (*samyj*-superlatives) and suppletive adjectives. While most adjectives form *samyj*-superlatives by combining *samyj* with their positive form (see 24a), some Russian speakers do not allow that for adjectives with suppletive superlatives, preferring combining *samyj* with the suppletive superlative instead (see 24b).

(24) The main puzzle (in superlatives)

a. *Samyj*-superlatives with regular adjectives

POS	SPRL	*samyj*-SPRL
glup-yj	*glup-ej-š-ij*	*samyj glup-yj*
dumb-AGR	glup-CMPR-SPRL-AGR	SPRL dumb-AGR
'dumb'	'dumbest'	'dumbest'

b. *Samyj*-superlatives with suppletive adjectives in some Russian idiolects

POS	SPRL	*samyj*-SPRL
xoroš-yj	*lučš-ij*	*samyj lučš-ij*
good-AGR	best-AGR	SPRL best-AGR
‘good’	‘best’	‘best’

It should be noted that, to an extent, the pattern replicates for Russian analytic comparatives formed using *bolee* ‘more’ (see Matushansky 2002 for additional discussion and see Kosheleva 2016 for discussion of the factors governing the choice of the comparative form). Although judgements are less clear, I make the simplifying assumption and equate the comparative and superlative patterns to each other, as presented in the table in (25).

(25) The main puzzle (in comparatives)

a. *Bolee*-comparatives with regular adjectives

POS	CMPR	*bolee*-CMPR
glup-yj	*glup-ej-e*	*bolee glup-yj*
dumb-AGR	glup-CMPR-AGR	CMPR dumb-AGR
‘dumb’	‘dumber’	‘dumber’

b. *Bolee*-comparatives with suppletive adjectives in some Russian idiolects

POS	CMPR	*bolee*-CMPR
xoroš-yj	*lučš-e*	*bolee lučš-ij*
good-AGR	best-AGR	CMPR best-AGR
‘good’	‘better’	‘better’

Even outside the main claim of this paper, the pattern is interesting on its own and my secondary goal is to provide a Nanosyntactic analysis of the pattern. The first step to tackle the problem is to state that the form found with *samyj* ‘most’ and *bolee* ‘more’ does not consistently correspond to neither form of the degree paradigm: it is not positive, it is not comparative, and it is not superlative. Given the Nanosyntactic assumption that difference in form implies difference in the realized structure (see section 2 of this paper and Caha 2018), there is another structure (‘analytic’ form), which is sometimes syncretic with the positive form and sometimes with the comparative form. I should note here that I assume that (a) the analytic form realizes the same structure both in comparatives and superlatives; (b) the main question is about the position of the structure on the functional hierarchy with respect to positive and comparative form, given that comparatives are contained in the superlatives (Bobaljik 2012 *et seq.*). Building on the idea of there being another, ‘analytic’, form of the adjective, found with analytic comparative and superlative forms, there are basically three possible configurations of the three-cell paradigm consisting of the positive form, comparative form, and the analytic form.

(26) Three possible orderings of the degree paradigm

a. AAB with regular adjectives, ABA with suppletive adjectives

Analytic	Positive	Comparative
glup-		*glup-ej*
lučš-	*xoroš-*	*lučš-*

b. AAB with regular adjectives, ABB with suppletive adjectives

Positive	Analytic	Comparative
glup		*glup-ej-*
xoroš-	*lučš-*	

c. ABA with regular adjectives, ABB with suppletive adjectives

Positive	Comparative	Analytic
glup-	*glup-ej-*	*glup-*
xoroš-	*lučš-*	

In the next subsection, I aim to establish that the attractive, ABA-avoiding option in (26b) is nevertheless untenable and a theoretical implementation of it is incompatible with the bigger picture of Russian degree morphology (the argument draws heavily on the discussion of Russian degree morphology in Kasenov 2023).

4.2 The pattern is an example of ABA

As stated earlier, the best analytical outcome would be the paradigm in (26b): no ABAs whatsoever and the pattern is unproblematic. However, I wish to argue that it is the paradigm in (26b) which is untenable for empirical reasons. To argue against it, let me flesh out that option. The paradigm in (26b) assumes that there is some structure which (a) is contained in the comparative form; (b) contains the positive form. Although the structural proposal for comparatives in, say, Bobaljik 2012 do not allow such structure to even exist, the more finely articulated structural proposals, such as the one given in Caha, De Clercq & Vanden Wyngaerd 2019, do. Nanosyntactic work on degree morphology (of which the study in Caha, De Clercq & Vanden Wyngaerd 2019 is an exemplar) argues that the functional sequence of feature-heads employed is *a*-Q-C1-C2-S1-S2. The featural make-up of main three forms is provided below.

(27) Nanosyntactic structure for

a. positive form: $\sqrt{}$] *a*] Q]

b. comparative form: $\sqrt{}$] *a*] Q] C1] C2]

c. superlative form: $\sqrt{}$] *a*] Q] C1] C2] S1] S2]

Given this background, an implementation of the paradigm in (26b) would be that the analytic form is of size C1P, while the positive form is of size QP and the comparative form is of size C2P. I now aim to argue that this option is untenable based on the certain peculiarities of Russian degree morphology. The core idea is that the synthetic comparative affix *-ej-* necessarily realizes the C1 head. If that is the case, it is impossible that C1P is realized as *glup-* (positive form) and not *glup-ej-* (comparative form) for regular adjectives (such as *glupyj* 'dumb').

The argument for C1 head being realized by the synthetic comparative affix *-ej-* comes from the curious class of Russian adjectives, which members form a comparative without any additional morphology, such as *krutoj*, the paradigm for which is provided in (28). I should note that the *krut-/kruč-* alternation is a case of a morpho-phonological process called palatalization, see Blumenfeld 2003 for an overview.

(28) The degree paradigm of the adjective *krut-oj* 'cool'

POS	CMPR	SPRL
krut-oj	*kruč-e*	*krut-ej-š-ij*
cool-AGR	cool-AGR	cool-CMPR-SPRL-AGR
'cool'	'cooler'	'coolest'

The core observation about adjectives with zero-comparatives is that the containment of the comparative form in the superlative form is not perfect: if the superlative affix *-š-* only realized superlative feature-heads, we would expect an unattested form **krut-š-ij*, not the observed *krut-ej-š-ij*. Without going into technical details (see Kasenov 2023 for a more involved analysis of the pattern), the observed form shows that the superlative affix *-š-* triggers re-lexicalization of the comparative structure, or backtracking. Backtracking happens due to featural overlap between exponents (see the discussion of Malayalam pattern in section 3): hence, there is featural overlap between the zero-comparative *kruč-* and the superlative affix *-š-*. The featural overlap, however, is necessarily limited to the C2 head: otherwise we would have no reason to expect the presence of the comparative affix *-ej-* in the superlative forms such as *krut-ej-š-ij* 'coolest' and *glup-ej-š-ij* 'dumbest'. Hence, the affix *-ej-* realizes the C1 head as well. For clarity, I present the lexicalization tables for the degree paradigm of *glupyj* 'dumb' and *krutoj* 'cool', given the argument that *-š-* realizes C2 head. The core idea, as already stated, is that *krut-* cannot realize C2P in the superlative, resulting in the exponence of *-ej-*.

(29) a. Lexicalization table for compraratives

aP	Q	C1	C2
glup-		*ej-*	
krut-			

b. Lexicalization table for superlatives

aP	Q	C1	C2	S1	S2
glup-		*ej-*	*š-*		
krut		*ej-*	*š-*		

To finish off the discussion, the data of zero-comparative adjectives, which motivates backtracking in the derivation of the superlative form, has led us to the conclusion that the comparative affix *-ej-* realizes the C1 head. Hence, the 'analytic' form of the adjective found in analytic comparatives and superlatives cannot be of C1P size because of an incorrect prediction of the presence of the affix *-ej-* in the analytic comparatives and superlatives. Therefore, the pattern of analytic degree morphology of Russian discussed in this section is an example of an ABA portmanteaux pattern. The next subsection is devoted to theoretical discussion of the conclusion.

4.3 Consequences of ABA

The preceding discussion established that the data presents an ABA pattern and should be analyzed by either of the paradigms presented below. For clarity, I assume the paradigm which postulates an ABA pattern with suppletive adjectives (it also seems that the ABA pattern with regular adjectives will turn out problematic, once the superlatives are taken into account but I do not wish to focus on that).

(30) Two ABA paradigms

a. AAB with regular adjectives, ABA with suppletive adjectives

Analytic	Positive	Comparative
glup-		*glup-ej*
lučš-	*xoroš-*	*lučš-*

b. ABA with regular adjectives, ABB with suppletive adjectives

Positive	Comparative	Analytic
glup-	*glup-ej-*	*glup-*
xoroš-	*lučš-*	

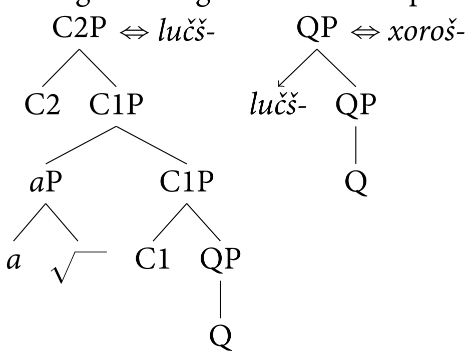
Assuming the results of Nanosyntactic work on degree morphology, the paradigm can be recast using the functional sequence in a way provided in the table below. The objective is now to provide a Nanosyntactic lexicon such that it generates the pattern *lučš–xoroš–lučš*.

(31) The resulting paradigm

*a*P	QP	C1P	C2P
glup-	*glup-*	*glup-ej*	*glup-ej*
lučš-	*xoroš-*	*lučš-*	*lučš-*

In light of the discussion in the previous section, the lexicon that generates such a pattern is provided below. Abstracting away from the C2 head, the lexical entries are essentially the same as those presented in the previous section as a pure representational possibility that could generate an ABA portmanteaux pattern — hence it has been already shown that the lexicon is enough to generate an ABA pattern presented by the Russian data.

(32) ABA-generating lexicon for the pattern



If my characterization of the pattern as an example of ABA is correct, then it presents a case of the pattern, which should be analyzed using the movement-containing suppletion schemata proposed in the section 3. An important caveat to the picture presented earlier is that there is inter-speaker variation with respect to the interaction between suppletive adjectives and analytic degree morphology. Some Russian speakers behave as one would expect and combine the positive form of such adjectives with the analytic comparative/superlative form markers.

(33) Interaction of analytic degree morphology with suppletive adjectives in other Russian idiolects

a. Analytic superlatives

POS	SPRL	*samyj*-SPRL
xoroš-yj	*lučš-ij*	*samyj xoroš-ij*
good-AGR	best-AGR	SPRL good--AGR
‘good’	‘best’	‘best’

b. Analytic comparatives

POS	SPRL	*bolee*-CMPR
xoroš-yj	*lučš-e*	*bolee xoroš-ij*
good-AGR	best-AGR	SPRL good-AGR
‘good’	‘better’	‘better’

The relevance of the existence of such speakers concerns the putative characterization of the ban on ABA patterns as the result of extra-grammatical forces (cf. Andersson 2018). It may be that positing lexical entries in the style of the movement-containing suppletion schemata requires much more data in support of it than more regular suppletion lexical entries, without movement, in which the ban on ABA falls out of the formal computational system. The existence of inter-speaker variation may be then regarded as evidence for ABA patterns being hard to learn due to the complexity of the movement-containing suppletion schemata.

5 Conclusion

This paper has discussed the limits of the current Nanosyntactic model with respect to its generative power regarding (pseudo-)ABA phenomena. I have argued that existing tools in the Nanosyntactic machinery allows ABA suppletion patterns where all three cells are portmanteau and have provided evidence from Russian adjectival morphology that such patterns are attested. Even though I am optimistic about the conclusion not being fatal for the Nanosyntactic model, someone else might be — there are ways to block the derivation presented in the paper by either constraining the power of pointers (a conclusion argued for by Vanden Wyngaerd 2018) or by modifying the Faithfulness Principle. However, I also believe that the Nanosyntactic system is nevertheless constrained with respect to ABA phenomena, since the pattern discussed in this work still conforms to the forming consensus that true portmanteaux are beyond all cases of seemingly ABA-ish distribution of morphological phenomena (cf. the conclusion in Davis 2021). Finally, the ability of the Nanosyntactic computational system to derive ABA phenomena may lead the research agenda to look into 'third-factor' explanations of the rarity of ABA patterns in morphosyntactic typology (as argued for by Andersson 2018).

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