The role of syntax in stress assignment in Serbo-Croatian*

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We present and analyse a set of interface phenomena showing important correlations between certain phonological regularities on the one hand and a set of syntactic and semantic properties of the respective expressions on the other. Serbo-Croatian deadjectival nominalizations typically exhibit two different prosodic patterns: 1) prosody faithful to the base i.e. surface prosody of the lexical adjective (e.g. Ispraavnoost 'correctness', derived from Ispraavan 'correct'), 2) a rising span over a long closed penultimate syllable and the syllable following it (e.g. isprAAvnOOst 'correctness'). We formulate a generalization where, all things being equal, nominalised predicational structures correspond to (1), while nominalised stems correspond to (2). The paper provides a formal model of the syntactic and semantic as well as the phonological reality of these nominalisations, and an attempt at explaining these facts.

1. Introduction

The paper focuses on deadjectival nominalisations, which show insightful interface effects in two distinct domains of grammar in Serbo-Croatian (S-C): the morpho-syntactic process of derivation of nouns from adjectival stems, and the phonological process of stress/tone assignment. In both domains, the results of the observed processes come in two general flavours. As for morpho-syntax, there is, on the one hand, a class of nominalisations which are fully compositionally (transparently) derived from a very broad set of adjectival stems[1] using always the same derivational morpheme (*-ost*). Due to these characteristics, we analyse such nominalisations as members of the (extended) paradigm of the adjectival stems in S-C. On the other hand, there are nominalisations which pattern together for being strikingly idiosyncratic: they are derived only from a limited number of stems, use various derivational suffixes and come in most cases with a semantic shift with respect to the compositional interpretation. In the other domain - stress and tone assignment, there is a comparable dichotomy: there is a class of nominalisations in which the positions of tone/stress is predictable from their position in the base word, and there is another class in which another pattern emerges (either the phonologically unmarked pattern or the stress pattern imposed by the suffix), resulting in a deviation from the prosodic properties of the base word.

We show that there is a neat match between these two domains. Deadjectival nominalisations which are productive, and part of the paradigm, i.e. which are spelled out to phonology with a rich and straightforward syntactic structure, have their stress and tone copied from the base adjective. In idiosyncratic deadjectival nominalisations, to which we assign a poor syntactic structure (a bare concatenation of the two elements), the unmarked prosodic pattern emerges, i.e. these

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[1] There are adjectives that do not nominalise at all, such as comparatives and superlatives, and very few which derive only the other type of nominalisations, and which we briefly mention and discuss in note 7 as well as in section 4. But with a marginal approximation, one can say that all adjectives that appear as predicates also derive this type of nouns.

nominalisations undergo a purely phonological tone/stress assignment, insensitive to any non-phonological features, most importantly the surface prosody of the base. Finally, even though a strong correlation as described can be observed, there are cases where particular stems do not derive one of the two types of nominalisations, i.e. where one of the types takes on also the interpretive effects normally typical of the other type or where the phonological environment does not allow for the contrast to be brought out (see 4.3.).

The research question can be stated as follows: Why does structurally complex, transparent interpretation go hand in hand with stress/tone assignment sensitive to the surface prosodic pattern of the base adjective? And why are there gaps in this correlation? Our account crucially relies on the fact that faithfulness to the surface prosody of the base word is a tool in the reconstruction of the internal morphological structure of a complex word. When its components stand both for their own lexical semantic contribution and for a sequence of syntactic structure, identification of the elements is vital for the recoverability of the structure. When the complex word has a non-transparent interpretation and as such constitutes a lexical entry, its internal structure is not crucial for its interpretation and its syntactic behaviour, so it also need not be recoverable, and phonology therefore does not take the surface prosody of the base adjective into account. This analysis is supported by the experimental findings that "modifying the stress of the stem will impede or slow down access" (Steriade 1999, quoting Cutler 1979, 1989). The gaps are ascribed to particular, mostly phonology-internal, but also some syntax-internal constraints on the derivation of one of the two types of nominalisations. As we shall see, there are various handshakes between syntactic structures and the phonological structures which serve as their exponents, so that the variation explored here is systematically excluded in many contexts for both semantic and phonological reasons.

We make use of Steriade's concept of Lexical Conservatism to establish a link between the internal syntactic structure of a derived word and the activation of phonological constraints which require the preservation of the prosodic properties of the base adjective. The constraint family LC militates against the introduction of novel allomorphs by enforcing the copying of the surface properties of the listed allomorph in every new form. In the case at hand, LC(STRESS/TONE) requires the copying of the surface stress pattern of the base adjective. Crucially, this constraint is sensitive to whether the form does or does not belong to the paradigm of the stem involved and militates against discrepancies in extended paradigm members.

The rest of this article is organised as follows. Section 2 introduces the two classes of deadjectival nominalisations in S-C, with their semantic and morphosyntactic asymmetries. In section 3, we recapitulate the syntactic analysis from Arsenijević (2010). Our phonological model is introduced in 4. Section 5 discusses the issue of the status of syntax with respect to the module of phonology, as indicated by our analysis. In section 6 we are looking at the possibilities of an extension of our approach to other languages, focussing on a comparable pattern in Dutch. Section 7 concludes this contribution.

2. Two types of deadjectival nominalisations by suffixation in Serbo-Croatian

S-C adjectives nominalise in two general ways: through suffixal derivation and through conversion. In this paper, we concentrate on the derivation, and describe two different types of deadjectival nominalisations derived by suffixation. As foreshadowed in the previous section, these two different types of nominalisations come with two different sets of semantic, syntactic and phonological properties. In derivation, the default suffix used is *-ost*, but there are also other suffixes with the same syntactic and semantic effects. The suffix *-ost* is special in taking part in both types of deadjectival nominalisation discussed in this paper. Only one type, the one of idiosyncratic deadjectival nouns, also makes use of other suffixes. Conversion, which is not directly relevant for the topic of our paper, has been discussed in Arsenijević (2012).

The most straightforward way of specifying the split between the two groups is in terms of their stress patterns, a dimension which we discuss in more detail in section 4 (a general flavour is given

in (1b vs. c)). For the moment, it is worth noting that the nominalisations in (1b) have a stress pattern different from the base adjective, whereas the ones in (1c) fully copy the prosody of the base adjectives (1a). Other differences are morphosyntactic and semantic. Arsenijević (2010, 2012) qualifies these differences in terms of structural complexity. Nominalisations in (1b) are similar to what is commonly referred to as (deverbal) root nominalisations – they seem to involve no structural complexity, often have a non-transparent interpretation, and do not necessarily entail that there is a bearer of the property denoted by the adjectival stem. In further text, we refer to them as the Lexical(ised) Deadjectival Nominalisations (LDN). Those in (1c) are structurally complex, and arguably nominalise a PredP, in certain cases with a full VP embedded – their interpretation is regular and transparent, including an entailment of an instantiation of the property involved in a bearer (which is preferably overtly expressed). Henceforth, we term them Structurally complex Deadjectival Nominalisations (SDN).

(1) a. *Opaasan,* *Ispaavan,* *prAAzAn*
'dangerous' 'faultless' 'empty'

b. opAAsn-OOst[2], isprAAvn-OOst, prazn-InA (?sobe)
dangerous-*ost* faultless-*ost* empty-*ost* room.Gen
'danger' 'faultlessness' 'emptiness (belonging to the room)'

c. Opaasn-oost Ispraavn-oost prAAzn-OOst (sobe)
dangerous-*ost* faultless-*ost* empty-*ost* room.Gen
'dangerousness' 'correctness' 'emptiness (of the room)'

In the next section, we give an overview of the main syntactic and semantic differences between these two types of nominalisations. We argue that the crucial difference is in their productivity, i.e. that one class is part of the paradigm of the adjectival stem, and the other includes rather idiosyncratic instances of lexical formation.

As mentioned above, another important asymmetry between the two types of deadjectival nominalisations is in their number and productivity. Almost every adjective derives a SDN. The number of adjectives deriving LDNs is relatively small, and subject to certain restrictions. There are actually several types of adjectival stems which only derive SDNs, including those of adjectival (usually result-oriented) passive participles, those of adjectival active participle forms and the counterparts of the English *-able* adjectives, which all arguably embed a VP structure. Forms such as the starred ones in (2) are not attested in dictionaries and grammars, and they are all judged totally unacceptable by S-C native speakers. In sections 3-5, we show how a conspiracy of syntax and phonology brings about these regularities.

(2) a. UvrEEđen-oost *uvređEn-OOst, prOračunaat-oost *proračunAAt-OOst
offended-*ost*.SDN offended-*ost*.LDN calculating-*ost*.SDN calculating-*ost*.LDN
'offendedness' 'calculatingness'

b. posUstAl-oost *posustAl-OOst, prEmrl-oost *premRl-OOst
gone_awry-*ost*.SDN gone_awry-*ost*.LDN gone-numb-*ost*.SDN gone-numb-*ost*.LDN
'awriness' 'silence(dness)'

c. čItljIv-oost *čitljIv-OOst, rAnjIv-oost *ranjIv-OOst
legible-*ost*.SDN legible-*ost*.LDN hurtable-*ost*.SDN hurtable-*ost*.LDN
'legibility' 'sensitivity'

Asymmetries between the two classes of nominalisations are best visible when the same adjectival stem derives both a LDN and a SDN. Looking at examples of this type, the following asymmetries can be observed.

[2] The capital letters are used to mark prosodic prominence, which is marked by stress and tone in Serbo-Croatian. The representations of Serbo-Croatian prosody are discussed further in section 4.

When used for properties of particular persons and objects, matching in denotation Moltmann's (2004) type of tropes, SDNs are more suitable, and LDNs are often unacceptable.

(3) SlUčaajnoost/*slučAAjnOOst ovog uzorka ne dovodi se u pitanje.
randomness.SDN/ LDN this sample.Gen not lead Refl in question
'The random nature of this sample does not come into question.'

More precisely, LDNs are out if they have undergone a lexical semantic shift, becoming idiosyncratic – usually in taking, as a more prominent or even the only one, one type of reference: to events, situations, concepts, or some other semantic class. For all meanings other than properties as instantiated in particular referents, some of which are discussed in what follows, the LDN is a better candidate than its SDN counterpart (the SDN often cannot receive the relevant interpretation).

For instance, LDNs can be modified by adverbials that select for quantized eventualities, while their SDN counterparts cannot.

(4) a. česta opAAsnOost nekadašnja rudarska solidAArnOost
frequent danger.LDN earlier.Adj miners' solidarity.LDN
'frequent danger' 'miners' solidarity from the past'

b. *(njegova) česta Opaasnoost *nekadašnja rudarska sOlidaarnoost
his frequent dangerousness.SDN earlier.Adj miners' solidarity.SDN
'his frequently instantiated dangerousness'

c. Jovanov-a/-e povremen-a/-e ljubAAznOst(-i)
J.Poss.Sg/Pl occasional.Sg/Pl kindness(es)
'an occasional kindness from/by Jovan' / 'occasional kindnesses by/from Jovan'

d. *Jovanov-a/-e povremen-a/-e ljUbaaznost(-i)
J.Poss.Sg/Pl occasional.Sg/Pl kindness(es)

LDNs go well with count quantifiers and modifiers, receiving the eventive interpretation (quantification is over events in which the property denoted by the adjective is instantiated), while with SDNs these constructions are ungrammatical.

(5) a. nekoliko Jovanovih ljubAAznOsti/*ljUbaaznosti
several Jovan's kindnesses.LDN/kindnesses.SDN
'several events instantiating Jovan's kindness'

b. razne opAAsnOsti/*OpAAsnosti
diverse dangers/'dangerousnesses'
'diverse dangers'

Another asymmetry relates to a subtle intuition: while LDNs can have a generic meaning, referring to a concept, an intensional property, SDNs always seem to imply a bearer of a property, as instantiated in a particular referent. This asymmetry is similar to the one between unaccusatives on the one hand, and transitive verbs that allow for a zero object on the other, where the former (e.g. *sink*, *float*, *break*) do not imply the existence of an agent, and the latter (e.g. *eat*, *read*, *wash*) do imply the existence of an affected participant.

(6) a. ta mala ljubAAznOOst o kojoj pričam, koju niko nije pokazao...
that little kindness.LDN about which talk.1Sg which nobody Neg.Aux shown
'that little kindness that I'm talking about, which nobody manifested'

b. #ta mala ljUbaaznoost o kojoj pričam, koju niko nije pokazao...
that little kindness.SDN about which talk.1Sg which nobody Neg.Aux shown
'that little kindness, which nobody manifested'

Speaking of the denotation of a SDN always means talking about the holding of the property it denotes for a referent. Talking about the denotation of a LDN also may get this interpretation, but it is more naturally interpreted as talking about a generic notion, intensional or extensional.

(7) a. KnjIžeevnoost ovog teksta je upitna.
literariness.SDN this.Gen text.Gen is questionable
'The literariness of this text is questionable'

b. #KnjIžeevnoost ovog autora je upitna.
literariness.SDN this.Gen author.Gen is questionable
'#The literariness of this author is questionable'
(unless the context makes literariness a natural property of an author)

c. KnjižEEvnOOst ovog autora je upitna.
literature.LDN this.Gen author.Gen is questionable
'The literature (by this author) is questionable'

d. #KnjižEEvnOOst ovog teksta je upitna.
literariness.SDN this.Gen text.Gen is questionable
'#The literature of/by this text is questionable'
(unless a context is made where certain piece of literature is part of a certain text)

Finally, while semantic counterparts of LDNs are derived by many different (stem-specific) suffixes, the semantics specific for SDNs only comes with nouns built by the suffix *-ost* which is added to an adjectival stem.

(8) a.

impotEnc-Ija	knjižEEvn-Ost,	dobr-OtA,	dOsad-a,	Umoor[3]
	literary-N	good-N	bore-N	tire-N
'impotence'	'literature'	'good(ness)'	'boredom'	'tiredness'

b.

impotEntn-oost	knjIžeevn-oost,	?dObr-oost,	dOsadn-oost,	?Umoor-n-oost…
impotent-N	literary-N	good-N	boring-N	tired-N
'being impotent'	'literariness'	'goodness'	'gloriousness'	'tiredness'

While, as discussed so far, LDNs normally have a broader range of interpretations, and SDNs are more restricted, there are uses in which only the SDN is acceptable.

(9) Njegova Opaasnoost/*opAAsnOOst ne dovodi se u pitanje.
his dangerousness.SDN/ LDN not lead Refl in question
'His dangerousness does not come into question.'

It is a general fact that when used for properties of particular persons and objects, i.e. to stand for concrete predications, SDNs are more suitable, and LDNs are sometimes out. The only class of adjectives that do not build SDNs are adjectives that do not nominalise at all, relational and certain subsective adjectives, i.e. those adjectives that cannot appear as predicates.[4]

(10) a. dOOkAzni materijal
evidence.Adj material

b. *Ovaj materijal je dOOkAzan.
this material is evidence.Adj

c. *dOOkAzn-oost,
evidence.Adj-oost

d. *dokAAzn-OOst
evidence.Adj-oost

The regularity is that all adjectives that can appear as predicates also can derive a SDN, but not necessarily also a LDN. This property of SDNs is one of the reasons why in the next section we

[3] That these suffixes are stem-specific means also that they are in mutual exclusion: where one is used to derive a noun from an adjective, the others derive ill-formed words. Together with their shared semantics, this implies they belong to the same class, or even different instantiations of formally the same suffix.

[4] As briefly discussed again in section 4 below, adjectives that involve an additional argument of their degree component, such as comparatives, superlatives, or adjectives denoting equal degrees of two arguments, also cannot derive SDNs. Assuming the reason is the impossibility to embed the second argument in the nominalisation, this further confirms our analysis.

analyze SDNs as members of the paradigm of an adjective, and LDNs as new words derived from a certain stem, possibly establishing their own new paradigms.

Finally, it is not necessarily the case that the semantic SDN-LDN asymmetry triggers different phonological output. There are nominalizations like *hUmaan-oost* 'humanity/humaneness', which have both the SDN and the LDN interpretation. Moreover, even in proper LDN-SDN pairs, one finds variation among the speakers of S-C, such that one of the forms is not actively used, leaving the other with both interpretations available like in the case of *hUmaanost* above. In 4.2., we are showing that the neutralisation of the contrast is phonologically conditioned, but also that the contrast is systematically blocked in some categories where it could not be meaningful. In sum, the distinction is not always available, but we shall show that whenever it is systematically unavailable, it is anavaulable for a reason.

Before presenting the analysis, we need to point out that a detailed analysis of a closely related phenomenon in Slovenian can be found in Marvin (2002, 130-132). Although the focus of her research is on participant-denoting deverbal nominalisations, Marvin does observe in Slovenian asymmetries that parallel those discussed in our paper. Moreover, she sketches a syntactic analysis which shares one crucial property with the analysis outlined in this paper, and discussed in more detail in Arsenijević (2010, 2012), namely that (in her case Slovenian) LDNs involve a syntactic simplex in the adjectival component, while SDNs involve phrases (Marvin labels them roots and APs). However, whereas in Slovenian the SDN/LDN distinction is prosodically brought out in a small number of nominalisations from simplex native adjectives, in S-C its scope is much larger and includes most Latinate adjectives (see Simonović 2012). On the theoretical side, while we agree in the general intuition that one type derives from a simple item, and the other from a non-trivial syntactic structure, we argue in this paper that the latter type involves a rich syntactic structure (an entire PredP), i.e. that it cannot be accounted for only in terms of categorial heads typical for the current theory of Distributive Morphology (such as vC, vE, voice – see Marantz 2012, Anagnostopoulou & Samioti current volume). Also, the present paper devotes more attention to the sensitivity of phonology to syntactic structures, while Marvin is primarily interested in the syntactic, phase-theoretic aspects of the problem.

3. Syntactic analysis: Arsenijević (2010)

We introduced the fact that adjectival participles only derive SDNs, never LDNs. In fact, not even all active participles derive SDNs: only those built from unaccusative or middle VPs, which have in addition received an adjectival (rather than eventive) interpretation.[5]

(11) a. utrnul-oost, obamrl-oost
go_numb.ActPcl-*oost*, be_paralised.ActPcl-*oost*
'numbness' 'fatigue', 'being asleep', 'numbness'

b. *udaril-ost, *peval-ost
hit.ActPcl-*ost*, sing.ActPcl-*ost*

An explanation is due in respect of what is traditionally referred to as the active participle in S-C. This form is rather a subject-oriented participle, which assigns a process or result interpretation of the respective verb to the subject if the verb is transitive or unergative (which means, to the agent of the verb), and only a result interpretation to the subject of the verb if it is unaccusative (in this case, to the patient or theme). Only the latter nominalise, and hence only result interpretations are attested on nominalisations of the active participle.

The restrictions on participles in deriving SDNs can be formulated in a simpler way: only those participles which can also be used with a copula, with an internal argument as the subject, and receive an adjectival interpretation, can derive SDNs with the ending *-ost* (see footnote 5).

[5] Transitive and unergative verbs make *-ost*-nominals from the passive participle, and with unaccusative and middle interpretations build them from the active participle.

(12) a. Ruka je utrnul-a / obamrl-a.
arm is go_numb.ActPcl-F.Nom / be_paralised.ActPcl-F.Nom
'an/the arm is numb'

b. Jovan je pevao (pesmu)
J Aux sing.ActPcl song
'Jovan sang a/the song.'

vs.

*Pesma je pevala
song Aux sing.ActPcl
int. 'The song went on.'

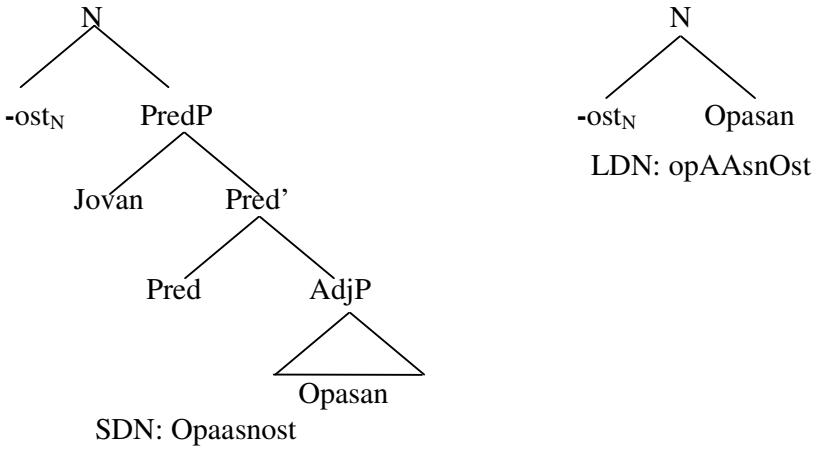
hence :

*peval-ost
sing.ActPcl-*ost*
int. 'the property of having sung' or 'the property of having been sung'

This, together with the fact that the typical interpretation for an SDN is that of a property as holding for a particular referent, suggests that a predication actually underlies each SDN, or in syntactic terms, that SDNs derive from PredPs. As PredP is a relatively high structural projection, this account also predicts that SDNs will always have a transparent interpretation, i.e. that they will not be able to establish idiomatic meanings, while LDNs will have available both options: compositional and idiomatic interpretations (see Anagnostopoulou & Samioti, this volume, for an extensive discussion of the syntactic boundaries for idiomatic interpretations).

Arsenijević (2010) argues for a syntactic analysis in which the main asymmetry between SDNs and LDNs is in their syntactic complexity. LDNs are derived from a bare stem, without any internal syntactic structure (i.e. its structure is eliminated in the process of lexicalisation), while SDNs involve a richer structure, where a PredP is nominalised.

(13) A simplified S-Chematic representation of the syntactic structures of SDNs and LDNs



The semantic asymmetries are derived from the syntactic difference: LDNs nominalise a concept corresponding to the lexical meaning of the stem, while SDNs nominalise a predicative relation between an argument and a verbal or nominal predicate.[6] Nominalised predications are argued to be

[6] One anonymous reviewer remarks that our analysis of SDNs incorrectly predicts that they should allow for accusative complements and expressions like **veoma opasnost* 'very dangerousness', drawing a parallel with similar effects observed on nominalisations of complex structures (see a summary in Kornflit and Whitman 2011). As for the modifiers like *veoma* 'very', we explain their ungrammaticality with the nominalisation by the requirement of its scalar semantics for a positive morpheme (Kennedy and Mcnally 2005), and the intervention effect of the nominalising suffix.

restricted to denote property instantiations, i.e. tropes, and nominalised lexical meanings, by default, property types, but they are also free to syntactically derive any other type of denotation, in particular tropes and eventualities. While Arsenijević (2010) merely hints at a phonological analysis, in terms of the order of spell-out, in this paper we aim at providing a deeper phonological analysis and drawing the implications that it has for the status of syntactic structure in a phonological process such as stress and tone assignment.

We argue that the relevant notion in this respect is that of paradigm. We take the paradigm of a stem to include all the forms that can productively be built from each member of the relevant class of stems, irrespective of the syntactic class of the product (i.e. belonging to the nominal category in this particular case does not prevent an item from being a member of the paradigm of an adjectival stem). Under such a definition, deadjectival nouns are members of the paradigms of adjectival stems, as long as they can be derived from each member of one or more morpho-syntactic classes of adjectival stems. Paradigms are characterized by a high degree of transparency: words derived are interpreted strictly compositionally with respect to the internal structure. Derivations which do not satisfy this condition, and hence stand outside the paradigm of the stem involved, are rather idiosyncratic in their nature, and the derived word is prone to a shift in lexical meaning. This is especially likely to be the case if the derivation proceeds via a relatively simple structural configuration, as is the case with LDNs.

We have tested our predictions on data extracted from the dictionary (RMS) and through acceptability judgments of more than ten native speakers of S-C. It was empirically confirmed that each adjective can derive a SDN, although in a small number of cases, these came with a degree of, arguably pragmatic, degradation. Only a restricted number of adjectives were attested to derive LDN forms. In what follows, we are turning to the productivity of the two types of nominalisations. A generalization can be formulated that the more (structurally) complex the stem is, the more likely it is that only a SDN will be derived from it. For instance, as already discussed, participial and other adjectival forms which arguably involve a VP structure (e.g. S-C counterparts of the English *-able* adjectives) can only ever derive a SDN: their LDN counterparts are systematically ungrammatical. Certain phonological restrictions apply as well, and these are discussed in section 4.

What we have seen so far provided some converging evidence for our initial proposal that in the default case, the SDN is a member of the paradigm of the adjectival stem, while the LDN is an idiosyncratic instance of lexical derivation. This is also the hypothesis on which we build our analysis of the sensitivity of phonology to syntactic structures.

4. Phonology

This section brings our phonological account, which makes crucial use of interface constraints, in particular of their capacity to distinguish between members of paradigms of the base (SDN) and lexicalised derivations (LDN). In order to present our phonological account, we first need to introduce some preliminaries on S-C prosody and the representations used in this article.

4.1 S-C prosody

The traditional view is that there are four "accents" in S-C, differentiated by length and contour.

(14) Traditional diacritics for S-C accents and the notation used here (between brackets)

As we are discussing deadjectival rather than deverbal nominalisations, and adjectives in S-C do not take accusative complements, there is no reason why SDNs should take accusative (in nominalised participles, already the participle is incompatible with a complement in the accusative case). But taking the general message, it lends further support to our analysis, as asymmetries in preserving complements of the base adjective do appear in the predicted way:

(i) a. on je bio impotEntan [u tom trenutku], ona je bila dOsaadna [preko svake mere]
he Aux been impotent at that moment she Aux been boring over every measure

b. njegova [impotEntnoost / *impotEncIja [u tom trenutku]] /
his impotence.SDN impotence.LDN at that moment
njegova [dOsaadnost / *dOsaada [preko svake mere]]
his boringness.SDN boredom.LDN over every measure

short rising: vòda (vOdA) ‘water-nominative’ short falling: vȍdu (vOdu)‘water-accusative’
long rising: túga (tUUgA) ‘sorrow’ long falling: škôla (škOOla) ‘school’

The rising accent is a tonal span over the accented syllable (which hosts the stress) and the syllable following it. All generative analyses of S-C prosody (for a recent overview, see Werle 2009) share a few important assumptions. First, the surface rising spans imply underlying tones on the rightmost syllable of the span, so that *vòda* (*vOdA* in the notation used here) is analysed as /voda$_H$/. Whenever there is an underlying tone hosted by a non-initial syllable, it will create a rising span over the originally tone-bearing syllable and the one preceding it (hence *vòda*/*vOdA*) and the stress will be located on the left syllable of the span. This, in combination with the general ban on final stress explains why all non-initial accents are rising (at least in native words), so that a form like **vodA* is excluded. This is also the reason why minimal pairs between rising and falling accents can only occur on initial syllables (e.g. *vEčEra* ‘dinner-nominative’ vs. *vEčera* ‘have dinner-3rd person aorist’). Second, the falling accents, which can occur only on the initial syllable of a word, are the underlying Hs on that syllable, so that *vȍdu* (*vOdu*) corresponds to /vo$_H$du/. Finally, the initial falling accent is assigned post-cyclically to words which have not acquired a stress/tone in the derivation (Inkelas & Zec 1988, Zec 1999). Consequently, /vo$_H$du/ corresponds to the toneless /vodu/ on yet a deeper level.

The present paper looks at S-C prosody from the perspective of a model which is focussing on surface prominence and how it is copied throughout paradigms. For this reason, we are using the following format to represent S-C prosody: capital letters are used to mark all the syllables which get surface prominence (stress and tone) and double vowels to mark long vowels. Note that whereas single capitalised vowels (the falling accent, where tone and stress co-occur) will be encountered only on the first syllable (in native words). Any two adjacent capitalised syllable nuclei stand for a rising span with the stress falling on the leftmost syllable of the span. In sum, the capital letters can be read as indicators of tone-bearing syllables, whereas the distribution of stress is predictable from that of tone (e.g. *tatAtA* stands for *ta'tAtA*, whereas *tAtata* stands for *'tAtata*).

(15) Representations of S-C tones used here, preceded by the corresponding underlying structure with marked Hs

(tata$_H$ta →) tAtAta – short rising span over first and second syllable
(taata$_H$ta →) tAAtAta – long rising span over first and second syllable
(tatata$_H$ →) tatAtA – short rising span over second and third syllable
(tataata$_H$ →) tatAAtA – long rising span over second and third syllable
(tatata → ta$_H$tata[7] →) tAtata – short falling accent on the first syllable
(taatata → taa$_H$tata →) tAAtata – long falling accent on the first syllable

4.2 The locus of variation – -ost prosody and the default pattern

The *ost-suffixation* generally does not affect the lexical tone/stress of the adjectival stems. As examples in (16) show, both surfacing rising span (a and b) and lexical falling accent (allowed only in loanwords, see Simonović 2012) are preserved in the derived abstract nouns. From this we can conclude that the suffix *–ost* either has no underlying tone or it has an underlying tone which gets overridden by that of the base. If the latter is the case, *-ost* would be exceptional with respect to all the other nominalising suffixes, which all attract stress/tone[8] (8) and which we further discuss in section 6.1.

[7] We refer the interested reader who is wondering about rationale behind the assignment of the initial high tone to toneless words to Zec & Zsiga (2009) for a recent account.

[8] The fact that *–ost* is productive and applied to virtually every adjectival stem cannot be a basis for a whole account here. For instance, the comparative suffix *-ijii* is just as productive, but it does affect the stress/tone (e.g. the comparative forms of the adjectives in (16) are *gramatIčnIjii*, *uvElIjii* and *konkrEtnIjii*).

(16) a.	gramAtIčn-	'grammatical'	+	-oost	gramAtIčnoost	'grammaticality'
b.	UvEl-	'withered'	+	-oost	UvEloost	'witheredness'
c.	konkrEtn-	'concrete'	+	-oost	konkrEtnoost	'concreteness'

The situation in the adjectival stems which surface with post-cyclic prosody – tone/stress aligned with the left edge of the word, spelled out as an initial falling accent – is much less clear. The few available generative descriptions are unclear as to what the main pattern is. For instance, Inkelas & Zec (1988) quote the example in (17) to show that *–ost* is one of the suffixes after whose addition a High is added at the right edge of the word. Note that the initial falling tone of *jEdnaak* is assigned post-cyclically.

(17)	jEdnaak	'equal'	+	-oost	jednAAkOOst 'equality'

On the other hand, Zec (1999) presents examples in (17), in which the toneless stems do not have any change of the position of stress/tone[9].

(18)	lUUd	'insane'	+	-oost	lUdoost	'insanity'
	hUmaan	'humane'	+	-oost	hUmaanoost	'humanity'

It is clear that *jednAAkOOst* and *hUmaanoost* are expected to display the same pattern and that one of them has to be exceptional. As it turns out, the pattern in *jednAAkOOst* is the odd one out, but it actually arises due to the specificity of its semantics. As already hinted in footnote 4, adjectives involving an overt degree argument, such as comparatives and superlatives, cannot derive any nominalisations. The adjective *jEdnAAk* 'equal' is neither comparative nor superlative, but still involves a degree argument, as it specifies that a certain property holds to the same degree of two or more referents. In a copular construction, it involves a second argument, which is an argument of degree, just like in comparatives.

(19)	Nisam	ja	jednak	sa	tobom.
	NEG_am	I	equal	with	you.
	'I'm not equal to you.'				

Our model hence predicts for this adjective that it cannot derive a SDN. However, while comparatives are usually hard to be taken to the generic level (cf. *biggerness, *smarterness in English), the meaning associated to jEdnaak 'equal' can be taken to the generic level, and hence this stem derives a LDN: jednAAkOOst 'equality'.

In sum, the adjectives with post-cyclic prosody do not, as a group, show any evidence for a H in the lexical representation of *–ost*. However, as we have seen already in the examples in section 1, there is a sizable number of nominalisations derived from adjectives which surface with post-cyclic prosody (e.g. *Ispraavan*) in which there is a semantically conditioned variation in prosody between the pattern of copying the surface pattern of the base adjective (*Ispraavnoost*) and the one of creating a rising span on the right edge (*isprAAvnOOst*).

Consulting of the native speakers on our dataset of over 200 nominalisations which have a base which surfaces with post-cyclic prosody has enabled us to state the following generalizations about the distribution of the rising span (as in *isprAAvnOOst*):

(1) It never arises when the syllable preceding the suffix is short. So we only ever have *kIsel+oost* 'sourness' and *hrApav+oost* 'coarseness', but no comparable derivates with a rising span.

(2) Pace *jednAAkOost,* there are no deadjectivals which have a single consonant preceding *-ost* and rising span (*hUmaanost*, *sImultaanost*, *Androgiinost etc.*).

(3) In the deadjectivals with a long closed penult[10], the rising span is generally possible and the variation depends on the semantic opposition between the SDN and LDN.

[9] Zec (1999) also has a class of adjectival stems for which a floating lexical High is assumed. It is not clear to us what the evidence in favour of this representation is. Furthermore, most examples provided by Zec (1999) are problematic to a sizeable number of our informants.

The emergent prosodic pattern with a rising span points at a general tendency for stress and weight to co-occur, formalized in the famous Stress-to-Weight constraint (Kager 1999:268), as well as the fact that coda-consonants seem to contribute to weight in S-C. The fact that a "rising accent" span is built at the end of the word, attracted by a heavy syllable is a well-attested preferred pattern in S-C (see e.g. Werle 2009's discussion of the Rightward tone shift, 109-118). The new insight is that this pattern is not restricted to words which have an underlying tone (as generally assumed), but it actually occurs also in toneless environments under certain conditions and that it is not only vowel length, but also coda consonants which create the environment for the shift.

In order to make sense of the emergence of the rising span, it is instructive to look at the *ost*-nominalisations derived from monosyllabic and disyllabic toneless adjectives[11].

(20)	čIl(i)	'chirpy'	+	oost	čIloost	
	glAtk(i)	'smooth'	+	oost	glAtkoost	
	pEgav(i)	'freckled'	+	oost	pEgavoost	
	čUUln(i)	'fleshly'	+	oost	čUUlnOOst	*čUUlnoost
	bUUrn(i)	'stormy'	+	oost	bUUrnOOst	*bUUrnoost
	brIIžn(i)	'worried'	+	oost	brIIžnOOst	*brIIžnoost

The generalisation is that if the base contains a short syllable, the initial short falling accent is carried over to the noun. However, if there is a long syllable in the base (so the base adjective has a falling accent as in *čUUlni*), the rising span arises – *čUUlnOOst* **čUUlnoost*. There is, however a small class of apparent exceptions to this generalisation, which we represent in (2121).

(21)	jOOnsk(i)	'ionic'	+	oost	jOOnskoost	*jOOnskOOst
	mIItsk(i)	'mythical'	+	oost	mIItskoost	*mIItskOOst

There is one important difference between the adjectives of the type *čUUlni* and those of the type *jOOnski.* The latter class is exceptional in that its paradigm lacks the indefinite forms, most importantly the nominative singular masculine form, the only form in the adjectival paradigm which has a null ending. So, there is the form *čUUlan*, but there is no form **joonsk*/**joonsak*.

This practically means that the entire paradigm of the adjectives of the type *jOOn.ski* has the initial long closed syllable, whereas the paradigm of the words like *čUUlni* always contains a form like *čUU.lan* in which the long syllable is not closed. This seems to be the point at which the grammar makes the distinction – only the consistently closed syllable with a long vowel is good enough to "arrest" the H in all the derivates. The relevance of the syllabification clearly points at the importance of the surface form of the base in word derivation, which is one of the main ingredients of our analysis. Here we can see the first interesting handshake between syntax and prosody: due to the semantics of the adjectivising suffix *–sk* – these adjectives will only ever derive SDN's. The reason, in short and with some simplification, is that this suffix always attaches to a noun interpreted as a referential nominal expression, hence always carrying complex internal syntax, which cannot be represented in the flat structure of an LDN. As we shall see below, the hyper-faithfulness to the surface form of the base in SDNs is one of the main features of the S-C system, for which our model accounts.

In sum, because most adjectives do have full paradigms, the default pattern in this class is: the falling accent if it is hosted by a short syllable or a rising span if it is headed by a long syllable[12]. In

[10] Note that in words of the type *Opaasnoost*/*opAAsnOOst* and *ljUbaaznoost*/*ljubAAznOOst,* we are assuming syllable boundaries cutting though the clusters consisting of fricatives and sonorants (*sn*, *zn, šn, žn* etc.) in spite of the fact that they can be syllable onsets in S-C (e.g. *sneg* "snow" and *znoj* "sweat"). We claim that these clusters are possible syllable onsets only word-initially. This claim is sustained by their distribution. First, there are no S-C words in which these clusters are preceded by a consonant (which would enforce the syllabification of the clusters as onsets): there are words like *kasno* and *grozno* as well as words as *lipsati* "to die"and *obzir* "regard", but no words like **kapsno* and **grobzno*. Note that we don't claim anything about clusters of the type fricative+plosive (*sp*, *sk* etc.), which never occur in the context relevant here.

[11] There are no adjectival bases longer than one syllable which have a long syllable with a falling accent.

this sense, the pattern encountered in polysyllabic derivations can be seen as an extension of this default pattern.

Both stress-to-weight effects and the influence of syllabification on the prosody are underexplored for S-C. Given the restricted focus of this article, we leave it to future research to provide a complete picture. For the present purpose, it is important to clearly delineate the locus of variation in deadjectivals, where phonology favours different output forms based on semantic/syntactic structure. As we have already seen, in the case at hand, variation is by and large restricted to the many nouns derived from toneless adjectives (which means that they surface with an initial falling accent) whose stem ends in a consonant cluster preceded by a long vowel e.g. *Ispraavn(i)* 'correct'. In these cases the options supplied by the phonology are the following:

(1) the pattern which copies the post-lexical surface prosody of the base adjective:

Ispraavn(i) + oost - Ispraavnoost

(2) the emergent "unmarked" stress pattern with a rising span on the right egde:

Ispraavn(i) + oost - isprAAvnOost.

This is exactly the locus of prosodic differentiation between SDN and LDN deadjectivals: the pattern copying of the base adjective prosody prevails in SDNs, whereas the default pattern with a rising span arises in LDNs .

At this point, having defined the locus of variation, we can understand better another important handshake between syntax/sematics and the phonological form: the three categories which are not able to derive LDN due to their syntactic and interpretive properties (as shown in (2)) also have phonological structures which cannot derive a prosodically distinct LDN: participles (both active and passive) and adjectives in *-(lj)iv* '-able' never create the right environment for systematic variation between the two classes of deadjectivals. This is the case because participles never end in a combination of a long vowel and a consonant cluster (so *–ost* can never be preceded by a heavy closed syllable) and *–(lj)iv* has its own lexically specified H which leads to *-ljiv* always being part of a rising span (e.g. *vId-e-ti* 'to see', *vIdljIv* 'visible').

In the following section, we present the formal model in which we show how the interface (syntactic/semantic) constraints interact with the prosodic ones leading to an account of the fact SDN deadjectivals copy certain surface properties of the base adjective, unlike their LDN counterparts.

4.3 Formalisation and analysis

In order to formalise this effect of copying of the surface properties of the base in the process of paradigm formation/word derivation, we propose an analysis couched in Optimality Theory (Prince & Smolensky 1993, Kager 1999). The constraints essential for our analysis, which militate against the emergence of novel allomorphs, have been proposed by Steriade (1997) and termed Lexical Conservatism constraints . In (22) we give the canonical form of these constraints.

(22) The form of lexical conservatism conditions: Lex (P)

Let T(μ) be the allomorph of μ appearing in a form under evaluation.
Let L(μ) be a listed allomorph of μ.
Let P be a phonological property.
T(μ) is characterized by P only if *some* L(μ) is characterized by P.

(Steriade 1997)

At this point, we need to explain the notion of paradigm as used in this paper. Recent generative morpho-syntactic theory (e.g. Halle and Marantz 1993, Marantz 1997, Embick 1998, Travis 1999) points out that there is no formal distinction between derivation and inflection. In this light, traditional definitions of the notion of paradigm as, roughly, a set of forms of one word distinguished by different inflectional make-ups, no longer can be maintained. We take the

[12] The same default is true of borrowed (Latinate) nouns in *–a*. Generally, only closed long syllables "arrest" the High - *nOOrma*, *sAAlva*, *fAArma*, but mOOdA, lAAmA, fAAmA (see Simonović, in preparation). The default short accent is falling: sEpsa, *mOka*, *pAsta*.

paradigm to include all the words which share the same stem and are derived by a productive mechanism, such that their semantics is transparent (i.e. such that they have a compositionally interpreted morphological configuration).

As we have seen, in *ost*-deadjectivals, the lexical stress is generally faithfully preserved. So, the faithfulness constraints against deletion or dislocation of the lexical stress/tone are ranked higher-up than the prosodic constraints responsible for the emergence of the right-aligned rising span headed by a long closed syllable (such as STRESS-TO-WEIGHT) which we collapse as PROSODY. In this case PROSODY requires the default prosody of the class: it is violated whenever (1) there is a long closed syllable which does not carry stress or (2) there is any other configuration which does not have the initial falling accent (a good overview of the specific constraints and their interactions proposed for S-C prosody can be found in Werle 2009).

Since we have no cases of *–ost* changing the lexical stress/tone of the base, MAX(STRESS/TONE) will be considered undominated. The relative ranking we arrive at is MAX(STRESS/TONE) >> PROSODY.

Now we turn to the Lexical Conservatism constraints. Crucially, the constraints which require the preservation of the surface properties of the stem stress – which we term LC(STRESS/TONE) impose stronger requirements on SDNs than on nouns whose meaning cannot be derived compositionally. So the constraint LC(STRESS/TONE)$_{PARADIGM,}$ indexed to SDNs, dominates the general LC(STRESS/TONE) constraint which is in charge of all derived words. Now, the crucial ranking is the one which allows the prosodic constraints to influence the stress of the LDNs, whereas in SDNs the copying of the stem stress is enforced. This ranking is LC(STRESS/TONE)$_{PARADIGM}$ >> PROSODY >> LC(STRESS/TONE).

Since there are no cases which would offer a ranking argument for the constraint LC(STRESS)$_{PARADIGM}$ with respect to MAX(STRESS/TONE), we are leaving these two constraints unranked with respect to each other. Turning to the tableaux, we need to remind the reader that the LC constraints here require the copying of the prosody of the adjectival form *Ispraavan*, a feature which is not present in the input underlying representation. The use of a related surface form as part of the input is common in OT approaches to paradigms, most importantly the output-output correspondence (for an overview of approaches, see e.g. Steriade 2000). In what we have seen so far, there were quite a few good reasons to assume that the surface form of the base is not part of the input of the tableaux for LDN. Still, we are including this representation (and the violations of LC(STRESS/TONE) which it makes possible to assign) between brackets in order to see how it affects general evaluation.

(23) (a)

/ispraavn + oost/ ~ correctness$_{SDN}$ BASE: *Ispraavan*	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
a. isprAAvnOOst		*!		*
☞ b. Ispraavnoost			*	

(b)

/ispraavn + oost/ ~ correctness$_{LDN}$ (BASE: *Ispraavan*)	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
☞ a. isprAAvnOOst				(*)
b. Ispraavnoost			*!	

As the tableaux in (23) show, the MAX(STRESS) constraint is never violated because there is no lexical stress to be unfaithful to. The constraint LC(STRESS/TONE)$_{PARADIGM}$ only plays a role in the

evaluation of the candidates for *correctness*$_{SDN}$, whereas in the case of correctness$_{LDN}$, whose meaning has to be retrieved from the lexicon, it is always vacuously satisfied.
In order to show that our ranking predicts the lack of variation in the nouns whose base has a lexical stress/tone (e.g. *konkrEtnoost*) and in those whose base has no long closed final syllable (e.g. *hUmaanoost*), in (24) and (25) we give the tableaux for these nouns.

(24) (a)

/konkrEtn + oost/ ~ concreteness$_{SDN}$ BASE: *konkrEtan*	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
☞ a. konkrEtnost			*	
b. kOnkretnoost	*	*!		*

(b)

/konkrEtn + oost/ ~ concreteness$_{LDN}$ (BASE: *konkrEtan*)	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
☞ a. konkrEtnost			*	
b. kOnkretnoost	*!			(*)

(25) (a)

/humaan + oost/ ~ humanness$_{SDN}$ BASE: *hUmaan*	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
a. humAAnOOst		*!	*	*
☞ b. hUmaanoost				

(b)

/humaan + oost/ ~ humanity$_{LDN}$ (BASE: *hUmaan*)	MAX(S/T)	LC(S/T)$_{PARADIGM}$	PROSODY	LC(S/T)
a. humAAnOOst			*!	(*)
☞ b. hUmaanoost				

Expectedly, the general constraint LC(S/T) never chooses the winning candidate in our tableaux. It may well be the case that this is not accidental, i.e. that surface properties (such as syllabification and surface prosody) cannot be copied outside of paradigms. If this is the case, it can be explicitly encoded into our basic model. LDNs (and comparable non-transparent derivations) can be defined as those derivations which do not have the surface form of the base as part of their input. This automatically makes the general constraint LC(STRESS/TONE) vacuous and superfluous. Also, the remaining LC constraint would not have to be indexed to a subset of nominalisations, it would just be vacuously satisfied in all the cases where it has nothing to compare to (i.e. in all LDNs). Our data set is not sufficient to confirm such a generalisation, but our analysis clearly puts this hypothesis on the research agenda and shows how different outcomes of this research are to be formalised. The important conceptual point here, as one of our reviewers suggests, is that, with or without this final intervention, we do not deny that LDNs are related and even synchronically derived from the adjectival base. However, (at least in S-C) they are crucially unable to copy surface prosody of the base. These are all questions which require further research.

Note that our constraint set as it is now also makes clear predictions as for the possible constellations in languages: we are excluding the option where the non-paradigm members copy more properties of the base than the paradigm members. Even in a language in which $LC_{PARADIGM}$ is ranked below the general LC, the general constraint will block allomorphy in both paradigm members and non-members. In this sense, $LC_{PARADIGM}$ can never really be ranked below LC, it can either be subsumed under it or promoted above it. Crucially, since there is no constraint which militates against allomorphy in non-paradigm members, but it tolerates it in paradigm members, such a constellation cannot arise.

4.4. Signs of reanalysis? – -ost getting High

In this short coda to this section, we are briefly returning to the exceptional case where the LDN has the rising span although there are no phonological conditions for its emergence: *jednAAkOOst* (related to *jEdnaak* 'equal').

Note that according to everything we have said so far, this deadjectival should act as $hUmaanoost_{LDN}$ (24b) and display post-cyclic prosody. However, this does not happen.

Our tentative account here is that in cases is where the SDN is blocked for semantic reasons, the LDN can actually stop being part of the derivational family of the base. In other words, *jEdnaak* and /jednaak/ can stop being part of the input for *jednAAkOOst*. Importantly, in the long run, if there are enough cases of this type, the *-ost*$_{LDN}$ may be reanalysed as having lexically specified tone. Still, it is very hard to make the claim that this reanalysis has already taken place given the fact that there are absolutely no cases where the H in *–ost* overrides either the lexical tone or draws the tonal span to a short stem-final syllable.

5. The emerging picture: Paradigms as the place of Syntax/Phonology Encounters

The essence of our analysis of the interaction between prosody of S-C deadjectival nominalisations and their syntax and semantics, is contained in the one phonological constraint that we label $LC(STRESS/TONE)_{PARADIGM}$. This constraint is active only when the input is a member of a paradigm, and only in these cases is there the effect of favouring a computationally more expensive solution (it involves a lexical check, or a richer input, containing also the prosodic specification of the surface base form). A natural question is why this would be the case. Why should a more expensive solution win, and why exactly for those inputs that are members of a paradigm? In this section, we come up with two sets of possible answers.

Answer 1: The relevant property of members of a paradigm is their interpretive transparency. Paradigms are domains of (guaranteed) interpretive transparency. Highly context-independent, the interpretation of members of a paradigm is strictly derived from the semantic contribution of its components in combination with the semantic contribution of the (complex word internal) syntactic structure in which they appear (Fodor & Lepore 1999, Koontz-Garboden 2007). A word can only have a non-transparent (shifted) lexical meaning if it has left the paradigm, or never belonged to it. And vice versa, once a word leaves the paradigm it was a member of (because the paradigm becomes unstable, or for some other reason), its meaning will tend to become less transparent.

A system that marks whether a complex lexical item is a member of a paradigm or not yields a higher productive capacity. Members of a paradigm which become lexicalised, with an idiosyncratic meaning, no longer trigger a blocking effect on the productive formation of their counterpart paradigm members: the two layers have independent lives.

Answer 2: The reason lies in the relation of (a)symmetry. It has been argued that grammar avoids symmetry (Kayne 1994, Moro 2000). Asymmetric relations are more easily linearised, and more easily assigned roles in the interpretive relation of predication. In the case of S-C deadjectival nominalisations, structures coming from a paradigm (i.e. SDNs) are characterized by a rich syntactic structure, in which the stem and the suffix stand in an asymmetric relation. The stem is more deeply embedded than the suffix, and according to the traditional models of spell-out, should be spelled out to phonology first (Uriagereka 1999, Chomsky 2001; Marvin 2002 in relation to a

similar empirical pattern). In such a configuration, phonology receives the input in an asymmetric relation, and preserves the prosody of the element that it receives first (as if the first element were spelled out as it were on its own i.e. as when the base adjective is pronounced), which is the stem (see the schematic representation in (13)). The structure of an idiosyncratic nominalisation (LDN) is flat. It involves two items in a symmetric relation. In such a case, phonology has no handle to resolve the symmetry.[13] It proceeds without prosodic assignment, and assigns tone and stress only at its own interface with phonetics, as a last resort strategy, insensitive to any information which is not contained in the lexical representation.

The two answers above are not in mutual exclusion. They may be taken as two perspectives at the same phenomenon, or even as two forces conspiring to give it its shape. In any case, the analysis we provide opens many interesting new questions about the interaction between syntax and semantics on the one hand and phonology on the other. For instance, while phonology may only stipulate the fact that certain suffixes come with a lexically specified high tone and some not, our model gives us a handle to explain why this is the case. Suffixes that most often or always appear in the shallow type of syntactic structure, are hence most often also the first syntactic head in the word spelled out to phonology. Hence if we take that suffixes by default have no tone specified in the lexicon, suffixes of the described type will most often still surface with a tone – one that is phonologically assigned. Suffixes that appear in more complex structures often enough, where they are not the first head in the word to be spelled out – will also surface without a high tone often enough. It is expected then that the former type of suffixes will eventually be stored in the lexicon with a high tone, and those of the latter type will remain toneless. Being lexically encoded with a high tone also marks for a particular suffix that it has a higher capacity of taking the derived word out of its stem's paradigm, and forming a new paradigm from the derived word.

6. Zooming out – Across suffixes and languages

In this section, we are looking at three windows opened by the data set on which we have based our analysis. In section 6.1. we are looking at other nominalising suffixes within S-C, showing that there is a match between their prosody (which overrides that of the base) and their semantics and syntax (LDN). Section 6.2. looks at the borrowed abstract nouns in S-C, in an attempt to define an important constraint on borrowing. Finally, section 6.3. discusses some possibly equivalent constellations in Dutch.

6.1. The suffixes competing with –ost

Zooming out, we are now looking at other suffixes available in S-C for deriving abstract nouns from adjectives. In the picture we have outlined here, it would be surprising to find suffixes which are less stress-affecting than *–ost*. And indeed, we have found no such suffixes. All the other productive suffixes available in the lexicon possess a lexical stress/tone which overrides the original stress of the adjective. In (26), we give some frequent nouns lexicalised with these endings.

(26)	-OtA	lEEp 'beautiful'	lep-OtA	'beauty'
		dObAr 'good'	dobr-OtA	'goodness'
	-OćA	skUUp 'expensive'	skup-OćA	'expensiveness'
		fIIn 'sophisticated'	fin-OćA	'sophistication'
	-InA	tEEžAk 'heavy'	tež-InA	'weight'
		gOOrAk 'bitter'	gorč-InA	'bitterness'

[13] It is possible that some asymmetry comes from the projecting nature of the nominalising suffix, and that this is why the final domain of the noun is targeted by the prosodic assignment. Arsenijević (2010) argues that the stress is indeed assigned to the suffix, and then as a consequence of a general rule in S-C moves to the penult syllable of the entire word.

An interesting consequence of the application of these stress-attracting suffixes is that, due to the general requirement of S-C to neutralise all pre-tonic length contrasts, all long stems get shortened, which incurs extra violations of further LC constraints – e.g. LC(LONG). It therefore comes as no surprise that these suffixes are restricted to a limited number of native adjectives and generally have LDN interpretations.

It should also be noted that whenever *-ost*-versions are made of these adjectives (marginal for most speakers), they always copy the stress of the stem and maintain its length. In other words, also the makeup of the derivational morphology in S-C conspires to create the optimal circumstances for the distinction between the two classes of deadjectivals.

6.2. Borrowed deadjectivals in S-C

So far, we have only dealt with native derivations. However, a sizeable number of abstract nouns are borrowed and belong to the Latinate stratum of the lexicon (see Simonović 2012). Many such nouns have been borrowed alongside the related adjectives. Importantly, there seem to be no productive derivational patterns within the Latinate stratum. We relate this to the fact that, typically, there is an *–ost*-noun available for every adjective as well.

(27) Adjective	*-ost*-noun	Borrowed noun
apstrAkt-an 'abstract'	apstrAktnoost$_{SDN}$	apstrAkcIja$_{LDN}$
ekokvEnt-an 'eloquent'	elokvEntoost$_{SDN}$	elokvEncIja$_{LDN}$
stEriil-an 'sterile'	stEriilnoost$_{SDN}$, strerIInOOst$_{SDN/LDN}$	sterilItEEt$_{LDN}$

As our examples show, the *-ost*-nouns are preferred in the SDN contexts and usually restricted to them. In cases like *stEriilan*, we can see three levels of relatedness to the stem: *ost*-deadjectival with the prosody copying that of the base adjective (*stEriilnoost*), *ost*-deadjectival with default prosody (*strerIInOOst*) and an unpredictable derivation (*sterilItEEt*). In this sense, it is not clear whether there are any real SDNs derived using foreign suffixes in S-C.

These examples show an interesting restriction on borrowing: derivationally complex words tend not to be borrowed with their compositional structure. Rather, they are first borrowed as simplex and then, in case that some related words from the source language are imported, the link between them can be reconstructed (see, Simonović 2012, in preparation). Given that borrowing is initiated in code-switching, this fact matches the finding that semantic specificity is preferred in code-switching (Backus 2001). This means that S-C speakers who borrowed *apstrAkcIja*, *elokvEncIja* and *sterilItEEt*, did so with a specific and non-compositional meaning. The moral of the story is that it is important not to rush into concluding that derivational suffixes are getting borrowed across the board and that what might seem to be a class of borrowed derivations can actually turn out to have semantics which points at its lexicalised status.

The three nouns derived from (or related to) *stEriilan*, arranged along the SDN/LDN scale in the predicted way, show that language will make the relevant distinction on any number of available items. We have already seen that a similar distinction exists in a micro-class in Slovenian. In the following subsection, we will see a similar case from Dutch.

6.3. Beyond S-C – Dutch

So far, we have only seen S-C facts and provided them with a S-C-internal account. However, it is important to look at the facts from the cross-linguistic perspective. What are the reasons for the dichotomy in S-C and are there any comparable phenomena in other languages? The two features of S-C which have conspired to give the dichotomy are the availability of a suffix which does not affect the prosody of the base (unavailable in say French or Italian) and the ungrammaticality of the other common means of expressing the trope meaning: 'X's being Y':

(28) *Jovanovo	budenje	opasan	/	*Jovanovo	bivanje	opasnim
J's	being.Perf	dangerous.Nom		J's	being.Imperf	dangerous.Inst
'Jovan's being dangerous'						

Before we move on to other languages we need to remind the reader that the dichotomy is not omnipresent in S-C either. There seems to be a pressure to have a single nominalisation from every adjective. And indeed, in many cases, even S-C speakers report allowing a single form from a single adjective for all functions even where there is room for variation. This pressure is even stronger in Dutch, which, indeed, allows the conversion of infinitives, so that what is expressed in S-C as *Jovanova Opaasnoost* 'Jovan's dangerous-N' can be expressed in Dutch as *Jovans gevaarlijkheid* 'Jovan's dangerous-N', but also as *Jovans gevaarlijk zijn* 'Jovan's dangerous be(N)'.

Despite the existence of the converted copula there seem to be tendencies which point at a distribution similar to that in S-C.

There is a stress-shifting micro-class of nominalisations which matches the S-C pattern: two adjectives *'dakloos* 'homeless' and *'werkloos "unemployed"* allow a stress shift in *heid*-nominalisation (*-heid* being comparable to *–ost*, see below). This stress shift tends to strongly correlate with LSD contexts.

(29) Daar komt hij weer met zijn 'dakloosheid/??dak'loosheid/'werkloosheid/??werk'loosheid.
'Here he goes again with his homelessness$_{SDN}$/unemployedness$_{SDN}$.'
(Implication: he is homeless/unemployed.)

Daar komt hij weer met zijn ??'dakloosheid/dak'loosheid/??'werkloosheid/werk'loosheid.
'Here he goes again with his homelessness$_{LDN}$/unemployedness$_{LDN}$.'
(Implication: Homelessness/unemployment, as a general issue, is his favourite subject.)

Furthermore, Dutch also has Latinate nominalizations, which are much more widespread than those in S-C. Booij (1999: 75) notes that the suffixes *–heid* (native) and *–iteit* (Latinate) are synonymous, but show an interesting asymmetry in distribution: whereas *–iteit* only combines with non-native bases, *–heid* can attach to both. His examples are *ab'surdheid* and *absurdi'teit* (the base being *ab'surd*) for non-native bases and *ge'woonheid* and **gewoni'teit* (from *ge'woon* 'ordinary'). Two remarks are in place here. First, just like in S-C, the productive native suffix is the one which leaves the stress pattern intact, whereas the borrowed one is stress-attracting. Second, *ab'surdheid*, although dispreferred by most speakers, will surface in contexts in which S-C has SDNs.

(30) de duidelijke absurdheid/?absurditeit van die regel
the clear absurdness/absurdity of that rule

Also, for many adjectives for which *heid*-nominalisation is held impossible and absent from dictionaries, it actually surfaces in SDN-contexts, in which the generally accepted nominalization is blocked.

(31) De seksueelheid/*seksualiteit van hun relatie staat buiten kijf.
'the sexualness/sexuality of their relationship is beyond dispute'

Hij moet per se zijn speciaalheid/*specialiteit bewijzen.
'He has to prove his specialness at any price.'

In this section we have made an attempt to sketch the broader picture and initiate some discussion on the general conditions on the prosody/syntax interactions of the type discussed in this paper.

7. Conclusion

The paper has examined the role that syntax and semantics play in the domain of phonology, more precisely – in prosody assignment in derived words. We observed an empirical domain, that of deadjectival nominalisations, where a correlation can be observed between the prosodic pattern of the derived noun and the types of interpretation it may be assigned. The correlation is very strong in the majority of cases, but it also faces certain restrictions, yielding considerable paradigm gaps: cases where only one prosodic pattern is empirically confirmed, and the nominalisation expresses all the available types of meaning. Using a syntactic analysis that explains the semantic effects, we proposed a model of the phonology of S-C and its interface with syntax, in which both the

phonology-semantics correlations and the gaps receive a formal analysis and explanation. The central role in accounting for the correlation effects is played by the tendency of Lexical Conservatism, in interaction with some relevant syntactic and phonological properties, such as the structural complexity of SDNs or syllable weight. Finally, in the last section we have made an attempt to show the larger picture in which other factors, such as the availability of different shapes of affixes in the lexicon and language contact are situated.

It is our hope that we opened many exciting windows and closed as few doors as possible and that future research will interact with this contribution in ways that will enable further insights into the prosody/syntax interaction.

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