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THE SEMANTIC ONTOLOGY OF DEADJECTIVAL NOMINALIZATIONS IN SERBO-CROATIAN

ABSTRACT

The paper presents three types of deadjectival nominalizations in Serbo-Croatian, each with different semantic properties, corresponding to what has been referred to in the literature as properties, tropes and qualities (Moltmann 2004a, Villalba 2009). After presenting the grammatical and semantic differences between the three types of nominalizations, I tackle the question of justification of the introduction of the ontological types like tropes and qualities. I show first that viable analyses can be formulated presenting the meanings referred to as tropes and qualities as derived from properties in combination with theoretical handles that are introduced for independent reasons. I conclude that a simpler ontology is not only more methodologically economical, but also is explicit about certain relations between different related types of meanings, which are obscured when the differences are captured in terms of primitive ontological classes.

KEYWORDS

deadjectival nominalizations, Serbo-Croatian, stress assignment, semantic ontology, properties, tropes, qualities.

1. Introduction

The ontology of natural language semantics has recently received a lot of attention in the formal research of natural language. Authors like Moltmann (2004a, 2004b and other work), von Heusinger and Wespel (2007) and Villalba (2009) argue that an enrichment of the ontology is empirically motivated (even necessary), and that its gains exceed its costs, the latter being mostly in the domain of methodological simplicity and possibly in the capacity to observe empirical regularities and make generalizations. In most cases, the enrichment of the ontology proposed goes in the direction of introducing kinds and instantiations (manifestations) within the traditional types: objects, properties and propositions. Next to that, arguments are provided for the necessity of new types, such as Villalba's (2009) qualities. In this paper, I present three types of nominalizations in Serbo-Croatian (S-C), which manifest both effects similar to those that Moltmann uses to argue for an enrichment of ontology along the dimension of kinds and instantiations, and those that Villalba finds in Spanish, to argue for a finer grained ontology at the level of types. S-C data display a transparent and straightforward interdependency between the semantic ontological status of linguistic expressions, and their grammatical (morphological and syntactic) behavior. Then I move to a discussion of the enrichment of the semantic ontology, pointing to some arguments against it, even in light of seemingly supportive empirical facts.

The paper is organized in the following way. Section 2 overviews the relevant empirical facts about the three types of deadjectival nominalization in S-C and their relevance for the semantic ontology of natural language. Section 3 introduces, in more detail, the differences between the post-stem stressed and the stem-stressed deadjectival nominalizations, and in section 4 an analysis is introduced. Section 5 presents facts and offers an analysis for the deadjectival nominalization by conversion. Section 6 discusses the consequences of the presented data and analyses for the natural language semantics ontology, and section 7 concludes.

2. Three types of deadjectival nominalizations in Serbo-Croatian

Purely descriptively speaking, S-C adjectives nominalize in two general ways: through suffixal derivation and through conversion. In this paper, I describe two types of derivation, thus ending up with three types of nominalization. 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 two different types of deadjectival nominalization.

Conversion, for which I discuss alternative analyses in section 5, targets the singular neuter form of the adjective, which is used, without further measures being taken, as a noun with a special kind of meaning related to the meaning of the underlying adjective.

Derived nominals in S-C cluster in two groups with respect to the stress pattern: one in which the stress falls on the last syllable before the nominalizing suffix (in further text: Post-stem Stressed Nominals, PSN), and the other in which the stress is the same as in the motive word (Stem Stressed Nominals, SSN). This is illustrated in (1) on three deadjectival nouns.

(1)	a.	opás-n-ost,	solidár-n-ost,	praz-n-ína
		danger-Adj- <i>ost</i>	solidar-Adj- <i>ost</i>	empty-Adj- <i>ost</i>
		‘danger’	‘solidarity’	‘emptiness’
	b.	òpas-n-ost	ùče-n-ost	pràz-n-ost ¹
		danger-Adj- <i>ost</i>	learn-Adj- <i>ost</i>	empty-Adj- <i>ost</i>
		‘dangerousness’	‘solidarity’	‘emptiness’

There is a general rule in S-C that the stress coinciding with a falling tone moves one place to the left (unless it falls on the initial syllable, and hence cannot move), and appears there with a rising tone. As all PSN have a rising tone, it is clear that the stress actually comes on the suffix.² In this paper, I discuss deadjectival nouns, but a similar phenomenon may be observed in deverbal nominalization.

It is not the case that every adjective derives both an SSN and a PSN. There are cases where only a PSN is possible (and the SSN is either grammatically or pragmatically bad), as there are adjectives which only may derive an SSN, and not a PSN. Finally, participial nominalizations derive only SSNs – PSNs derived from participles are ill-formed. In this paper, I am particularly interested in those cases where both a PSN and a SSN are derived from one

1. I use two different diacritics in marking the stress, to also mark the tone of the stressed syllable, as tone in S-C indicates whether the stress was originally on the respective syllable (the falling tone, *e.g.* *è*) or it moved there from the next syllable to the right (rising tone, *e.g.* *é*). I ignore the length of the stressed syllable, as I do not use it in the argumentation (it is not fully orthogonal to the observed issues, but also not significantly used in the discussion).

2. Inkelas and Zec (1988) have an account of the S-C stress system without falling and rising tones, but with high and low ones instead. While their account is more formally elaborated, and probably more empirically accurate as well – for reasons of simplicity, I decide to use the more traditional views wherever possible. This simplification does not bear on the analysis, as it is used for descriptive purposes only.

and the same adjectival stem, and more precisely, for the semantic asymmetries between those two nouns. Unless specified otherwise (as for instance in respect of participial nominalization), when talking about the semantics of PSNs and SSNs, I am talking about those cases where they have a SSN, *i.e.* a PSN counterpart, respectively. And, in those cases, next to the phonological differences, there are important semantic and morphological asymmetries between the two types of nominalizations.

While, as discussed in section 3, PSNs normally have a broader range of interpretations, and SSNs are more restricted, there are uses in which only the SSN is acceptable.

- (2) Njegova opasnost/*opás-n-ost ne dovodi se u pitanje.
 his dangerousness.SSN/PSN 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, SSNs are more suitable, and PSNs are sometimes out. This property of SSNs lies in the centre of attention of this paper, as it directly bears on the issue of ontological inventory required for the description of the semantics of deadjectival nominalizations.

Most prominent differences emerge in respect of the availability of two types of readings for the two classes of nominalizations: the trope and the event reading. Let me briefly introduce these notions, before skipping to a more detailed description of the asymmetries between PSNs and SSNs. Tropes have been a topic in philosophical literature since its early days, defined as instances of properties or relations, and they are introduced to linguistic semantics in the work of Moltmann (2004a, 2004b), who shows their relevance in the semantic analysis of particular types of linguistic expressions. Villalba (2009) has a more fine-grained ontology, in which he distinguishes between adjectives, properties and qualities. Thus, his semantic ontology includes kinds and instances of adjectives, kinds and instances of properties and kinds and instances of qualities (next to kinds and instances of individuals and events). He takes adjectives as an ontological class to include the denotations of linguistic expressions of the adjectival types, and argues that two types of Spanish nominalizations, with two different types of interpretation, present sufficient ground for the introduction of two other related types of abstract objects, properties and qualities, illustrated in (3).

- (3) adjectives: *honest* (denoting ways of being)
 properties: *being honest* (denoting conditions/states of being in a certain way)
 qualities: *honesty* (denoting abstract substances)

Moltmann's and Villalba's enrichments of the set of ontological classes used in the semantic analysis of natural language target different levels of ontology. While Moltmann argues that for one (or all) of the types already in use, two subtypes have to be introduced, that of kinds and that of instances, Villalba argues for the introduction of two new types of abstract objects, both of which still can be classified into two subtypes, the one of kinds and the one of instantiations.

Villalba's arguments are empirical, based on the existence of two types of deadjectival nominalization in Spanish: regular definite nominalizations (built with the suffix *-dad*) and *lo*-nominalizations, which is basically a converted neuter form of the adjective (*lo* is the neuter gender form of the definite article in Spanish, but could also be a pronominal element).

- (4) a. la honestidad (de Juan)
 the.F honesty of Juan
 'Juan's honesty'
- b. lo honesto (de Juan)
 the.Neut honest of Juan
 'Juan's honesty'
- Villalba (2009 :1)

On a battery of tests, Villalba shows that the two types of nominalization denote two different types of entities, and uses this systematic split in the semantics of nominalizations as a ground for positing two different corresponding ontological types.

In S-C, a type of deadjectival nominalization to the Spanish *lo*-nominalization is used, which has a similar morpho-syntactic make up and displays a similar semantic behavior.

- (5) a. iskreno stvorenje
 honest.Neut being
 '(an/the) honest being'
- b. (ono) iskreno u čoveku
 (that/it) honest.Neut in human
 'the honest aspects of a/the human'

For reasons of space, I do not present full Villalba's diagnostics in application to the Serbo-Croatian data, but only two of his tests, as an illustration, showing that indeed, generic and individual level uses of this type of predication yield judgments of semantic or pragmatic unacceptability.

- (6) a. #U ovoj zemlji, (ono) banalno u političarima je istrebljeno.
 in this country that banal in politicians is extinct
 b. #U ovoj zemlji, (ono) banalno u političarima je uobičajeno.
 in this country that banal in politicians is common

Note that with PSNs and SSNs, these sentences are well-formed. I refer to this type of nominalization (the construction of an optional *ono* ‘that’ plus an adjective) as the deadjectival nominalization by conversion, and to the nouns derived in this way as conversion nouns (CN), as they are phonologically identical to the respective motive adjectives.

The goal of this paper is two-fold. It describes the three types of nominalizations in S-C (PSN, SSN and those derived by conversion) with respect to the types of abstract objects that they denote, and then, based on the described facts, discusses the issue of the richness of ontology needed for an adequate formalization of the semantics of deadjectival nominalizations.

3. Asymmetries between PSNs and SSNs

Let me start with the asymmetry already mentioned in section 2. When used for properties of particular persons and objects, matching in denotation Moltmann’s type of tropes, SSNs are more suitable, and PSNs are sometimes out.

- (7) Njegova opasnost/*opás-n-ost ne dovodi se u pitanje.
 his dangerousness.SSN/PSN not lead Refl in question
 ‘His dangerousness does not come into question.’

More precisely, PSNs are out if they have undergone a lexical semantic shift, becoming rather 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, PSNs, when available, are the better and often actually the only way of expressing them.

Only PSNs, and not their SSN counterparts, can denote eventualities that can be described as instantiating the property that forms the core of the adjectival meaning. While some PSNs can also have the interpretation typical of their SSN counterparts (*i.e.* the trope-interpretation), vice versa is not the case: whenever an SSN has a PSN counterpart, the former cannot denote an eventuality in which a property is instantiated. Here are some data illustrating this behavior.

PSNs can be modified by adverbials that select for quantized eventualities, while their SSN counterparts cannot (when an SSN has no PSN counterpart,

everything changes, especially if derived from a verb, in which case only the SSN is plausible).

- (8) a. česta opásnost, nekadašnja rudarska solidárnost
 frequent danger.PSN earlier.Adj miners' solidarity.PSN
 'frequent danger' 'miners' solidarity from the older times'
 b. *česta òpasnost, *nekadašnja rudarska sòlidarnost
 frequent dangerousness.SSN earlier.Adj miners' solidarity.SSN
 c. *Jovanov-a/-e povremen-a/-e ljubáznost (-i)
 J. Poss.Sg/Pl occasional.Sg/Pl kindness (es)
 d. Jovanov-a/-e povremen-a/-e ljubáznost (-i)
 J. Poss.Sg/Pl occasional.Sg/Pl kindness (es)
 'an occasional kindness from/by Jovan'/'occasional kindnesses by/from Jovan'

PSNs 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 SSNs these constructions are ungrammatical.

- (9) a. nekoliko Jovanovih ljubáznosti/*ljùbáznosti
 several Jovan's kindnesses.PSN/kindnesses.SS
 'several events instantiating Jovan's kindness'
 b. razne opásnosti/*òpasnosti
 diverse dangers/'dangerousnesses'
 'diverse dangers'

Another asymmetry relates to a subtle intuition: while PSNs can have a generic meaning, referring to a concept, an intensional property, SSNs always seem to imply a bearer of a property, 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.

- (10) a. ta mala ljubáznost, koju niko nije pokazao...
 that little kindness.PSN which nobody Neg.Aux shown
 'that little kindness, which nobody manifested'
 b. #ta mala ljubáznost, koju niko nije pokazao...
 that little kindness.SSN which nobody Neg.Aux shown
 'that little kindness, which nobody manifested'

Talking about the denotation of a SSN always means talking about the holding of the property it denotes for a referent. Talking about the denotation of a PSN may get the interpretation above, but is more naturally interpreted as talking about a generic notion, intensional or extensional.

- (11) a. Književnost *(ovog teksta) je upitna.
literariness.SSN this.Gen text.Gen is questionable
'the literariness of this text is questionable'
- b. Književnost *(#ovog autora) je upitna.
literariness.SSN 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. Književnost (ovog autora) je upitna.
literature.PSN this.Gen author.Gen is questionable
'the literature (by this author) is questionable'³
- d. #Književnost ovog teksta je upitna.
literariness.SSN this.Gen text.Gen is questionable
'#the literature of/by this text is questionable'
(unless a context is made where certain literature belongs to a certain text)

Finally, while PSNs belong to a large class of derived nominals, involving many different (stem-specific) suffixes, all deadjectival SSNs are built by the suffix *-ost*, added to an adjectival form, with the derived nominal denoting a property as holding for a particular referent.⁴

- (12) a. književn-ost, dobro-ta, slàv-a, ùmor-Ø, bel-ína...⁵
litera-N good-N glor-N tire-N white-N
'literature' 'good (ness)' 'glory' 'tiredness' 'whiteness'
- b. glèdan-ost, zaóstal-ost, sàdašnj-ost, ljùbazn-ost...
watched-*ost* retired-*ost* now.Adj-*ost* kind-*ost*
'watchedness' 'retiredness' 'present' 'kindness'

(for how many people are
watching a movie or a tv-show)

3. For reasons of space, I do not discuss the issue of thematic roles assigned to PPs coming with a derived nominal, as it is a complicated issue, to a large extent orthogonal to the problems under discussion.

4. There are also deverbal SSNs, similarly derived only by one suffix: *-je*.

5. 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 are from the same class, or even different instantiations of formally the same suffix.

There are (at least) two types of adjectival stems which only derive SSNs: those of adjectival (usually result-oriented) passive participles, and those of adjectival active participle forms.

- (13) a. *úvreděn-ost* vs. **úvredén-ost*, *očuvan-ost* vs. **očuván-ost*
 offended-*ost*.SSN offended-*ost*.PSN preserved-*ost*.SSN preserved-*ost*.PSN
 ‘offendedness’ ‘preservedness’
- b. *pósustal-ost* vs. **posustál-ost*, *ùtihl-ost* vs. **utíhl-ost*
 go_away-*ost*.SSN go_away-*ost*.PSN go_silent-*ost*.SSN go_silent-*ost*.PSN
 ‘awriness’ ‘silence (dness)’

Derived nominals of these two kinds, although SSNs in terms of prosodic and morphological features, are more likely to receive also the interpretations typical of PSNs (hence the semantic contrast is only observable in cases where there are two different forms, one PSN and one SSN).

- (14) a. (?)*ta mala úvredenost, koju niko nije*
 that little offendedness.PSN which nobody Neg.Aux
pokazao...
 manifested/shown
 ‘that little kindness, which nobody expressed/showed’
- b. (?)*ta (krajnja) posústalost, koju niko nije*
 that utter lassitude. PSN which nobody Neg.Aux
pokazao...
 manifested/shown
 ‘that little lassitude, which nobody manifested’
- c. *ta vrhunska književnost, koju danas niko ne piše...*
 that sophisticated literature which today nobody not writes
 ‘that sophisticated literature, which today nobody writes...’
- d. *ta apsolutna belina, koju nigde ne možemo videti...*
 that absolute whiteness which nowhere not can.IPl see
 ‘that absolute whiteness, which can’t be found anywhere...’

An even smaller class of active participles derive SSNs: only those built from unaccusative or middle VPs, which have in addition received an adjectival (rather than eventive) interpretation.⁶

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

the predicate, 2) Marvin only considers nominalizations deriving from participles, while I take a broader look – at nominalizations deriving from all types of adjectival forms and 3) different generalizations relating to the interaction of stress and syntax and semantics of the derived nominals can be observed in S-C and in Slovene. On the theoretical side, the present paper devotes more attention to the semantic asymmetries between the nominalizations of the two stress-patterns, while Marvin is primarily interested for the syntactic, phase-theoretic aspects of the problem.

4. The analysis of SSNs and PSNs

Arsenijević (2010) provides an analysis that is based on a reformulation of a phonological rule Inkelas & Zec (1988) gave for derived and composed words in S-C. The rule is syntax-sensitive and specifies that when two items combine, the stress lies on the one that contains or presents the more deeply embedded projecting head. The explanation is that the more deeply embedded projecting head is also the one that is first sent to phonology, and therefore first assigned stress. When another item is added, its stress has to be deleted due to the restriction that one word carries one stress. SSNs are syntactic nominalizations. What is nominalized are predication where the adjectival stem is the deeper projecting head (deeper than the suffix) and hence preserves stress. PSNs are lexical nominalizations, where the root is nominalized by the nominal suffix, and hence the suffix is the only projecting head. This is illustrated in (17a) for PSNs and in (17b) for SSNs. In PSNs the adjectival component is not really adjectival yet, but only a root, categorially unmarked, while the suffix bears the category N, which projects. Hence, the suffix preserves stress.

- (17) a. [ljúbazn-òst_N] → (the second member preserves stress) ljubazn-òst_N
 kind-*ost*
 'kindness'
 b. ljubazn-òst_N → (the stress moves one place to the left) ljubáznost

Depending on the higher functional structure, the noun derived in (17) may end up in an expression with a generic meaning (naming the property) or in a referential one. In both cases, the noun projects a DP, but with a different structure between the noun and the DP, according to one's favorite theory of genericity and referentiality (*e.g.* Borer 2005, Chierchia 1998, Zamparelli 1995). When taking a referential interpretation, its reference is only restricted by the noun, a potential restrictive modifier, and the semantic contribution of the functional projections between the noun and the DP. In the latter case, when used referentially, it

involves no further type restrictions, and may refer to a particular instantiation of the property, to an object, or to an event, the only restriction being that the definite description of the referent involves the respective property (kindness in the particular case). This fully matches the semantics of PSNs.

As already briefly stated, I propose to analyze SSNs as deriving from full-fledged predications. The head of PredP takes an AdjP complement, projected by the nominalizing adjective.

- (18) a. [-øst [_{PredP} [_{DP} Jovan] pred [_{AdjP} ljùbazan]]
 -ost J kind. Adj
 b. Jovanova ljùbazn-ost
 Jovan's kind-*ost*
 'Jovan's kindness'

As the noun is not capable of assigning Nominative, the subject either has to be assigned genitive, or to be realized as a possessor.

- (19) a. ljùbaznost (mog prijatelj) Jovana
 kindness my.Gen friend.Gen J.Gen
 b. Jovanova ljùbaznost
 J.Poss kindness
 '(my friend) Jovan's kindness'

The interpretation is straightforward. The noun derived in this structure is bound to refer to the property denoted by the adjective, as instantiated in the particular predication. The bare predication, unspecified for aspect, tense, or any other temporal information, allows only for an individual level interpretation (I assume with *e.g.* Rothstein 1999 that adjectives denote properties without any temporal structure).

The phonological realization, more precisely, the stress pattern, is now different because there is an asymmetric structural relation between the suffix and

the stem. The stem is much more deeply embedded, and in Kayne's sense to the right of the suffix. While the phonological and lexical properties of the suffix and the stem get them eventually in a different order (*i.e.* the suffix following the stem), their syntax determines that the stem is to the right and the stem preserves its stress.

- (20) a. [-øst [_{PredP} [_{DP} Jovan] pred [_{AdjP} ljùbazan]] → [-ost ljùbazan]
 -ost J kind
 b. [-ost ljùbazan] → [ljùbazan-ost]

In the particular nominal *ljùbáznost*, the stress falls on the first syllable, and cannot be moved one syllable to the left. Hence it stays there and keeps the falling tone. In cases when the stress on the stem does not fall on the first syllable, it moves as usual.

The analysis as presented captures the empirical generalization that only SSNs are really productive: they can build from any PredP. PSNs are rather idiosyncratic: only certain adjectival stems build such nominals, while others, together with participles, have only one option: that of appearing in a PredP, which subsequently nominalizes. In this respect, the present analysis reaches similar conclusions as Roy (2010), who argues that in French too, adjectives can appear in 'bare' AdjPs, or in PredPs embedding AdjPs, but that in French, only those in PredPs may undergo nominalization. The difference is that in S-C, 'bare' roots also appear with the nominalizing suffix *-ost*, although not productively.

To briefly summarize this section in respect of the central aim of the paper: pairs of nominalizations, one of the PSN and one of the SSN type, which share their motive adjectives, nicely map onto Moltmann's ontological distinction between kinds and instances of properties, respectively. More precisely, the semantic qualification of SSNs is done in the simplest way if their denotation is described in terms of tropes.

5. Nominalization by conversion

The S-C counterpart of the Spanish *lo*-nominalization is built by conversion. While this is probably also the case for Spanish *lo*-nominalizations, they also include a D-related element (a pronoun or a determiner). S-C has no articles, and the noun derived by conversion has no additional elements to mark its nominal status.⁷

7. I ignore here the issue of definiteness, in particular the question whether in S-C there is also an indefinite use of CNs – as no article/definite pronoun is involved in the mechanics of nominalization. Rather, I stick to the proper counterparts of the Spanish *lo*-nominalizations, which are all definite.

- (21) a. iskreno stvorenje
 honest.Neut being
 'honest being'
- b. iskreno u čoveku
 honest.Neut in human
 'the honest aspects of a/the human'

S-C CN differ from those in Spanish in typically selecting for a complement headed by the preposition *u* 'in', where the Spanish counterparts would have a *de* 'of'. However, in the relevant respects: genericity and the assignment of individual level predicates, pointed out by Villalba as distinctive properties of *lo*-nominalizations in Spanish – they are the same:

1. CNs cannot have generic interpretations – the sentence in (22) would be fine if a PSN were used.

- (22) *U ovoj zemlji, banalno u političarima/politici je potpuno
 in this country banal in polititians/politics is completely
 istrebljeno.
 extinguished
 'In this country, the banal in the polititians/politics is completely extinguished.'

2. CNs cannot be subjects of individual level predicates.

- (23) *U ovoj zemlji, besramno u političarima/politici je uobičajeno.
 in this country shameless in polititians/politics is usual
 'In this country, the shameless in the polititians/politics is usual.'

I argue that the way CNs are realized in S-C is quite telling in respect of their underlying semantics. The fact that they take the preposition *u* 'in', unlike the PSNs and SSNs which take bare genitives, says something important about the denotation of CNs: they involve a partitive relation with the bearer of the nominalized property.⁸ The nominalizations in (22) and (23) denote the respective maximal set of the banal and shameless parts of the politicians/politics, that is extinct and common, respectively. Moreover, the partitive predicate expressed

8. Both the Spanish preposition *de* 'of' and the S-C preposition *u* 'in', as well as their cross-linguistic counterparts, often receive partitive interpretations. While for the former this is one of the core denotation, the latter has partitivity as an entailment of the spatial relation it denotes. Taking that the narrow semantics of *u* 'in' is *is spatially contained by*, i.e. *has its spatial extent as a part of the spatial extent of* – the partitive component is self-evident.

by the preposition *u* 'in' is bound by the situation (*i.e.* in syntactic terms: by a c-commanding temporal interval, be it event time or reference time). It is the maximal set of parts of an individual or a group picked by the property involved in a particular temporal interval that is denoted by a deadjectival noun derived by conversion. This accounts for the impossibility of generic use, or of assignment of individual-level predicates.

In PSNs and SSNs, the genitive of their complements has a possessive interpretation. In Spanish, the situation is similar. The preposition *de* 'of' has a possessive interpretation in their *dad*-nominalizations, but a partitive one, which is also available for this preposition, in *lo*-nominalization. S-C marks this difference overtly. In support of this analysis, consider the following sentences, in which the partitive relation is made more explicit.

- (24) a. Iskreno u njemu ga tera da prizna, ali ima u njemu i
 honest in him him makes Comp admit but has in him and
 nešto jako neiskreno.
 something strongly dishonest
 'The honest in him makes him admit, but there is also something very
 dishonest in him.'
- b. Mnogi govore o mračnom u religiji, ali to je mali deo
 many speak about dark in religion but that is little part
 onoga što religija jeste.
 that what religion is
 'Many people talk about the dark in the religion, but that is a little part of
 what religion is.'
- c. Divlje u njoj je prevladalo (druge strane njene ličnosti).
 wild in her Aux prevailed other sides her personality
 'The wild in her prevailed (the other sides of her personality).'

The example in (24c), as well as those in (25), which are found on Google, offer an illustration for the dynamic nature of the CN denotations, and the episodic nature of their identification through the partitive relation.

- (25) a. ...nakon što se ono ljudsko u njemu pretvori u
 after Comp Refl that human in him turns into
 demonsko...
 demonic
 '...after the human in him turns into the demonic...'

- b. ...očekujte da će nešto ljudsko u njemu proraditi...
 expect Comp will something human in him start_work
 ‘... expect that something human in him will emerge...’
- c. ...kad je sve ljudsko u njemu odavno mrtvo...
 when Aux all human in him long_ago dead
 ‘...when all that’s human in him is already dead...’

I speculate that CNs in S-C, and probably also in Spanish, derive from reduced relative clauses (in the spirit of Sproat and Shih 1988 and similar approaches arguing that different classes of adjectives should be analyzed as reduced relative clauses). This explains the maximization effect, and, in combination with the partitive interpretation of the preposition, it yields the interpretation as specified. This means that no real conversion takes place (and hence CN is an unfortunate label), and that CNs are real adjectives standing for (reduced !) relatives – their use as arguments is licensed by the D-element (LO in Spanish or the pronoun in S-C, where the latter may as well drop).

In summary, Spanish *lo*-nominalizations are not an endemic class – they have counterparts in S-C, a language from the Slavic family, and possibly in some other languages as well. The semantics of S-C CNs is the same as that of Spanish *lo*-nominalizations, for which Villalba argues to be best described as a separate ontological type of properties, different from the type of qualities which is reserved for standard nominalizations (PSNs in S-C). If anything, this should be a support for Villalba’s proposal, as it increases the cross-linguistic relevance of the regularities observed in Spanish. However, the discussion brought to question the nominal status of these elements, indicating that they are rather adjectives, derived as reduced relative clauses, and with a partitive denotation, and that this also explains their special semantic properties.

6. Ontology – how rich?

So far, this paper provided empirical data of the type used by proponents of richer ontologies: different morpho-syntactic classes are shown to systematically have denotations of different types, as well as sketches of analyses proposed for the presented facts. In this section, I point to some advantages of a theory that does not introduce ontological classes but derives the semantic asymmetries in terms of a semantic and syntactic analysis of the different types of expressions.

First, let me point that this question can be asked in different contexts. For instance, it is one of the central topics of descriptive metaphysics, a discipline of philosophy dealing with our intuitions about the classes of concrete

and abstract objects in the world. This is a different setting from that of natural language semantics. In semantics, the goal is to observe and describe regularities between the forms different expressions take, and their meanings. Thus the status of the question of ontological granularity is rather a methodological one. That a certain semantic class can be identified on certain grounds is not a sufficient argument for giving it a status of an ontological class. The relevant parameters here are the effects of such a move in the theory.

On the one hand, the introduction of new ontological classes leads to simpler models of the classes of expressions linked with these ontological classes. On the other, however, it deprives us of some of the handles in observing and modeling the links between different types of denotations, as well as in recognizing finer-grained semantic units that play a role across a number of semantic classes.

An illustration can be found in Jäger (2003), who shows how linking interpretations of adjectival predicates to situations can derive the effects that have been proposed to be treated in terms of manifestations of individuals (von Heusinger & Wespel 2007).⁹

Jäger argues that each copula sentence of the form *NP is Adj* is underlyingly of the form *NP is Adj P*, where P is a parameter that is supplied from the context. In (26), this parameter determines the dimension along which John is corrupt to a degree higher than some standard degree. Taking into account presuppositions, he shows how this view properly accounts for the copular sentences involving an *as*-phrase, of the type in (26).

(26) John as a judge is corrupt.

He argues that the *as*-phrase is actually responsible for a presupposition which combines with the presupposition of existence of a parameter, resulting in a specification of the actual parameter P. In other words, it is not the case that the expression *John as a judge* introduces a manifestation of the individual John, for which it is asserted that it is corrupt. Rather, the expression *as a judge* supplies the dimension along which it is asserted that John is corrupt – the dimension of him being a judge.

Recall that the difference between PSNs and SSNs in the analysis from Arsenijević (2010) was that the former are derived from roots, and the latter from full-fledged copular predications. Combined with Jäger's analysis of copular clauses, this means that SSNs involve an embedded contextually determined parameter P, as well as binding to situations. In other words, they involve a

9. I thank Carla Umbach for pointing out to me the work by Jäger, and both Carla Umbach and Sascha Alexejenko for valuable discussions of the issue of richness of the semantic ontology.

mechanism that yields the manifestation reading effects. These effects extend to the denotation of the derived noun: it denotes what is intuitively recognized as a manifestation of a property.

PSNs, which are built from roots, involve no such thing as Jäger's parameter *P*. Therefore, they are free in their semantics to refer to what is intuitively recognized as kinds or instances of eventualities, properties or generic concepts.

To the extent that the analysis in terms of reduced relatives is on the right track, Jäger's analysis of copular clauses is also applicable in the case of CNs, and Spanish *lo*-nominalizations. The underlying free relatives are copular clauses themselves, each involving a parameter *P* for the adjectival predicate involved. The *in*-phrase, specifying the bearer of the nominalized property in fact determines the restrictor set for the set of parameters: all parameters, *i.e.* all dimensions, relevant for the complement of *in* are members of the set of possible parameters. The maximizing effect of the free relative scopes over *P*, and returns its maximal set, *i.e.* all the parameters relevant for the complement of *in*. This results exactly in the speakers' intuition about the meaning of CNs – the set of all 'sides', or parts of the complement of *in* that qualify as bearers of the property specified by the adjective, *i.e.* all about this referent that can be qualified by the respective adjective.

Assuming that an analysis along the lines sketched above is correct – one must observe that all that it tells us about different types of nominalizations and their mutual relations, as well as about the links between their syntax and semantics, would remain unnoticed were we to commit to a richer ontology, and instead of derived representations – specify abstract objects of the respective types as the terminal descriptions of the meanings of these expressions. Any simplicity brought by such a move at the level of description of particular types of expressions would be marginal compared to the descriptive and explanatory gain of the theory based on a simpler ontology, at a broader level, where all these types of expressions are part of the same picture.

7. Conclusion

The paper presents data from Serbo-Croatian, describing three grammatically distinct types of expressions that come with distinct types of interpretation, corresponding to ontological classes suggested as a necessary enrichment of the traditional ontology of natural language semantics. Analyses are proposed for each of these three types, arguing that the semantic effects derive from the underlying semantic and syntactic structures. Finally, I discussed the consequences of the presented empirical material, and proposed analyses, for the issue of how rich an ontology is required for the natural language semantics.

Implementing Jäger's (2003) analysis of copular predicates, I argued that deriving the semantic effects using a small set of ontological classes is methodologically advantageous compared to describing the facts by use of a richer ontology.

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RÉSUMÉ

Cet article présente trois types de nominalisations désadjectivales en Serbo-Croate, qui présentent chacun des propriétés sémantiques différentes, confirmant les distinctions faites dans la littérature entre PROPRIÉTÉS, TROPES et QUALITÉS (Moltmann 2004a, Villalba 2009). Après avoir présenté les différences grammaticales et sémantiques entre les trois types de nominalisations, je remets en question la pertinence linguistique des types ontologiques comme les tropes et les qualités. Je montre tout d'abord qu'il est possible de formuler des analyses viables dans lesquelles les interprétations correspondant aux tropes et aux qualités découlent du statut de propriété en combinaison avec des outils théoriques introduits pour des raisons indépendantes. La conclusion à laquelle j'aboutis est qu'une ontologie plus simple est à la fois plus économique d'un point de vue méthodologique, et plus explicite concernant les relations entre les différents types d'interprétations, qui restent mystérieuses dans une approche où les différences sont encodées en termes de classes ontologiques introduites comme des primitifs de la théorie.

MOTS-CLÉS

Nominalisations désadjectivales, Serbo-Croate, accentuation, ontologie sémantique, propriétés, tropes, qualités.