# ON THE DERIVATION OF REFLEXIVE NOUNS:
## THE CASE OF CZECH

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## 1. Introduction

From its beginning in the '60s, and particularly after the appearance of Chomsky's (1970) *"Remarks on nominalization"*, the guideline of the generative linguistic investigation of different aspects of nominal phrases has been the assumption that there exists a similarity between nouns and verbs. This assumption has reflected the basic intuition that nouns have much in common with their verbal counterparts, and has led to lines of research aimed at strengthening this insight, as well as deriving the attested differences between the two domains. In the late '70s and during the '80s works on the topic concentrated mainly on the application of various grammatical principles and modules such as Case, government, binding, ECP and Theta theory, developed originally in the verbal and sentential context, to nominals (e.g. Anderson 1979, Cinque 1980, Safir 1984, Williams 1985, Zubizarreta 1987, Giorgi and Longobardi 1991). From the late '80s, with the introduction of functional heads into the X-bar schema (Chomsky 1986) and the DP-Hypothesis, which incorporated the functional head D(eterminer) into nominal projections (Abney's 1987), the analogy between nouns and verbs has been further tightened by a variety of works on DP internal structure and DP-internal functional heads composition; these studies have further advanced the parallel analysis of verbal and nominal projections (e.g. Ritter 1991, Szabolcsi 1994, Bosque and Picallo 1996, Mallen 1997, Siloni 1997, Leko 1999, Willim 2000).
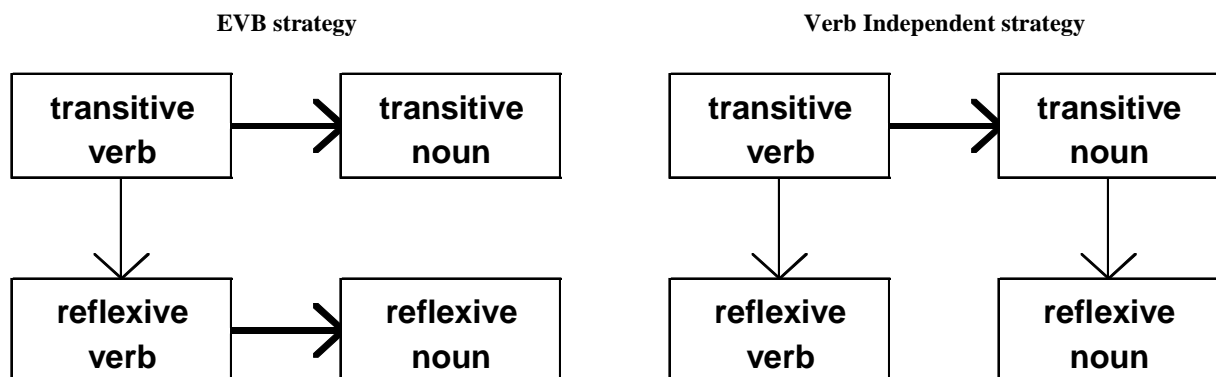
The above parallel treatment has been initially motivated by the obvious morphological relatedness of verbs and so called derived or deverbal nouns, such as e.g. *examine – examination*, *express – expression* in English. As shown in Grimshaw's (1990) comprehensive study of argument structure and nominalization, deverbal nouns are usually ambiguous between what she labels *complex event* vs. *simple event* reading. Complex event nouns have an associated event structure in their representation. As such they express events and must obligatorily realize their arguments, exactly like verbs. Simple event nouns, on the other hand, lack an event structure. Rather then expressing events they thus name processes or outputs of processes and they realize their "arguments" only optionally, exactly like result nouns, i.e. nouns denoting entities, either concrete (e.g. 'book') or abstract (e.g. 'love').

In this paper I will focus on Czech deverbal nouns in the narrow "complex event sense" (henceforth *event nouns* or simply *nouns*), specifically reflexives, and I will make an attempt to draw another possible analogy between the nominal and the verbal domain. In earlier literature it is implicitly assumed that the various nominal voices are derived directly from their corresponding verbal voices by nominalization, e.g. that unaccusative nouns are derived from unaccusative verbs, reflexive nouns from reflexive verbs, etc. (e.g. Grimshaw 1990, Szabolcsi 1994, Siloni 1997, Cornilescu 1999, Reinhart and Siloni 2005, Siloni and Preminger 2006). In what follows I will show that this derivational strategy is not the only one available. Namely, I will argue that Czech reflexive nouns cannot be derived from their reflexive verbal counterparts. Instead it appears that their derivation proceeds via some other derivational path, which is to a certain extent independent of the derivation of their verbal counterparts (i.e. reflexive verbs) but parallel to derivational processes that apply in the verbal domain[1]. I will call the former (usually assumed) derivational strategy an *Exclusively Verb*

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[1] It is widely assumed that reflexive verbs are derived from the related transitive verbs (e.g. Marantz 1984, Pesetsky 1995, Chierchia 2004). Following Reinhart and Siloni 2005 I assume that the operation of

*Based* derivation (EVB), while the latter (newly suggested) derivational strategy, I will call *Verb Independent* derivation. Both strategies are graphically depicted in figure 1:

**Figure 1: Exclusively Verb Based vs. Verb Independent derivation of reflexive nouns**

**EVB strategy**                    **Verb Independent strategy**

| transitive verb → transitive noun | transitive verb → transitive noun |
| reflexive verb → reflexive noun   | reflexive verb    reflexive noun  |

The graphs contain two kinds of arrows. The thick horizontal arrows indicate what is usually called the process of nominalization, i.e. the process creating nouns from verbs. As can be seen, under the EVB strategy the formation of reflexive nouns consists of this type of process only. Under the Verb Independent strategy, on the other hand, the actual process of nominalization is only one component of the derivational machinery involved in the creation of reflexive nouns; the other derivational component is a valence changing operation indicated by the thin vertical arrows, which is available in the nominal domain in a manner parallel to the verbal domain.

The paper is organized as follows: I start by a brief presentation of the Lexicon-Syntax parameter, suggested by Reinhart and Siloni (2004). In section 3 I demonstrate that the value of the parameter is set to *Syntax* in Czech. Section 4 reveals that Czech has reflexive event nouns, a fact that contradicts one of Reinhart's and Siloni's predictions regarding Syntax type languages; subsequently the essence of the problem is formulated and three possible ways to resolve the puzzle are outlined. As a next step, I argue in favor of one of these three solutions (section 5), and I suggest that Czech reflexive nouns are derived from the related transitive nouns, exactly as reflexive verbs are derived from the related transitive verbs (section 6). Finally, section 7 contains some concluding remarks.

### 2. The lexicon – syntax parameter

Reinhart and Siloni (2004) observed that languages seem to split cross-linguistically into two groups with respect to the properties of their reflexive verbs. They argue that this division follows straightforwardly if in one type of languages the operation of reflexivization, i.e. the operation forming reflexive verbs from a basic (transitive) verb, applies in the lexicon (e.g. in Hebrew), while in the other language type this operation applies in the syntax (e.g. in French). The most compelling of their arguments in favor of this kind of analysis is based on the fact that only the syntax type, but not the lexicon type, languages allow their reflexive verbs to participate in ECM structures, as illustrated in (1).

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reflexivization reduces the internal theta role of a basic transitive verb; this reduced theta role is consequently "bundled" with the external theta role and therefore still present in the semantics.

(1) **Lexical vs. syntactic reflexivization**

      Hebrew                                       French

a.   Dan mitraxec.                          Jean se lave.
     Dan washes.                           Jean SE washes.
                                             'Jean washes.'

b.   *Dan mitxašev inteligenti.          Jean se considère intelligent.
     Dan considers (refl.) intelligent.    Jean SE considers intelligent.
                                           'Jean considers himself intelligent.'

The operation of reflexivization binds together two theta roles; this complex theta role is subsequently assigned to a single argument. If these theta roles originate in a single theta grid, the operation is available in both Hebrew and French (1a). However, if these theta roles originate in two different theta grids, as is the case in ECM structures, the operation is available in French only (1b). Under the assumption that the operation of reflexivization is lexical in Hebrew and syntactic in French, this state of affairs is exactly what one would expect. In languages like Hebrew, the operation of reflexivization will always apply to single lexical entries only, as the lexicon contains isolated entries listed without any relations between them. In languages like French, on the other hand, the operation of reflexivization can bind together theta roles of two distinct predicates, as it applies after syntactic structure is available; a priori, then, there is no reason to expect the operation to only have access to a single predicate (for details see Reinhart and Siloni 2004 and 2005).

Beyond the availability of ECM reflexives, Reinhart and Siloni (2004) point out another two distinctions between syntax and lexicon type languages, namely, whether the operation is productive and whether it can form dative reflexives.[2] Only languages that derive the reflexive verbs in the Syntax have these properties.

(2) **Lexical vs. syntactic reflexivization**

Lexical reflexivization (Hebrew)         Syntactic reflexivization (French)

(a) **Productivity**

*Dan mitrašem.                      Jean se dessine.
  Dan draws (refl.)                  Jean SE draws.
                                         'Jean draws himself.'

*Dan mitahev.                       Jean s'aime.
  Dan loves (refl.)                   Jean SE loves.
                                         'Jean loves himself.'

(b) **Dative reflexive**

*Dan hištaleax mixtav.              Jean s'est envoyé une lettre.
  Dan sent (refl.) letter.            Jean SE is sent a letter.
                                         'Jean sent himself a letter.'

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[2] For further distinctions see Siloni 2005.

As the cross-linguistic differences among reflexives seem to form a coherent cluster, Reinhart and Siloni further suggest to ascribe the choice between the lexicon and the syntax to the setting of a newly proposed Lexicon – Syntax parameter:

(3) **Lexicon – Syntax parameter**

UG allows arity operations to apply in the lexicon or in the syntax.

Further studies on reciprocals (Siloni 2001) and middles (Marelj 2004) show that, similarly to reflexives, these formations can also be created either in the lexicon or in the syntax, depending on the language. Moreover, it appears that the properties of all three verbal formations correlate in a given language, e.g. once a language creates reflexives in the syntax then it creates reciprocals and middles in the syntax as well. These findings, then, provide additional support for the suggestion that valence changing operations are subject to the Lexicon – Syntax parameter setting.[3]

Since the present study focuses on a particular language (i.e. Czech) and a particular voice (i.e. reflexives) the Lexicon – Syntax parameter presented above is actually not needed for the sake of the following argumentation. More precisely, for our purpose just two of Reinhart's and Siloni's ideas are necessary:

(i)     Transitive and reflexive verbs are derivationally linked; this linkage can be grasped in terms of reflexivization, i.e. a valence changing operation that forms reflexive verbs by targeting the argument structure of the related transitive verbs.

(ii)    The operation of reflexivization can apply either in the lexicon or in the syntax; it can be determined where it applies in a particular language by a battery of distinguishing features (especially the availability of ECM reflexives).

However, in section 6 I will show that Czech reflexive nouns display the same set of syntax-type properties as their verbal counterparts, and I will suggest that the operation of reflexivization applies in exactly the same manner in the verbal and the nominal domain. Given the Lexicon-Syntax parameter, this suggestion can be reformulated in an elegant way. Namely, it can be concluded that the operation of reflexivization is subject to the same parameter setting regardless of whether it applies on verbs or nouns.

Moreover, it is worthy to note that what is said in the reminder of this paper about Czech reflexives holds for Czech reciprocals as well (see Hron 2005). In light of the Lexicon-Syntax parameter (3), this state of affairs is not surprising.

With this in mind we can turn to reflexive formations in Czech.

## 3. Czech is a syntax type language

Let us start with a brief examination of Czech reflexive verbs. As the following data demonstrate Czech reflexive verbs display all three properties typical of syntax type languages.

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[3] Note that the parameter as formulated in (3) does not imply that each arity operation can apply either in the lexicon or in the syntax. It is possible that some voice alternates are derived cross-linguistically only in one of the two components of the grammar. (Which operations can be subject to variation along the parameter and which ones cannot is arguably determined by the compatibility of the specific operation with the intrinsic nature of the component.) That this is indeed the case has been argued e.g. in Reinhart and Siloni 2005 and Horvath and Siloni 2005 for unaccusative and passive formations, respectively.

**Productivity**: Practically any Czech transitive verb can undergo the process of reflexivization, although in many cases, of course, the resulting reflexive form can have a quite odd meaning; reflexives are created by the addition of the clitic SE[4] to their transitive base. Some haphazard examples follow:

(4) <u>Syntax type properties of Czech reflexive verbs - productivity</u>

| | |
|---|---|
| *namaloval se* | ('he painted himself') |
| *obětoval se* | ('he sacrificed himself') |
| *kontroloval se* | ('he controlled himself') |
| *popsal se* | ('he described himself') |
| *bodnul se* | ('he stabbed himself') |
| *polil se* | ('he spilled something on himself') |
| *zabil se* | ('he killed himself') |
| *nahrál se* | ('he recorded himself') |
| *vysvětlil se* | ('he explained himself'), etc. |

**Dative reflexives:** Dative reflexives are created by the addition of the clitic SI to their transitive base form and they can be derived quite freely as the Accusative reflexives above. Once more several random examples follow:

(5) <u>Syntax type properties of Czech reflexive verbs – dative reflexives</u>

| | |
|---|---|
| *koupil si auto* | ('he bought a car to himself') |
| *umyl si ruce* | ('he washed his hands') |
| *vyčistil si brýle* | ('he cleaned his glasses') |
| *pomohl si sám* | ('he helped himself alone') |
| *vysvětlil si to špatně* | ('he explained it to himself wrongly') |
| *zranil si nohu* | ('he injured his leg') |
| *napsal si dopis* | ('he wrote a letter to himself') |
| *objednal si polévku* | ('he ordered a soup to himself') |
| *položil si otázku* | ('he asked himself a question'), etc. |

**ECM reflexives:** Several ECM examples follow; the examples come in transitive vs. reflexive pairs:

(6) <u>Syntax type properties of Czech reflexive verbs – ECM reflexives</u>

| | | |
|---|---|---|
| i. | Marie viděla Petra tančit. | Marie se viděla tančit (v zrcadle). |
| | Mary saw Peter$_{-Acc}$ dance$_{-Inf}$. | Mary SE saw dance$_{-Inf}$ (in a mirror). |
| | 'Mary saw Peter dance.' | 'Mary saw herself dance (in a mirror).' |
| ii. | Marie slyšela Petra mluvit. | Marie se slyšela mluvit (v rádiu). |
| | Mary heard Peter$_{-Acc}$ speak$_{-Inf}$. | Mary SE heard speak$_{-Inf}$ (in a radio). |
| | 'Mary heard Peter speaking.' | 'Mary heard herself speaking (in a radio)' |
| iii. | Soudce shledal Petra vinným. | Soudce se shledal vinným. |
| | Judge found Peter$_{-Acc}$ guilty$_{-Ins}$. | Judge SE found guilty$_{-Ins}$. |
| | 'The judge found Peter guilty.' | 'The judge found himself guilty.' |

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[4] That the clitic SE (and its dative variant SI) is not an object clitic of a transitive verb was shown in Hron 2005.

iv.  Uznal Petra hodným funkce.             Uznal se hodným funkce.
Found$_{-3.sg}$ Peter$_{-Acc}$ qualified$_{-Ins}$ job$_{-Gen}$.    Found$_{-3.sg}$ SE qualified$_{-Ins}$ job$_{-Gen}$.
'He found Peter qualified for the job.'   'He found himself qualified for the job.'

On the basis of the data just presented, we can conclude that Czech reflexive verbs are formed in the syntax.

## 4. "The problem" - Czech has reflexive nouns

Siloni (2002) and Reinhart and Siloni (2005) offer still another distinction between languages that create their reflexive formations in the Syntax and languages in which the operation of reflexivization applies in the Lexicon: only the later but not the former have reflexive nouns. As just discussed, Czech is a language whose reflexive verbs clearly display syntax type properties. However, contrary to Reinhart's and Siloni's prediction, Czech does have reflexive nouns, as illustrated in (7):

(7) **Czech reflexive nouns (the examples are nominal versions of the verbal reflexives presented in (4))**

| | |
|---|---|
| *namalování se* | ('painting oneself') |
| *obětování se* | ('sacrificing oneself') |
| *kontrolování se* | ('controlling oneself') |
| *popsání se* | ('describing oneself') |
| *bodnutí se* | ('stabbing oneself') |
| *polití se* | ('spilling something on oneself') |
| *zabití se* | ('killing oneself') |
| *nahrání se* | ('recording oneself') |
| *vysvětlení se* | ('explaining oneself'), etc. |

The minimal consequence of this state of affairs is that Reinhart's and Siloni's fourth distinction between lexicon and syntax type languages, i.e. existence vs. absence of reflexive nouns, is not universally valid and an immediate question naturally arises why it is so.

A closer look at the explanation that Reinhart and Siloni give to this allegedly universal feature of syntax type languages reveals that their reasoning is based on two assumptions:

**Assumption 1:** The process of nominalization occurs universally in the Lexicon (as argued in Siloni 1997).

**Assumption 2:** The formation of reflexive nouns is universally Exclusively Verb Based, i.e. reflexive nouns are universally derived "directly" from the corresponding reflexive verbs.

Assuming this, the absence of reflexive nouns in syntax type languages follows straightforwardly: These languages create their reflexive verbs post-lexically, i.e. in the syntax, and thus they have no verbal reflexive input in the lexicon that could feed nominalization.

**Figure 2: Reinhart's and Siloni's explanation for the absence of reflexive nouns in syntax type languages**
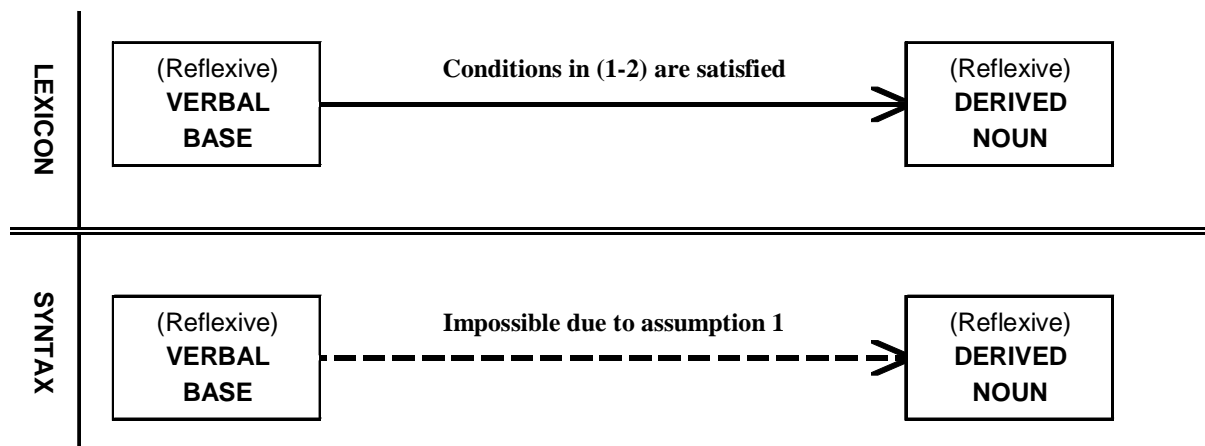


The fact, that there are reflexive nouns in Czech thus inevitably leads to the conclusion that (at least) one of the two assumptions above must be revised. That is, it is either not the case that the process of nominalization occurs universally in the Lexicon, or it is not the case that the derivation of reflexive nouns is universally Exclusively Verb Based.

Now, the exploration of the question whether the nominalization occurs in the Syntax or in the Lexicon and whether reflexive nouns formation is Exclusively Verb Based or rather Verb Independent (see figure 1) permits the following four possibilities:

(8) <u>**Four possible derivations for reflexive nouns**</u>

i. Lexical Nominalization - Exclusively Verb-Based Derivation
ii. Syntactic Nominalization - Exclusively Verb-Based Derivation
iii. Syntactic Nominalization - Verb Independent Derivation
iv. Lexical Nominalization - Verb Independent Derivation

Option (i) is the option assumed by Reinhart and Siloni; this option cannot account for the existence of reflexive nouns in Czech. We thus remain with options (ii), (iii) and (iv). In what follows option (iv) will be advanced. This will be done by arguments against both the syntactic nominalization as well as the Exclusively Verb Based derivation of reflexive nouns in Czech; note, however, that for the defense of option (iv) it is sufficient to reject the syntactic approach to the process of nominalization.

## 5. Against the derivation of reflexive nouns from reflexive verbs

### 5.1 Against syntactic nominalization

Different arguments were presented in the literature in favor of the hypothesis that the derivation of the so called *deverbal* or *event* nouns is a syntactic rather then lexical process (see e.g. Hazout 1995 and by Fu, Roeper and Borer 2001). The core of these analyses is the assumption that event nouns are derived by some kind of V to N incorporation.

(9) **Syntactical nominalization – V to N incorporation**
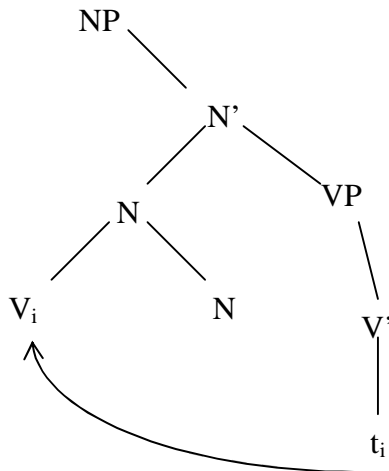


Now, the presence of the V-head in the structure leads to the prediction that event nouns – like verbs - can be modified by adverbs, such as e.g. manner adverbs. This is however not the case in Czech (see (10a) and (10b) for transitive and reflexive nouns, respectively). Instead the only possible modifiers of Czech event nouns are adjectives and PPs as expected for "true nouns".

 (10) **Czech nouns cannot be modified by manner adverbs**

ai.   Matka převléká dítě pomalu.
      Mother changes-clothes child$_{Acc}$ slowly.
      'The mother slowly changes her child clothes.'

aii.  *matčino převlékání dítěte pomalu
      mother's changing-clothes child$_{Gen}$ slowly
      ('mother's changing her child clothes slowly')

aiii. matčino pomalé převlékání dítěte
      mother's slow changing-clothes child$_{Gen}$
      ('mother's slow changing her clothes')


bi.   Matka se převléká pomalu.
      Mother SE changes-clothes slowly.
      'The mother slowly changes her clothes.'

bii.  *matčino převlékání se pomalu
      mother's changing-clothes SE slowly
      ('mother's changing her clothes slowly')

biii. matčino pomalé převlékání se
      mother's slow changing-clothes SE
      ('mother's changing her clothes slowly')

Moreover, as shown in (11), Czech event nouns cannot be modified even by time adverbs like *včera* 'yesterday'. This observation is particularly suggestive since in many languages, including English or Hebrew, for instance, time adverbs can sometime modify nominal heads. Czech nouns,

however, do not allow even this kind of adverbial modifiers; the modifier must have once more an adjectival form *včerejší* (iii), the adverb being allowed in a verbal context only (i).

(11) **Czech nouns cannot be modified by time adverbs**

ai.  Petr vysvětlil ten problém včera.
Peter explained that problem$_{Acc}$ yesterday.
'Peter explained the problem yesterday.'

aii.  *Petrovo vysvětlení toho problému včera
Peter's explanation that problem$_{Gen}$ yesterday$_{Adv}$
('Peter's explanation of the problem yesterday')

aiii. Petrovo včerejší vysvětlení toho problému.
Peter's yesterday$_{-Adj}$ explanation that problem$_{Gen}$
('Peter's explanation of the problem yesterday.')

bi.  Petr se včera vysvětlil.
Peter se yesterday$_{-Adv}$ explained.
'Peter explained himself yesterday.'

bii.  *Petrovo vysvětlení se včera.
Peter's explanation SE yesterday$_{-Adv}$.
('Peter's explanation himself yesterday.')

biii. Petrovo včerejší vysvětlení se.
Peter's yesterday$_{-Adj}$ explanation SE.
('Peter's yesterday explanation himself.')

On the basis of the data in (10) and (11), we can infer that the syntactic approach to the process of nominalization is unsuitable for Czech. This conclusion in turn disqualifies derivational options (8ii) and (8iii) and leaves us with option (8iv) only, i.e. the derivation of Czech reflexive nouns must be Verb Independent. In the following subsection I will nevertheless present some further direct arguments against deriving reflexive nouns from their corresponding reflexive verbs.

*5.2 Against Exclusively Verb Based derivation of reflexive nouns*

Putting aside the problems that the Czech data pose for the syntactic approach to the process of nominalization, there are two additional arguments that suggest that the derivation of Czech reflexive nouns cannot be considered Exclusively Verb Based.

The first one of these arguments is of a morphological nature. Namely, Czech event nouns are derived by the addition of the suffix *-í* to the passive form of a verb, as represented in (12):

(12) **Morphological rule for derivation of event nouns in Czech**

VERB $\Rightarrow$ PASSIVE FORM OF VERB[5]  +  suffix - Í $\Rightarrow$  EVENT NOUN

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[5]Passive verbs are created in Czech mostly by the substitution of the past tense ending *-l* by the passive ending *–n*; some verbal classes use the passive ending *–t* instead of *–n*. Beyond that, in both cases the process of

If reflexive nouns were formed from reflexive verbs then the input for the rule in (12) would be as in (13):

(13) **Prospective verbal input for reflexive nominalization**

> VERB   SE

Interestingly, however, the morphological shape of Czech reflexive nouns is like in (14a) and not (14b):

(14) **Morphological shape of Czech reflexive nouns**

a.   VERB   SE $\grave{e}$ VERB-PASSIVE + -Í   SE   $\grave{e}$ **NOUN-PASSIVE-Í   SE**

b.   * VERB   SE $\grave{e}$ VERB SE-PASSIVE + -Í   $\grave{e}$ **NOUN   SE-PASSIVE-Í**

That is, the rule targets the verb itself, not the clitic. Put it differently, it appears that what actually undergoes the nominalization is the (transitive) VERB and not the VERB – SE (reflexive) complex, SE being an independent clitic element whose presence is forced by the process of reflexivization (either verbal or nominal). This state of affairs thus constitutes a piece of straightforward and independent evidence against the Exclusively Verb Based derivation of reflexive nouns in Czech.[6]

The second argument against the possibility that Czech reflexive nouns are derived from corresponding reflexive verbs is more articulated and it relies on the following data.

**First**, in verbal contexts the clitic SE must obligatory surface on "the second syntactic position" of the sentence, while in nominal contexts it obligatory follows the noun.

(15) **Verbal vs. nominal clitic** *se*

(a) **Verbal context**

i.   Petr **se** každý den myje studenou vodou.
     Peter SE every day washes cold-Inst water-Inst.
     'Peter washes himself every day with cold water.'

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passivization can entail some further (usually predictable) phonological changes of the verbal stem. The ending of the productively derived event nouns will therefore always be either –*ní* or -*tí*.

[6] It can be of some interest to note here that Hungarian seems to display an exactly reverse situation. As noted in Siloni and Preminger (2006), the order of morphemes in Hungarian suggests that valence changing operations indeed precede nominalization, as demonstrated in the reflexive (i) and unaccusative (ii) examples below (taken from Siloni and Preminger); this state of affairs can be considered as a piece of evidence that Hungarian, unlike Czech, indeed utilizes EVB:

i. János (rendszeres) borotvál-koz-ás-a
   *(the) János (regular) shave-**REFL**-**NOMINAL**-**AGR***
   'János' (regular) self-shaving'

ii. az ing össze-gyűr-őd-és-e
    *the shirt PRT(together)-wrinkle-**UNACC**-**NOMINAL**-**AGR***
    'The shirt's wrinkling'

ii. Každý den **se** Petr myje studenou vodou.
iii. Myje **se** Petr studenou vodou každý den?
iv. Studenou vodou **se** Petr myje každý den
v. *Petr každý den myje **se** studenou vodou.

(b) **Nominal context**

i. Petrovo každodenní mytí **se** studenou vodou.
Peter's everyday-Adj washing SE cold-Ins water-Ins.
'Peter's everyday washing himself with cold water.'

ii. Každodenní mytí **se** Petra studenou vodou.
iii. *Petrovo **se** každodenní mytí studenou vodou.

**Second**, event nouns cannot take pronominal clitics as their complements.

(16) <u>**Unacceptability of pronominal clitics in a nominal context**</u>

a. *Petrovo koupení ho.                  Petr ho kupuje.
   Peter's buying him/it-Gen.            Peter him/it-Gen buys.

b. *Petrovo pomáhání jim.                Petr jim pomáhá.
   Peter's helping them-Dat.            Peter them-Dat helps.

c. *Petrovo svěření jí ho.               Petr jí ho svěřuje.
   Peter's entrusting her-Dat him-Gen.  Peter her-Dat him-Gen entrusts.

Each one of these two facts poses a problem for the Exclusively Verb Based derivation strategy. Nevertheless, for each one of them there can be found an explanation. Namely, it can be claimed

(i) that Czech nouns – unlike verbs – obligatorily undergo an overt movement to some higher functional head (presumably K), which in turn blocks the raising of the clitics SE/SI (presumably base generated inside ReflP as assumed e.g. by Toman 1999 and Boskovic 2001) into the second position inside the DP,

(ii) and that the unacceptability of pronominal clitics in the nominal context is due to the lack of (verbal) Agr$_O$P in the (nominal) structure.

However there is still **third** piece of data. Namely, once the reflexive clitic is present then the pronominal clitic is acceptable as well. (The acceptability of these expressions can slightly vary among speakers, but they are without any doubt admissible unlike the expression in (16) above.)

(17) <u>**Acceptability of pronominal clitics in the presence of SE/SI**</u>

a. Koupení si ho.
   Buying SI him/it-Acc.

b. Svěření SE jí.
   Entrusting SE her-Dat.

As far as I can see the data presented in (17) cannot be accounted for under the Exclusively Verb Based derivation strategy. More precisely, the Exclusively Verb Based derivation strategy cannot explain SIMULTANEOUSLY (1) why the clitics SE/SI behave as a "second position" clitics if related to a verb while if related to a noun they displays an enclitic character; (2) why nominal heads can host the clitics SE/SI but cannot host pronominal clitics; and (3) why if the clitics SE/SI are present pronominal clitics are allowed to appear as well. (See an appendix for the outline of a possible lexicalist solution of the puzzle.)

To summarize: In this section we have argued that the process of nominalization cannot be syntactic in Czech, since Czech event nouns cannot be modified by adverbs. Given that Czech reflexive verbs are not present in the lexicon but are derived post-lexically in the syntax, this finding in itself is sufficient to conclude that the derivation of Czech reflexive nouns cannot be considered Exclusively Verb Based. We have presented two additional arguments that disqualify the EVB option regardless of whether the process of nominalization occurs in the lexicon or in the syntax, namely, the morphological shape of Czech reflexive nouns and the different behavior of clitics in the verbal and the nominal domain.

## 6. Reflexivization in the nominal domain

Once we discard the possibility that reflexive nouns are derived from reflexive verbs in Czech, a straightforward question arises: what is the derivational path by which Czech reflexive nouns are formed. This question can be split in the following manner:

i. What is the immediate derivational base of Czech reflexive event nouns?
ii. Where is the actual process of nominalization located in this derivational path?

The second of these questions is beyond the scope of the present paper. (But see the next section for some remarks.)

Regarding the first question it seems as a most natural option that Czech reflexive event nouns are derived from related transitive event nouns, exactly like reflexive verbs are derived from transitive verbs. That is, it seems that the operation of reflexivization can apply not only on transitive verbs but also on transitive nouns in Czech. As the Lexicon – Syntax parameter is set onto the Syntax in Czech, one can expect that the Czech reflexive nouns will display the same syntactic properties as the reflexive verbs do, namely (i) they are created productively, (ii) there are nominal dative reflexives and (iii) they can appear in ECM structures. The examples below demonstrate that this prediction is borne out.

(18) **Syntax type properties of Czech reflexive nouns - productivity**

| | |
|---|---|
| *namalování se* | ('painting oneself') |
| *obětování se* | ('sacrificing oneself') |
| *kontrolování se* | ('controlling oneself') |
| *popsání se* | ('describing oneself') |
| *bodnutí se* | ('stabbing oneself') |
| *polití se* | ('spilling something on oneself') |
| *zabití se* | ('killing oneself') |
| *nahrání se* | ('recording oneself') |
| *vysvětlení se* | ('explaining oneself'), etc. |

(19) **Syntax type properties of Czech reflexive nouns – dative reflexives**

| | |
|---|---|
| *koupení si auta* | ('buying a car to oneself') |
| *umytí si rukou* | ('washing oneself hands') |
| *vyčištění si brýlí* | ('cleaning glasses to oneself') |
| *objednání si polévky* | ('ordering a soup to oneself') |
| *položení si otázky* | ('asking oneself a question'), etc. |

(20) **Syntax type properties of Czech reflexive nouns – ECM**

ai.  Petrovo shledání toho muže zajímavým.
Peter's finding that man$_{-Gen}$ interesting.
'Peter's finding that man interesting.'

aii. Petrovo shledání se zajímavým.
Peter's finding SE interesting.
'Peter's finding himself interesting.'

bi.  Ředitelovo uznání Petra hodným funkce.
Director's considering Peter$_{-Gen}$ qualified job.
'Director's considering Peter qualified for the job.

bii. Ředitelovo uznání se hodným funkce.
Director's considering SE qualified job.
'Director's considering himself qualified for the job.'

We can thus conclude that the derivation of Czech reflexive nouns is parallel to the derivation of their verbal counterparts to the extent that both reflexive formations seem to be derived by the same valence changing operation, which targets a related transitive base, either nominal (resulting in reflexive noun) or verbal (resulting in reflexive verb).

## 7. Concluding remarks

In this paper we have argued that it is reasonable to infer that Czech reflexive nouns are derived from their related transitive nouns rather than from their transitive verbal counterparts. Beyond that we have demonstrated that the two derivational paths, the nominal one and the verbal one, are parallel. If so, it is more than natural to ask whether the derivation of other Czech nominal voices proceeds along the same lines. In other words, once we have shown that the operation of reflexivization can apply both in the verbal and the nominal domain, the question arises whether the same is true for other valence changing operations as well. As mentioned in section 2, this is indeed the case for Czech reciprocal formations (see Hron 2005). As far as the other voices are concerned, there is some preliminary evidence suggesting the same picture, however further research is needed.

Another question that remains open was already formulated above. Namely where the actual process of nominalization is located in the derivational machinery that creates different nominal alternations (voices) of the same (verbal) concept? Note that if the Czech reflexive nouns are derived from transitive nouns then the actual process of nominalization is only one step in their derivation. In principal, two options come into mind.

i.      The process of nominalization applies to a transitive verb, creating a
        corresponding transitive noun.

ii.    The process of nominalization applies already at the level of concepts, creating the corresponding transitive noun.[7]

This transitive noun subsequently undergoes reflexivization and we get a nominal reflexive output, regardless of which one of the two options above is chosen.

Finally, let's come back to the four possible strategies for deriving reflexive nominals presented in (8), repeated below as (21):

(21) **Four possible derivations for reflexive nouns**

i. Lexical Nominalization - Exclusively Verb-Based Derivation
ii. Syntactic Nominalization - Exclusively Verb-Based Derivation
iii. Syntactic Nominalization - Verb Independent Derivation
iv. Lexical Nominalization - Verb Independent Derivation

Option (i) is the option assumed by Reinhart and Siloni (2004) and it accounts for the absence of reflexive (and reciprocal) nouns in Syntax type languages like French[8]. We have argued that Czech seems to utilize option (iv). The question remains whether there are languages that utilize options (ii) and (iii) and subsequently whether the choice between these options can be captured by some parameter setting.

Another question is, whether the two derivational strategies can be utilized in the same language, either for distinct voices or even for the same voice (in the latter case one would expect a given language to have two types of such a nominal voice, e.g. reflexive: one derived via the Verb Independent strategy and the second derived via EVB).

Finally, note that the term Verb Independent derivation as used here, can appear to be "too strong". Namely, in the present discussion this term means that the derivation of event nouns is independent but **parallel** to various derivational processes in the verbal domain. It is in principle possible, however, for the derivation of event nouns to be independent **but not parallel**. For instance, one cannot exclude the possibility that a language will derive its reflexive verbs from transitive verbs by syntactic reflexivization, while their reflexive nouns will be derived from transitive nouns by lexical reflexivization.

The answers for all these questions are far beyond my ambition here.

**Appendix**

**Czech clitics in the nominal domain**
Let us first recapitulate what the problem to be solved is. Our task is to explain SIMULTANEOUSLY: (1) why the clitic SE/SI behaves as a "second position" clitic if related to a verb while if related to a noun it must encliticize to that noun. (2) Why nominal heads can host the clitic SE but cannot host a pronominal clitic. And (3) why if the clitic SE is present pronominal clitics are allowed to appear as well.

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[7] This option presupposes that the Lexicon has actually two levels, the level of "(verbal) concepts" and the level of specific "verbal entries". Such a suggestion was indeed elaborated in Reinhart (2002), the "dividing line" between the two levels being what she labels the "Lexicon Marking" procedure.
[8] In Appendix I suggest that there are two clitics SE in Czech. One lexically specified as a verbal clitic and one lexically specified as a nominal clitic. If this proposal is on the right track then it can be that the difference between French and Czech regarding the existence of reflexive nouns is due to the absence of the nominal clitic SE in French rather then because these two languages choose different nominalization strategies. (A possible support for this hypothesis constitutes the fact that in French the clitic SE cannot appear even with existing unaccusative and subject experiencer nouns.)

In what follows I will sketch a possible solution of this puzzle. **The basic point of the current proposal will dwell in a shift in the conception of the cliticization domain**. The cliticization domain, as it was proposed in the literature so far, was usually defined, either explicitly (e.g. Boskovic 2001) or implicitly (e.g. Franks and King 2000), in terms of intonational phrase boundaries. That is, the cliticization domain always exists in potential regardless of the actual presence of a clitic/clitics, as there is always an intonational phrase in the (prosodic) structure. On the other hand, in the proposal to be advanced here the existence of a cliticization domain will be tied to the existence of a properly licensed clitic, i.e. if there is no such a clitic in the structure there is no cliticization domain.

First, let us make the following set of assumptions:

(1) <u>Clitic specification</u>

Each clitic is lexically specified as

a.      being a clitic,
b.      being an enclitic, proclitic or directionally neutral,
c.      being univocally syntactical heads or ambivalent between a head and phrasal status.

The three lexical specifications above are the same as presupposed in Franks and King (2000). That is each clitic is lexically marked as an item that needs a prosodic support (i), with respect to the direction of this support (ii) and regarding its syntactical status (iii). The third of these specifications comes to distinguish between the verb adjacent clitics, which are univocally heads, and the second position clitics, which are ambivalent between a head and phrasal status (for details see Franks and King, pg. 311-348). **I suggest that there are two reflexive clitics in Czech** – a verbal one, specified as ambivalent between a head and phrasal status (and therefore surfacing in the second sentential position), and a nominal one, specified as a head (and therefore adjacent to the noun).

Second, let us define the cliticization domain as follows:

(2) <u>Cliticization domain (CD)</u>

a.      The left edge of the CD is determined by the position of the head of that CD.
b.      The right edge of the CD is "left opened".
c.      The left edge of the CD is not adjacent to the left edge of the IP.
d.      There is no IP boundary inside the CD.

(3) <u>The head of the CD</u>

The head of the CD is

a.      a clitic which is the first clitic in the clitic cluster,
b.      a clitic whose syntactic requirements were fully satisfied.

And finally, let us stipulate the condition for clitic licensing:

(4) <u>Prosodic licensing of clitics</u>

A clitic is prosodicly licensed if it is positioned inside a CD, either as a head of that CD or (left?) adjacent to other licensed clitic.

Now, let us see, whether the proposal outlined above, can give us desirable results.

First, the lexical specification (1) of the nominal clitic SE as being adjacent to the noun explains directly, why the clitic is attached to the nominal head instead of rising to some higher position in the sentence.

Second, assuming that pronominal clitics are – unlike the reflexive clitic – always second position clitics in Czech we get an explanation, why the pronominal clitic cannot appear alone in the nominal domain. Namely, the second position clitics need to rise to the second syntactic position of the sentence. This rising is, however, not possible out of the nominal domain, presumably because the head noun – unlike the verb – rises overtly to some higher functional head inside the DP (for arguments in favor of such movement see e.g. Willims (2000) analysis of Polish DPs). Such a pronominal clitic thus doesn't fill all its syntactic requirements and therefore cannot serve as a head of a CD (3ii). Since it is adjacent to any other clitic neither (4) it is not prosodicly licensed and cannot appear on the surface.

Third, if the reflexive clitic is present in the nominal domain, it serves as a head of a CD. In such a case, the pronominal clitic is prosodicly licensed as it is adjoined to the reflexive clitic.

(It should be noted that the proposal sketched above deals successfully with certain other clitic phenomena, namely clitic climbing in Czech, which poses a problem for current analysis of Slavic clitics as well.)

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