Derivational suffixes *-ar* and *-nik* in Upper Sorbian

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Upper Sorbian (West Slavonic, Indo-European) often uses suffixes to create new derived nouns. The suffixes -ar (and its phonological variant -er) and -nik are widely used, and both indicate that a male human is associated with the meaning of the source word. It is not obvious why either suffix is used in a particular case. This paper describes the two suffixes and tries to explain the motivation working behind the choice between -ar and -nik, by analysing the possible approaches of part-of-speech, phonological, and semantic motivations. Based on my analysis of the nature of these suffixes, I argue that semantic motivation offers the most promising and plausible explanation because -ar denotes a male human and -nik denotes a thing inherently. Relying on the concept of cognitive grammar reinforces the hypothesis of semantic motivation. The explanation of a semantic approach shows the increased likelihood that -ar will be preferred if a new concept denoting a male human arises in the future. On the other hand, if a new concept of a thing as a derived noun emerges, it is likely that the noun will take -nik.

Keywords: *Upper Sorbian, suffix, male human, inherent meaning, cognitive grammar*

1. Introduction[1]

Sorbian belongs to Indo-European and is a member of the West Slavonic languages of the Slavonic branch – together with Czech, Polish, Slovak, and Kashubian. It is spoken in eastern Germany and classified into two variants – namely Upper Sorbian and Lower Sorbian. Upper Sorbian is distributed in the Free State of Saxony around the upper Spree River, and Lower Sorbian is distributed in the Land of Brandenburg around the lower Spree River. Although there are no demographic statistics for the number of speakers of Upper Sorbian, it is said that there are maximally 15,000 speakers out of 40,000 Sorbs and a few thousand speakers of Lower Sorbian – as long as my understanding reaches through casual conversations with Sorbs. All native speakers of Sorbian are bilingual with German.

As I will show below, Upper Sorbian has many suffixes which produce new nouns. In this paper, I concentrate on two suffixes, *-ar* and *-nik*; I describe their distribution and try to delimit when one is used rather than the other. Throughout this paper, I use the term *Sorbian* for Upper Sorbian.

2. Derivational morpheme denoting male human

In Sorbian, there are many suffixes to create a new derived noun which will denote a male human associated with the stem. Representative ones are shown in (1).

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(1) a. *-ar/-er*: *čitar* 'reader' < *čitać* 'to read'
    b. *-ćer*: *dźělaćer* 'worker' < *dźěłać* 'to work'
    c. *-ćel*: *darićel* 'donator' < *darić* 'to present'
    d. -nik: *rěčnik* 'speaker' < *rěčeć* 'to speak'

The suffixes *-ar* and *-er* are phonological variants, the latter of which is realized after a palatalized consonant, and they are in complementary distribution. Note that the verb *spisować*, which we can trace as the source form, does not seem to exist in present-day Sorbian.

    The starting point of this research focuses on the question of what kind of stem takes *-ar/-er*, *-ćer*, *-ćel*, *-nik,* and so on. Note that all examples in (1) are from a verb-to-noun type of change, but as we will see later, there are also other types.

3. Previous studies

The body of previous study of this research area lacks comprehensive description, except Pohončowa (2017), who describes the word formation in the present-day Upper Sorbian language. Her section 4 (Pohoncova 2017: 76–81) devotes to the derivational processes. She describes thoroughly how derived noun/verb/adjective are created from base noun/verb/adjective.

    If we look into the older, but comprehensive grammars, we find that Faßke (1981), on the one hand, is a comprehensive grammar written in German, but the author describes only some lines about such derivational suffixes in his section on noun gender. According to Faßke, the gender of a derived noun with any of the productive derivational suffixes is male. He offers a list of such productive derivational suffixes. On the other hand, Šewc-Schuster's grammar (1984), written in Upper Sorbian, describes some derivational process of noun, but it is not comprehensive. Faßke's list of male human suffixes (1981: 401; excerpted) is shown in (2).

(2) List of male human suffixes according to Faßke (1981: 780) (excerpted)
    a. *-ar/-er*: *čitar* 'reader', *lětar* 'pilot', *spěwar* 'singer', *kuzłar* 'magician', *lijer* 'founder', *hrajer* 'player', *pěsnjer* 'song-writer' ...
    b. *-ač*: *brodač* 'man with beard' ...
    c. *-ak*: *čušlak* 'snooper', *rybak* 'fisherman', *čornak* 'black horse' ...
    d. *-an*: *delan* 'lowlander', *krajan* 'compatriot', *Budyšan* 'man from Bautzen', *Američan* 'American' ...
    e. *-'enc*: *młodźenc* 'youth', *wotrodźenc* 'apostate', *konjenc* '(horse) stable', *kruwjenc* 'cow stable', *hosćenc* 'restaurant' ...
    f. *-ćel*: *darićel* 'donator', *spisowaćel* 'author', *wěrićel* 'creditor', *radźićel* 'adviser', *knježićel* 'ruler'...
    g. *-ćer*: *dźělaćer* 'worker', *knježićer* 'ruler', *radźićer* 'adviser' ...
    h. *-nik*: *rólnik* 'farmer', *rěznik* 'butcher', *pinčnik* 'waiter', *hajnik* 'forester', *sudnik* 'judge' ...
    i. *-owc*: *sportowc* 'sportsman', *figowc* 'fig tree', *seršćowc* 'brush', *blachowc* 'tin pot', *snopowc* 'scarecrow' …

                                          (English translations by me)

The apostrophe in *-'enc* means that the non-palatalized consonant immediately preceding the suffix changes to a palatalized consonant (e.g. *kruwa* 'cow' > *kruwjenc*).

For words denoting a female human, there are some suffixes for them. One of the common suffixes is *-ka*, which is attached to the noun denoting a male human. This suffix is productive. Examples are shown in (3).

(3) a. *přećelka* 'female friend' < *přećel* '(male) friend'
     b. *čitarka* 'female reader' < *čitar* '(male) reader'

Note that *čitarka* is derived from *čitar*, which is in turn from *čitać* 'to read' by the derivational suffix *-ar*.

Now we return to my starting point. The question precisely consists of the following three questions:

i)   why do some verbs take *-ar/-er*, while others use *-nik* etc.?
ii) are there some specific patterns in this choice?
ii) if so, are such patterns predictable?

To answer these questions and to show possible explanations for them, this paper focuses specifically on the suffixes *-ar* and *-nik*.

4. Suffixes *-ar* and *-nik*

In this section, we examine the suffixes *-ar/-er* and *-nik* in general. Since, as I described above, the suffix *-er* is the phonological variation of *-ar*, we will use hereafter *-ar* as the representative form. The examples with *-ar* are shown again in (4).

(4) Examples with *-ar*
     a. *čitar* 'reader'   < *čitać* 'to read'
     b. *lětar* 'pilot'   < *lětać* 'to fly'
     c. *spěwar* 'singer'   < *spěwać* 'to sing' / *spěw* 'song'
     d. *kuzłar* 'magician'   < *kuzłać* 'to conjure, to magic'
     e. *lijer* 'founder'   < *leć* 'to pour'
     f. *hrajer* 'player'   < *hrać* 'to play'
     g. *pěsnjer* 'song-writer'   < *pěsnić* 'to write song'

We see that the noun with *-ar* denotes mainly a person associated with the stem.

The suffix *-nik*, on the other hand, denotes either a person associated with the stem or a thing associated with the stem.

(5) Examples with *-nik*
     a. *rěčnik* 'speaker'   < *rěčeć* 'to speak'
     b. *słownik* 'dictionary' < *słowo* 'word'[2]

At first glance, *-ar* is a derivational suffix for male human, while *-nik* can denote a male human as well as a thing. The fact is, however, that the use is not entirely straightforward. In the following section, I will seek the possible principles behind and explanations for the two suffixes.

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[2] The word *słownik* can be a loan word from Polish or Czech (Anja Pohončowa p.c. indicating Jentsch 1999: 241).

5. Possible principles

How can we determine the nature of the two suffixes? On what motivations are these suffix choices based? In this section I will explore likely explanations from the following three approaches, which we will analyse one by one:

i)   part-of-speech motivation
ii)   phonological motivation
iii)   semantic motivation

The first motivation I will consider is part-of-speech motivation. It focuses on examining the stem in terms of its part of speech: that is, whether the derived noun is from a verb (stem), from a noun, or from another part of speech. In other words, this approach seeks the answer from the part-of-speech restriction. The second motivation, phonological motivation, is based on precepts such as the idea that a consonant cannot stand after specific consonant. It can be also called phonotactic motivation. On the other hand, examining semantic motivation, we assume that the morphemes *-ar* and *-nik* have a different core meaning, respectively, and that the selection of either *-ar* or *-nik* is based on that meaning. To discern the nature of these morphemes, I researched the entries in the Upper Sorbian retrograde dictionary by Meškank (2001), which is based on Völkel's dictionary (1981) and contains 44500 entries. It is interesting to observe that Meškank (2001) uses the character *ŕ* for palatalized *r*, which was used up to the early 20th century, but it is no longer used in the actual orthography.

5.1 *Part of speech motivation*

According to Meškank (2001), the suffix *-ar* is mainly attached to a verb stem, but examples of noun + *-ar* are also attested. Examples are shown in (6).

(6)   a.   *płuwar* 'swimmer'   <   *płuwać* 'to swim' (verb)
      b.   *blidar* 'carpenter'   <   *blido* 'table' (noun)

The suffix *-nik*, on the contrary, is mainly attached to a noun, but words constructed of the root of the (derived) Adjective + *-nik* also occur.[3] However, no example of Verb + *-nik* is found. Examples are given in (7).

(7)   a.   *słownik* 'dictionary'   <   *słowo* 'word' (noun)[4]
      b.   *pinčnik* 'waiter'   <   *pinca* 'cellar' (noun)
      c.   *kajkostnik* 'adjective' <   *kajkosć* 'property' (adjective derived from
           interrogative *kajki* 'which')
      d.   *industrialnik* 'industrial person' < *industrialny* 'industrial' (adjective) <
           industrija 'industry' (noun)

Note that adjective stem of *-nik* must have always been derived from a noun.
       To sum up, the analysis of the distribution of the suffixes and the part of speech of the stem suggests an extent of regularity. See Table 1.

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[3] It might be better to analyze the root of the (derived) Adjective + *-ik*. (Anja Pohončowa p.c.)
[4] Anja Pohončowa (p.c.) realyzes me that in relation with fn. 3, the word *słownik* can be derived from adjective *słowny* "of word", which comes in turn from the noun *słowo*.

Table 1: Relation of stem to suffix

	verb	noun	adjective
-ar	++	+	–
-nik	–	++	+

From the point of view of the stem, a verb takes only *-ar* and an adjective always selects *-nik*, while a noun takes either *-ar* or *-nik* (although *-nik* is dominant). One might conclude that it is plausible that the part-of-speech motivation explains the selection of the suffixes *-ar* and *-nik*. The question remains as to how we explain the fact that the noun stem can take both suffixes even though the choice of suffix for the noun is determined in almost all cases. It is therefore better to find another solution in order to resolve these questions.

5.2 *Phonological motivation*

Like many Slavonic languages, Sorbian has some phonological features. Palatalization is a good example. It is therefore reasonable to seek an answer to the selection between *-ar* and *-nik* in the phonological area. One might suppose that the suffix selection is dependent on some phonological constraints, i.e. phonotactics.

As stated in §2, the suffixes *-ar* and *-er* are in complementary distribution according to the palatality and non-palatality of the preceding consonant. If the source form ends in a vowel, then *j* is added to the stem final as a sort of glide. This *j* signals palatality, so that the following suffix must be *-er*, not *-ar*. See (8).

(8)   a.   *hrajer* 'player'   <   *hrać* 'to play'
        b.   *lijer* 'founder'   <   *leć* 'to pour'

Note that in the case of *lijer*, the vowel *e* of *leć* is alternated to *i* through the phonological process. In other words, the choice between *-ar* and *-er* follows the phonotactic rules and has nothing to do with *-nik*.

The suffix *-nik*, on the other hand, can be placed after a non-palatalized as well as a palatalized consonant. No case in which *-nik* follows a vowel immediately can be found. Some examples are shown in (9).

(9)   a.   *pomocnik* 'helper'   <   *pomoc* 'help', 'path'[5]
           jazyčnik 'lingual (sound)'   <   *jazyk* 'tongue'
        b.   *adresnik* 'address book'   <   *adresa* 'address'
           próšnik 'dust bag'   <   *proch* 'dust'
        c.   *rěčespytnik* 'linguist'   <   *rěčespyt* 'linguistics'
           pućnik 'road sign, directory'   <   *puć* 'way'

In each pair above, consonants of the stem final correspond to both non-palatal and palatal (*c* vs. *č*, *s* vs. *š*, *t* vs. *ć*). Since the suffix *-nik* can follow any consonant, palatality does not play a role here. There seems to be no phonotactic rule for *-nik*.

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[5] *Pomocnik* can be seen as a derived noun from adjective *pomocny* "of help", which is in turn from noun *pomoc*. (see also fn. 4.)

Looking back at the question of the possible motivations for the choice of *-ar* and *-nik*, we conclude that there is no positive evidence to support the phonological motivation.

5.3 *Semantic motivation*

5.3.1 *Semantics of -ar and -nik*

In terms of semantics, the suffixes *-ar* and *-nik* require investigation of their meanings. As I described in §4, a noun with *-ar* generally denotes a male human while a noun with *-nik* denotes either a human or a thing.

If we look into *-ar* more precisely, we find that the noun typically denotes old concepts, examples of which are shown in (10).

(10)   a.   *ratar* 'farmer'
          b.   *rybar* 'fisherman'   <   *rybać* 'to fish, to angle'[6]
          c.   *kowar* 'blacksmith'   <   *kować* 'to forge'

Note that *ratar* has no derivational source, at least in present-day Sorbian. It could be derived from verb *ratarić* 'to farm', to whose stem the zero-suffix is attached. This point of view is, however, not clear to me. There are instead words derived from *ratar* like *ratarstwo* 'agriculture', *ratarski* 'agricultural'.

Sorbs were originally an agricultural and gathering people in the settlements located near water (Kunze 1995). The word *ratar* is old. According to Schuster-Šewc (1978–1989: 1207–1208), it originated in Proto-Slavic *órtajь whose descendant Polish *rataj* is used in the 14th-15th century. The concept which the word *kowar* expresses is relatively new – at least newer than that of *ratar* and *rybar*. Schuster-Šewc (1978–1989: 649) explains that the verb *kować*, which originated in Proto-Slavic *kovati* or *kujǫ* and from which *kowar* is derived, means 'to shoe a horse' and 'to mint coins' besides the general 'to forge'. Although the origin of *horseshoe* is controversial, one of the oldest horseshoes was found in an Etruscan tomb dated around 400 B.C. (Bates 1902). Even though the Sorbian *kować* is used in the early 17th century, it is unknown when Sorbs became familiar with horseshoes. It is, however, not hard to imagine that horseshoes were not new for Sorbs by this time. From these historical descriptions, those words in (10) were apparently in use in the Sorbian community from ancient days, though archaeological verification is still needed. Let us assume, therefore, that *human* is inherent in the meaning of *-ar*.

In contrast, a word with the suffix *-nik*, again, can denote a male human as well as a thing. Take a look at an example *wołojnik* 'pencil'. This word is derived from *wołoj* 'lead'. In other words, the word *wołojnik* means a thing, more precisely a tool or an instrument, to write with lead. Such examples are found throughout Sorbian.

(11)   a.   *čajnik* 'kettle'   <   *čaj* 'tea'
          b.   *wódnik* 'water tank' <   *woda* 'water'
          c.   *popjelnik* 'ashtray' <   *popjeł* 'ash'

From these examples we can assume that the suffix *-nik* primarily denotes a thing, but there is another example to reinforce this view. Take for instance the case of *časnikar*, 'clock-maker', which has the suffix *-ar* attached after *-nik*. This word is derived from

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[6] The verb *rybać* is taken from Schuster-Šewc (1978–1989: 1255–1256), which seems not to exist in the present-day Upper Sorbian.

*čas**nik*** 'clock', which is originated in turn from *čas* 'time'. Example (12) shows the derivational process.

(12)   *čas* 'time' > *čas**nik*** 'clock' > *časnikar* 'clock-maker'

To denote a tool to measure the time (*čas*), the word *čas**nik*** is built. Then, as the noun for the craftsman for that tool, the word *časnikar* is made secondarily. Although such secondary derivations occur infrequently, it is safe to assume that the morpheme *-nik* means a thing.

Based on the discussion heretofore, our working hypothesis is formulated in (13).

(13)   Working hypothesis of *-ar* and *-nik*:
The suffix *-ar* denotes a male human and *-nik* denotes a thing inherently.

This hypothesis would be convincing if the semantic motivation were to work on the selection of *-ar* and *-nik*. In §5.3.2, we look at the secondary derivation, that is, the combination of *-ar-nik* and *-nik-ar*, more precisely in order to ascertain this view.

5.3.2 *Secondary derivation*

As for the secondary derivation mentioned above, there are logical possibilities for *X-nik-ar* and *X-ar-nik*. There are not so many words with the secondary derivation in the retrograde dictionary. Comparing the two combinations, the case of *-nik-ar* is very rare.

(14)   *X-nik-ar*
hygienikar (= *hygienik*) 'hygenist' (but **hygienar*)   <   *hygiene* 'hygiene'

Note that there is a word *hygienik* 'hygienist', which has the same meaning as *hygienikar*.[7] In this case, *hygienik* is the base form and then *hygienikar* is made by attaching the suffix *-ar* to it. The form *hygienar*, on the contrary, is not found.

In the cases of *X-ar-nik*, the situation is different from *X-nik-ar*. In terms of the number of the entries in the retrograde dictionary, the former is more common than the latter. In §5.3.1, we posited that *-ar* denotes a male human and *-nik* denotes a thing generally. The semantics of *X-ar-nik* is, however, not merely the addition of the meaning of *-ar* and that of *-nik*. Adding *-nik* to a word that means a male human attached by *-ar* (i.e. the form *X-ar*), the resulting form contains a more abstract, more specific concept. See (15).

(15)   *X-ar-nik*
*lěkar**nik*** 'pharmacist'   <   *lěkar* 'doktor' (? < *lěkować* 'to cure, to heal')[8]
*rybar**nik*** 'expert fisherman'   <   *rybar* 'fisherman'   <   *ryba* 'fish'

In both examples, the derivational process to form *X-ar* is straightforward. From the (possible) source *lěkować* and *ryba*, the derived noun denotes a male human who is associated to the source word. Once *-nik* is attached to those derived nouns, however, they obtain a different meaning although the association to the meaning of the stem remains. *Lěkar**nik*** is no longer a doctor, but a pharmacist. In the same way, *rybarnik* is

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[7] It is possible that the form *hygienikar* is a loan word from German *Hygieniker* (Anja Pohončowa p.c.)
[8] The derivational process of *lěkarnik* might be more complex, because it is possible that the word is derived from *lěkarnja* "hospital" – using suffix denoting place – which is in turn from *lěkar*.

not a mere fisherman. This fact suggests that *-nik* has extended the meaning beyond denoting a thing to denoting a person with special property.

Viewing the hypothesis in (13) through the lens of this analysis, we can see that semantic motivation is the most plausible in terms of the selection between *-ar* and *-nik*. In the next subsection, we will look at further examples in English as a supporting explanation from cognitive accounts.

5.3.3 *English -er*

In English, there is a derivational suffix to create a noun denoting a human which is associated with the meaning of the source word. Taylor & Seto (2008: 147) point out that the English *-er* denotes a person. According to them, *X-er* originally means 'a person doing X'. As examples, they point to *walker*, *singer*, *murderer*, and so on. As a result of the semantic development of *-er*, the resulting word can mean a thing or an instrument like *can opener* and *dishwasher*. They conclude that "agent and instrument do often an act as one entity" (original in Japanese; English translation by me).

If we apply this cognitive explanation to the Sorbian suffix, it is likely that our hypothesis in (13), that *-ar* denotes a male human and *-nik* denotes a thing inherently, is correct. In sum, of the three motivations posited in §5, the semantic motivation is the most reliable.

6. Concluding remarks

In this paper, we identified the nature of the Sorbian derivational suffixes *-ar* and *-nik* and tried to give a possible explanation for the selection of these suffixes. We assumed three motivations, i.e. part-of-speech motivation, phonological (or phonotactic) motivation, and semantic motivation. Part-of-speech motivation provides a possible explanation, but it is ultimately weak. Indeed, verb stems tend to take *-ar* overwhelmingly, and adjectives are attached by *-nik* exclusively, but nouns with *-ar* as well as with *-nik* are equally prevalent. As for phonological motivation, we cannot find evidence to support it as an explanation for suffix selection. Semantic motivation is more premising. Assuming that *-ar* denotes a male human and *-nik* denotes a thing inherently, the selection of these suffixes might be explained in a unified way. Ultimately, though, I must emphasize that the first two motivations are totally excluded as explanations for suffix choice. The derivational process is not as straightforward as we think. Considering the ways that several factors may work together, I argue here that semantic motivation works as the strongest of the three factors.

This hypothesis leads to new perspectives in terms of the distribution of *-ar* and *-nik* and in terms of the dominance of semantic factor. Indeed, if a new concept in Sorbian denoting male human should arise in the future, I would argue that it is more likely that the morpheme *-ar* will be preferred because of its inherent meaning of male human. If a new concept of a thing as a derived noun should emerge in Sorbian in the future, it is highly likely that the noun will take the suffix *-nik*. This patterning has already begun, which Pohončowa (2009) argues in relation to internationalism. The tendency will be stronger in the future, as her examples which denote new concepts like *surfowar* 'surfer', *akcionar* 'activist' (from German *Aktionar*) etc. indicate.

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