

DERIVATIONAL PARADIGMS WITHIN SELECTED CONCEPTUAL FIELDS – CONTRASTIVE RESEARCH

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Abstract. *The paper discusses the nature of derivational paradigms and accounts of them as a combination of two parameters that establish a paradigmatic network. It is demonstrated that there are no substantial differences between inflectional and derivational paradigms and that the only major difference concerns the saturation value, i.e., the degree of structural completeness of a paradigmatic network. It is emphasized that actual words are only one aspect of derivational paradigmaticity, the other one being the enormous potential capacity of the derivational system. This contrastive empirical research analyzes three selected cognitive fields in three different languages in order to demonstrate the advantage of the parameter of saturation value for contrastive examination of derivational systems of various languages.*

Key words: *derivational paradigm, paradigmatic network, saturation value, contrastive research*

1. INTRODUCTION

The notion of paradigm has traditionally been discussed exclusively within the field of inflectional morphology. The idea of derivational paradigms has, for a long time, been subject to mistrust. Nevertheless, recent research (e.g., Furdík 2004; van Marle 1985; Pounder 2006; Štekauer 2014) has shown that derivational paradigm is a well-defined concept and that its acceptance within the scope of derivational morphology should not be perceived with skepticism. The paper approaches this poorly investigated area from a new perspective:

- It examines the extent to which patterns of relationships among derived words form derivational paradigms.
- It introduces the notion of saturation (Körtvélyessy 2015) to the area of derivational paradigms. Saturation is conceived as structural richness of any linguistic system or

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its part. By implication, here it refers to the degree of completion of selected de-verbal, de-adjectival and de-substantival paradigms with existing complex words.

- It examines derivational paradigms with regard to selected conceptual fields.
- It takes a contrastive approach by comparing three morphologically different languages: Slovak, English and French.

Section 2 discusses the central term of this paper, notably the notion of derivational paradigm, in order to set the scene for the empirical research described in Section 3. The empirical research is based on three cognitive categories, SUBSTANCE, ACTION and QUALITY. Each cognitive category is represented by a selected lexical field, in particular, Family Members, Motion, and Size and Shape. For each of these lexical fields twenty simple underived words have been selected. Individual directions and degrees of derivation are illustrated with ample examples. The analysis of derivational paradigms in three different languages is followed by the conclusions in Section 4.

2. THE NOTION OF DERIVATIONAL PARADIGM

According to a deep-rooted view, inflectional morphology is paradigmatic, while derivational morphology is not. Although Bauer (1997: 243), as one of the first, deals more profoundly with derivational paradigm on the basis of series like ‘national’, ‘nationalize’, ‘nationalist’, ‘nationalistic’ and ‘nationality’, he admits that “whatever it is that makes a paradigm, it is taken to apply prototypically to cases of inflection and not derivation.” While this is true, Stump maintains that “there can be no principled objection to the notion of a derivational paradigm” (Stump 1991: 710). This view is supported by van Marle (1994: 2929-2930), who points out that “in derivation, paradigmatic structure may manifest itself in a fundamentally different way from the way it does in inflection.”

Since the purpose of this paper is not to provide an overview of various approaches to the notion of derivational paradigm the paper confines itself to the most important aspects of derivational paradigm.¹ Irrespective of various theoretical conceptions of derivational paradigm, let us stress that – since both inflectional and derivational paradigms are paradigms – they must share some fundamental features. They include: regularity; systematicity; functionality, i.e., formally realized grammatical/semantic categories; a pattern-like nature; and restriction to affixation processes. The fundamental difference as stated by Bauer (1997) and Štekauer (2014) on several occasions is the crucial role of potential units in derivational paradigms vs. actual units in inflectional morphology. In other words, the existing gaps in derivational paradigms can be filled in by means of regularly formed potential words. Furthermore, Štekauer (2014) identifies significant parallelisms between inflectional and derivational paradigms.

First, both of these types of paradigm operate within word-classes. Thus, there are substantival, verbal, adjectival and adverbial paradigms in inflection, which means that (inflectional) affixes are attached to nominal, verbal, adjectival and adverbial stems. In derivation, this has an analogy in paradigms which are also based on nouns, verbs, adjectives or adverbs. The fact that in the case of derivation the word-class can change is not crucial – the word-class changing affixation is a typical feature of derivational processes.

Second, the inflectional paradigm is based on expression by affixes of certain (grammatical) categories, for example, CASE, NUMBER and GENDER in nouns. Analogically

¹ For a recent overview of various approaches and conceptions of derivational paradigm see Štekauer (2014).

to this, derivational paradigms are also based on expressing certain (derivational semantic) categories, for example, the category of AGENT, PATIENT, INSTRUMENT, LOCATION, ABSTRACTNESS, ACTION, RESULT OF ACTION, etc.

Third, each of these categories can be realized by various formal devices, i.e., different affixes. Thus, while the ‘NOMINATIVE MASCULINE PLURAL’ slot of the substantival paradigms in Slovak can be represented by the suffixes *-i*, *-y*, *-ovia*, *-e*, *-á*, *-ia*, *-tá* (their use depends on the formally determined gender of the particular noun), thereby establishing various substantival (inflectional) paradigms for the category of nouns (twelve in total), one can analogically speak of several distinct derivational noun-based paradigms within the category of AGENT, including the paradigm based on the combination of a verbal base and the suffix *-er*; nominal base and the suffix *-ist*; nominal base and the suffix *-ian*; nominal base and the semisuffix *-man*; verbal base and the suffix *-ee*; etc.

Fourth, both inflectional and derivational paradigms function as patterns for new lexical items entering the paradigmatic system of a language. This means that both inflectional and derivational paradigms are characterized by the principle of **regularity** and the principle of **predictability**.

Fifth, from this perspective, there seems to be only one substantial difference between the two types of paradigm: while membership in inflectional paradigms is obligatory, membership in derivational paradigms is facultative. As a result, while there are minimum gaps in the inflectional system of paradigms, there are quite a lot of them in the derivational paradigmatic system in every language. This fact does not, however, project itself onto any chaotic and vague nature of derivational paradigms. The opposite is true, as indicated in the preceding paragraph. In spite of numerous gaps, derivational paradigms are highly regular and predictable, which is guaranteed by the possibility to fill each of the gaps by a potential word which perfectly fits the paradigmatic **system**. From this it follows that the only major difference between inflectional and derivational paradigms concerns the fact that while the former is based on actual units the latter relies on a combination of actual and potential units.

In this paper, we define the derivational paradigm as a combination of two parameters:

- as an **ordered set** of all complex words directly derived from a single **base** (Horecký et al. 1984: 38, Furdík (2004: 73ff.),
- as a **pattern** established by a **sequence of derivational operations** which makes it possible for other words to form their derivatives.

A combination of these features establishes the **paradigmatic network**.

3. EMPIRICAL RESEARCH

Our research covers three languages, Slovak, English and French, with the aim to determine and compare the degree of completeness of derivational paradigms, i.e., their *saturation*, in selected *conceptual fields* when examined from the point of view of existing words only. Here, the term *existing word* is understood differently from the term *actual word*. Notably, while actual word may be viewed as an institutionalized unit (whatever it may mean – cf., for example, Bauer 2001), existing word for the purpose of our research means a complex word that occurs in at least one of our sources, including dictionaries and Google. The selected lexical fields include *Family Members*; *Size and Shape*; and *Motion* which represent three cognitive categories, in particular, SUBSTANCE, QUALITY and ACTION, and, at the same time, three different word-classes. Our analysis pursues three directions of

derivation: desubstantival, deadjectival and deverbal derivation. Each of them includes 20 simple, underived words as a point of departure for the paradigm development:

- (1) *Family Members*
mother, father, daughter, son, cousin (male, female), aunt, uncle, groom, bride, sister, brother, husband, partner, nephew, niece, widow, parent, child, fiancé
- Size and Shape*
fat, tall, hard, deep, oval, big, small, round, narrow, slim, square, sharp, solid, light, dense, long, giant, thin, tiny, short
- Motion*
to rotate, to walk, to fly, to jump, to escape, to dive, to slide, to roll, to swing, to dance, to swim, to travel, to jog, to fall, to climb, to ride, to drive, to descend, to ascend and to ski.

The main objective of this cross-linguistic research is to map the saturation of derivational paradigms in Slovak, English and French in relation to these lexical fields and to identify the completeness, i.e., the degree of saturation of noun-based, adjective-based and verb-based paradigms. Furthermore, our intention is to compare the number of filled slots and empty slots in these paradigms, bearing in mind that *each of these slots may be potentially filled*. It should be noted that a fully saturated paradigm is one in which all slots (within an examined sample of twenty words) are filled with an equally derived word. For example, the English suffix *-ing* establishes a fully saturated paradigm of deverbal nouns. The role of the individual prefixes and suffixes in constituting the derivational paradigms is addressed as well.

It will be shown that the number of derivational possibilities in the languages examined substantially differs. So, for example, the Slovak noun-based sample yields 45 different derivational possibilities compared to 20 English ones. In the following discussion, it is important to bear in mind that all the observations are related to the limited number of lexical items representing three selected conceptual fields, and therefore their validity is restricted. Any broader generalizations would be premature.

3.1 Slovak

3.1.1 Desubstantival derivation

Slovak desubstantival derivation is productive in the formation of verbal, adjectival, adverbial and substantival paradigms. Desubstantival derivation is highly regular in deriving adjectives from nouns, although this type of derivation is limited to the formation of possessive adjectives, exemplified in (2):

- (2) *mam-in* ‘belonging/pertaining to mother’ < *mother* ‘mama’
dcér-in ‘belonging/pertaining to daughter’ < *dcéra* ‘daughter’

Out of the analyzed conceptual category of family members, every single noun, no matter what gender the noun is, derives its possessive adjective in *-in*. The derivation of adverbs is likewise carried out systematically by means of the suffix *-sky/-cky*:

- (3) *sester-sky* ‘like a sister’ < *sestra* ‘sister’
otcov-sky ‘like a father’ < *otec* ‘father’

The derivation of verbs is much less systematic. An example of postfixation is given in (4):

- (4) *ženit' sa* 'to get married' < *žena* 'woman';

However, thanks to numerous Slovak prefixes that function analogically to particles in English phrasal verbs, there is a range of various paradigms (of unequal degree of saturation) based on the subsequent derivation of denominal verbs. Examples are given in (5):

- (5) *o-ženit' sa* 'to get married (perfective))' < *ženit' sa* 'to get married (progressive)'
vy-ženit' 'to gain (property) by marriage' < *ženit' sa* 'to get married'

In the category of denominal nouns the most complete paradigms are represented by diminutives. Out of several diminutive suffixes, female diminutives form a complete paradigm by means of the suffix *-ka/-ička*:

- (6) *mam-ka / mam-ička* 'mother.DIM' < *mama* 'mother'

The diminutive suffix '*-inka/-enka*' establishes a regular derivational paradigm of female diminutive nouns as well:

- (7) *mam-enka / mam-inka* 'mother.DIM'

In the category of male diminutives, the most productive suffix is *-ko/-čko* and its variants *-čik*, *-čok* and *-ček*:

- (8) *otec-ko* 'father.DIM' < *otec* 'father'
syn-ček / syn-áčik < *syn* 'son'

Slovak desubstantival derivation also allows for the formation of nouns from nouns by means of prefixes, but most of the prefixes can be added to merely a few words, and thus, the paradigms obtained are rather incomplete. The only semi-regular paradigm is found with the prefix *pra-* 'fore' as in (9):

- (9) *pra-otec* 'forefather' < *otec* 'father'

Another suffix which produces a fairly systematic paradigm is the suffix *-stvo/-ctvo* deriving abstract nouns:

- (10) *brat-stvo* 'brotherhood' < *brat* 'brother'
partner-stvo 'partnership' < *partner* 'partner'

3.1.2. Deadjectival derivation

De-adjectival derivation in Slovak gives rise to adverbs, adjectives, nouns and verbs. The derivation of adverbs from adjectives establishes fairly regular derivational paradigms either by means of suffixes or by means of prefixes. The only fully complete adverbial paradigm is found with the suffix *-o*. Each of our size and shape adjectives can derive its adverbial form, for example:

- (11) *úzko* 'narrowly' < *úzky* 'narrow'
okružlo 'round' < *okružly* 'round'

Those adjectives which derive their adverbial diminutive form can underlie the paradigm of adverbial diminutives as well:

- (12) *tenučko* < *tenučký* ‘very thin’
tučnulinko < *tučnulinký* ‘fat.DIM’

The most complete paradigm of nouns derived from adjectives is unquestionably obtained with the suffix *-ost’*. Each of the sample adjectives derives its abstract noun by means of this suffix as in (13):

- (13) *vel’kost’* ‘bigness; size’ < *vel’ký* ‘big’

The suffix *-nie* also derives a fairly regular paradigm of action nouns, since only five gaps are found with this suffix:

- (14) *hl’benie* ‘deepening’ < *hlboký* ‘deep’
krátenie ‘shortening’ < *krátky* ‘short’

Only partly complete are paradigms of patient nouns (15) and agent nouns (16):

- (15) *dlháň* ‘tall man’ < *dlhý* ‘long’
velikán ‘great personality’ < *vel’ký* ‘big’
(16) *hl’bič* ‘digger’ < *hlboký* ‘deep’

The self-reproduction of adjectives is very systematic in the formation of diminutives – the most productive are the suffixes *-učký/-ušký* and *-unký/-inký* (17) – and augmentatives (18):

- (17) *nizučký* ‘very low’ < *nízky* ‘low’
malinký ‘very small’ < *malý* ‘small’
(18) *velikánsky* ‘very big’ < *vel’ký* ‘big’
dlhánsky ‘very long’ < *dlhý* ‘long’

Many of the adjectives can be modified by a wide range of prefixes. Example (19) illustrates the semantic category of intensification by means of the prefix *pri-* and attenuation by *ne-*:

- (19) *priúzky* ‘too narrow’ < *úzky* ‘narrow’
nevysoký ‘rather short/low’ < *vysoký* ‘tall/high’

The formation of de-adjectival action verbs is also productive in Slovak. Examples are given in (20):

- (20) *tučnieť* ‘to become fat’ < *tučný* ‘fat’
úžiť ‘to narrow’ < *úzky* ‘narrow’

These imperfective verbs can be subsequently derived by means of prefixes. The most complete paradigm is formed by the prefix ‘*z-/s-*’ which turns imperfectives into perfectives:

- (21) *stučnieť*V ‘to get fat’ < *tučnieť* ‘to become fat’
zúžiť ‘to narrow down’ < *úžiť* ‘to narrow.durative’

The derivation of adverbs from adjectives is, in Slovak, highly regular. The majority of adverbs end in the suffix ‘*-o*’. In the research, this suffix produces fully regular paradigm of adverbs derived from the adjectives of size and shape:

- (22) *husto* ‘densely’ < *hustý* ‘dense’
dlho ‘long.ADV’ < *dlhý* ‘long’

3.1.3. Slovak deverbal derivation

Buzássyová (1974) and Furdík (2004) maintain that the nature of verbs in Slovak makes it possible to derive almost all participants of verbal action. Furdík illustrates the case with the substantival and the adjectival derivatives of the verb *písať* ‘to write’.

- (23) *písať* ‘to write’ → *pisateľ*, *pisár* ‘writer’ Agent
 → *písadlo* ‘writing implement’ Instrument of an action
 → *písanie* ‘writing’ Action noun - Process
 → *písačka* ‘act of writing’ Result of action
 → *písareň* ‘writing room’ Place of action
 → *písanka* ‘writing book’ Object of action
 → *písací* ‘writing_{adj}’ Property of an action (Purpose)
 → *písaný* ‘written’ Property of an action

The results of the research show that apart from deriving substantival and adjectival paradigms in a regular fashion, deverbal derivation is also relatively productive in deriving adverbs and, importantly, highly productive in deriving other verbs.

Like with desubstantival derivation, deverbal derivation, too, is dominated by one or two suffixes which establish more regular paradigms than the rest of the suffixes. In the derivation of nouns from verbs, it is the suffix *-nie* which establishes a fully regular paradigm of verbal nouns:

- (24) *lietanie* ‘flying’ < *lietať* ‘to fly’
kĺzanie ‘sliding’ < *kĺzať* ‘to slide’

A highly regular derivational paradigm of Agent nouns is formed by the suffix *-ec*:

- (25) *chodec* ‘walker, pedestrian’ < *chodiť* ‘to walk’
utečenec ‘escapee’ < *utiecť* ‘to escape’

Similarly, in the formation of a fully regular adjectival paradigm, one single suffix, namely the suffix *-ucí/-ací*, clearly dominates the field:

- (26) *otáčací* ‘rotating’ < *otáčať* ‘to rotate’
hojdací ‘swinging’ < *hojdať* ‘to swing’

Relatively regular adjectival paradigms are also found with the suffixes *-ový/-avý* and *-ský/-cký*. The adjectives derived from verbs by these suffixes then serve systematically the subsequent adverbial derivation by the suffix *-o*:

- (27) *potápavý* ‘(having the feature of) diving’ < *potápať* ‘to dive’
potápačský ‘(designed for) diving’ < *potápať* ‘to dive’

Finally, the derivation of verbs from verbs in Slovak, and their ability to derive entirely complete and regular paradigms is an important feature of the Slovak derivational system. What is also striking is that fully regular paradigms are obtained by both suffixes and prefixes.

3.1.4. Slovak: the results

All three types of derivation, deverbal, deadjectival and desubstantival, are unrestricted in their capacity to establish regular derivational paradigms based on existing words. Deverbal

derivation of verbs, supported primarily by prefixes, allows for the formation of complete derivational paradigms without any gaps or other peculiarities. Deverbal derivation can also produce a fully regular derivational paradigm of substantives. Each verb examined derives its own verbal noun. Deverbal derivation produces fully regular adjectival derivational paradigms as well. Each of the verbs under discussion derives its adjectival form. The only direction of derivation, with which the derivational paradigm is not entirely regular, is one in which verbs derive adverbs. Only half of the verbs derive the corresponding adverbial form.

Given the completeness of verbal derivational paradigms in general, the paradigm is conceived of here as a certain kind of morphological network, created by the 20 analyzed verbs on one hand, and by the number of derivational possibilities on the other. The total number of derivational possibilities stands for the number of all morphologically related words which are derived from the respective base words.

The number of derivational possibilities in Slovak deverbal derivation within the conceptual field examined is 48. The total number of slots is 960 (20 verbs \times 48 derivational possibilities = 960). The existing words fill in 459 of these slots. By implication, the number of gaps, i.e. the number of blank slots is 501. The blank slots represent the potential capacity of the system. The degree of saturation of the deverbal derivation paradigm in the field examined is 48%.

Deadjectival derivation establishes entirely regular derivational paradigms of Slovak nouns and Slovak adverbs, both without any gaps. Each adjective derives its substantival and its adverbial forms. The generation of verbs from the corresponding adjectives is nearly fully productive. In the derivational paradigm of verbs derived from adjectives, four gaps are identified. The formation of an adjectival derivational paradigm is limited mostly to the cases of intensification, de-intensification and negation. The derivation of diminutive and augmentative forms of adjectives from other adjectives is fairly systematic. The most complete adjectival paradigm is found with the de-intensified adjectives.

The number of derivational possibilities in the deadjectival derivation is 40. The total number of slots in the paradigmatic network is 800, while the number of words which fill in the slots is 275, leaving the remaining 525 slots unfilled. The degree of saturation of the adjectival derivation paradigm in the field examined is 35%.

In the desubstantival derivation, there is no affix deriving a fully regular paradigm. Nevertheless, it should be emphasized that the derivation of, for instance, diminutives is carried out by different suffixes, depending on the gender of the noun in question. The paradigms of both male and female diminutive nouns are entirely regular. Likewise, the derivation of adjectives from nouns is gender-conditioned. There is no fully complete derivational paradigm of adjectives; however, both the female relational adjective paradigm and the male relational adjective paradigm are completely regular. The derivation of verbs and adverbs is, on the whole, performed in a less regular fashion than the derivation of nouns and adjectives. The paradigm of adverbs derived from nouns is semi-regular, while the paradigm of verbs derived from nouns is rather irregular.

The total number of derivational possibilities for Slovak nouns is 45. The total number of slots is 900 of which merely 194 slots are filled. This results in a degree of saturation of only 22%. The reason for the low degree of derivational paradigms of nouns should be sought in the strong competition of suffixes.

3.2. English

3.2.1. Desubstantival derivation

Desubstantival derivation in the examined cognitive field allows for the derivation of nouns, adverbs and adjectives. The most complete paradigm of English substantives is established by the suffix *-ship*:

- (28) *fathership* < *father*
brotherhood < *brother*

Another highly systematic paradigm is constituted by the suffix *-hood*:

- (29) *brotherhood* < *brother*
childhood < *child*

Regular substantival derivational paradigms in English can also be formed by means of prefixes. The most productive are the prefixes *un-* and *step-* which establish denominal paradigms of the 2nd and 3rd order, for example:

- (30) *unaunthood* < *aunthood*
unmotherliness < *motherliness*
- (31) *stepfather* < *father*
stepniece < *niece*

The derivation of adjectives from nouns is, in English, carried out by several suffixes. The most complete adjectival paradigm in our sample is found with the suffix *-less*.

- (32) *brideless* < *bride*
groomless < *groom*

Most of the adjectives can be further modified by means of the prefix *un-*, which undoubtedly forms the most complete derivational paradigm out of all the examined prefixes. It combines with desubstantival nouns (see (30)) and adjectives:

- (33) *unbridelike* < *bridelike* < *bride*
unpartnerish < *partnerish* < *partner*
unparentless < *parentless* < *parent*

A systematic derivation of adjectives is observed for the suffix *-ly* (not only the 1st order derivation):

- (34) *sisterly* < *sister*
motherly < *mother*

Systematic denominal paradigms of adverbs are based on derived denominal adjectives such as (35):

- (35) *childishly* < *childish* < *child*

Most of these adverbs, although not all, can be further modified by the prefix *un-*:

3.2.2. Deadjectival derivation

De-adjectival derivation in English is productive in deriving nouns, adverbs and adjectives. The derivation of verbs from adjectives is less productive, but possible. Regular derivational paradigms of substantives derived from adjectives are formed in English with the suffixes *-ness* and *-ing*. The *-ness* suffix forms a fully complete paradigm of abstract nouns, such as (36):

- (36) *fatness* < *fat*
shortness < *short*

In the case of the suffix *-ing*, the resulting action noun constitutes a paradigm of the 1st or the 2nd order, in the latter case via the verbalizing step:

- (37) *squaring* < *square*
hardening < *harden* < *hard*

The regular *-ness* paradigm of the 2nd order is also obtained from adjectives derived by the prefix *-un*:

- (38) *unslimness* < *unslim* < *slim*
unsolidness < *unsolid* < *solid*

De-adjectival derivation in English allows for the derivation of a fully complete adverbial paradigm by means of the suffix *-ly*.

As to the derivation of verbs from adjectives, the only relatively regular paradigm is established by the suffix *-en*. The only suffix that derives a highly regular deadjectival derivational paradigm of English adjectives is the attenuative suffix *-ish*:

- (39) *fattish* < *fat*
thinnish < *thin*

The derivation of adjectives from adjectives is fairly systematically represented by means of prefixes, such as *super-*, *non-* and *un-*:

- (40) *superdense* < *dense*
non-giant < *giant*
untiny < *tiny*

3.2.3 Deverbal derivation

Deverbal derivation is most productive in the formation of substantival derivational paradigms. Two of the examined suffixes derive fully regular paradigms, the suffix *-ing* (41) which forms verbal nouns, and the suffix *-er/or* which forms Agent nouns (42):

- (41) *jogging* < *jog*
walking < *walk*
- (42) *jumper* < *jump*
flyer < *fly*

The suffix *-ity* also establishes a regular paradigm of 2nd order via its potentiating adjectivizing suffix *-able*:

- (43) *swingability* < *swingable* < *swing*
ascendability < *ascendable* < *ascend*

Two entirely complete derivational paradigms of deverbal adjectives are formed by the suffix *-able* and the prefix *un-*, respectively. De-verbal derivation of verbs is poorly represented in our sample.

3.2.4 English: the results

To summarize, all three types of derivation are, in English, productive in the formation of derivational paradigms. Desubstantival derivation in English produces nouns, adverbs and adjectives in a regular way. Several highly regular derivational paradigms are found in desubstantival derivation where the total number of derivational possibilities is 20. Out of them, 15 are formed by suffixation, 4 by prefixation. In the substantival derivational paradigm, the network of 400 slots is filled to about 50% (197 filled vs. 203 unfilled slots).

In the deverbal area, the most productive is the derivation of nouns. Two suffixes derive fully complete substantival paradigms, and highly regular paradigms are found with a few other suffixes and prefixes as well. Furthermore, deverbal derivation gives rise to regular adverbial and adjectival paradigms. Deverbal verbs do not establish regular paradigms.

The deverbal derivation network counts 420 potential slots. The number of derivational possibilities is 21. The paradigmatic network of the verbal paradigm is complete to 48%, with 200 filled slots and 220 blank slots.

Deadjectival derivation in English is productive in deriving nouns, adverbs and adjectives. The derivation of verbs from adjectives is less productive, but possible. The only fully complete paradigm of English nouns is established by the suffix *-ness*.

The adverbial paradigm is also fully regular, obtained by means of the suffix *-ly*. In the derivation of verbs from adjectives, the only relatively regular paradigm is found with the suffix *-en*. Deriving adjectives from adjectives is mostly represented by means of prefixes such as *super*, *non-* and *un-*. A fairly regular adjectival paradigm is also produced by the suffix *-ish*.

The number of derivational possibilities in the English deadjectival derivation is 29. For the adjectives of size and shape, the paradigmatic network is complete to 36%. Out of the total number of 580 slots, 209 of them are filled while the remaining 371 are left unfilled. To conclude, the most complete paradigmatic network is that of English nouns completed to 53%, followed by the network of English verbs of motion, completed to 48%. The least regular paradigmatic network is that of English adjectives, complete to 36%.

3.3. French

3.3.1. Desubstantival derivation

French de-substantival derivation can produce nouns, adjectives, verbs, and adverbs. In French, this type of derivation, within the examined conceptual field, does not give rise to any regular derivational paradigm. It is even impossible to speak of semi-regular paradigms, since the most complete paradigm in our sample has merely five members.

3.3.2. Deadjectival derivation

De-adjectival derivation in French is capable of producing nouns, adverbs, verbs and other adjectives. The only entirely complete paradigm in our sample is the adverbial one, formed by means of the suffix *-ment*, which is the only suffix allowing for the derivation of adverbs from adjectives in French:

- (44) *légèrement* ‘lightly’ < *léger* ‘light’
solidement ‘firmly’ < *solide* ‘solid’

Verbs can be derived from adjectives by means of two suffixes, in particular, *-er* and *-ir*. The former suffix establishes a semi-regular derivational paradigm, while the paradigm obtained by the latter suffix is rather irregular:

- (45) *profonder* ‘to deepen’ < *profond* ‘deep’
grandir ‘to enlarge’ < *grand* ‘large’

A semi-regular substantival derivation paradigm is found with the suffix *-eur*:

- (46) *grosseur* ‘size’ < *gros* ‘large, big’
hauteur ‘height’ < *haut* ‘high’

Adjectives are derived from other adjectives mostly by means of the suffix *-able* which establishes a semi-regular adjectival paradigm:

- (47) *évitable* ‘escapable’ < *évasion* ‘to escape’
descendable ‘descendable’ < *descendre* ‘to descend’

3.3.3. French deverbal derivation

Within the sample of verbs examined, deverbal derivation in French allows for the formation of nouns, adjectives and verbs. The derivation of adverbs from nouns has not been ascertained. Deverbal derivation is highly systematic in deriving substantives. The most regular derivational paradigm of nouns derived from adjectives is found with the suffix *-eur*, which produces a relatively regular paradigm of male agentive nouns. The suffix *-euse* is used to derive female agentive nouns:

- (48) *nagereuse* ‘female swimmer’ < *nager* ‘to swim’

Deriving adjectives from verbs is also accomplished in a fairly regular fashion. The most complete paradigm of deverbal adjectives is found with the suffix *-ant*:

- (49) *sautillant* ‘jumping’ < *sauter* ‘to jump’

The formation of verbal paradigms is possible, although the paradigms obtained are only semi-regular as is the case with the suffix *-er*:

- (50) *sautiller* ‘to jump.DIM’ < *sauter* ‘to jump’
dansotter ‘to dance.DIM’ < *danser* ‘to dance’

3.3.4. French: the results

To conclude, out of the three languages examined, the French derivational paradigms in the examined conceptual fields seem to have the lowest saturation value, with many gaps in the system.

Desubstantival derivation is the least saturated one. Although it makes it possible to derive nouns, adverbs, adjectives and verbs, no fully regular paradigm has been found with this type of derivation. In fact, one cannot even speak of semi-regular paradigms either, because all of the paradigms are fairly incomplete.

The number of derivational possibilities is 20, and thus, the number of available slots equals 400. Merely 45 of them are filled in with derivatives. The rest of the slots are left unfilled and, therefore, the paradigmatic network of French desubstantival derivation is only saturated to 11%. The role of suffixes is unquestionably higher than that of prefixes, because there is only one prefix used to modify the examined substantives.

As for the deadjectival derivation, the formation of nouns, adverbs, verbs and other adjectives is possible. The deadjectival adverb paradigm is entirely regular. Each of the adjectives derives the corresponding adverb by means of the suffix *-ment*. The paradigms of verbs derived from adjectives are either semi-regular or irregular. Most of the suffixes which derive nouns from adjectives produce incomplete derivational paradigms. None of the paradigms of deadjectival adjectives are fully regular.

The number of derivational possibilities identified for French deadjectival derivation is 17. The total number of slots is 340. The number of filled slots is 80, which makes the whole paradigmatic network saturated to 24%. The role of suffixes is significantly higher than the role of prefixes.

Verbs in French can derive nouns, adjectives and verbs. French deverbal derivation is unproductive in deriving adverbs. The most regular is the formation of substantives. The derivation of adjectives from verbs is also fairly regular. The paradigms of deverbal verbs are semi-regular.

The number of derivational possibilities in deverbal derivation equals 19. By implication, the total number of slots which could be filled is 380. Out of them, 116 are filled and 264 are left blank. The paradigmatic network of deverbal derivation in French is saturated to 31%. It can be concluded that, out of the three languages analyzed, French derivation is the least regular in establishing derivational paradigms in the conceptual field under examination.

4. CONCLUSIONS

One of the often-cited arguments in favour of the distinction between derivational and inflectional fields of morphology concerns the non-existence of paradigmatic relations in derivational morphology. Consequently, paradigmatic treatment of derivational morphology has been, until recently, rather fragmentary. Nevertheless, as suggested in section 2 of this paper there seem to be conclusive arguments in favour of the paradigmatic nature of derivational morphology.

The results of our empirical research which maps the situation of derivational paradigms in Slovak, English and French in relation to the selected conceptual fields show that all the examined types of derivation, i.e. deverbal, deadjectival and desubstantival, can give rise to fully regular derivational paradigms. With each of the types, at least one of the established

derivational paradigms is fully saturated, and a number of paradigms are highly regular. Examples of fully saturated paradigms, include Slovak deadjectival nouns derived by the suffix *-ost'*; Slovak deverbal nouns derived by the suffix *-nie*; English deverbal nouns derived by the suffix *-ing*; and French deadjectival adverbs derived by the suffix *-ment*.

The results of the research show that, in Slovak, the most systematic out of the types of derivation examined is unquestionably the deverbal one. Deverbal derivation in Slovak generates several fully regular verbal derivational paradigms, and it is connected with the extensive capacity of Slovak affixation to express various *Aktionsart*-categories. Deriving nouns and adjectives from verbs in Slovak is likewise fully regular. Slovak deadjectival derivation is fully regular in deriving nouns and adverbs, and highly regular in deriving paradigms of Slovak adjectives and verbs. Slovak desubstantival derivation forms fairly regular adverbial, adjectival and substantival paradigms, even if none of them is fully saturated. Paradigms of verbs derived from substantives are rather irregular.

Desubstantival derivation in English allows for the derivation of adverbs, nouns and adjectives. Systematic paradigms of verbs derived from nouns do not exist in the examined conceptual fields. English deadjectival derivation is highly regular in deriving nouns, adverbs and adjectives. The derivation of verbs from adjectives is less systematic, but possible. A fully regular paradigm is found in the derivation of nouns from adjectives. Deverbal derivation is definitely most regular in the formation of substantival derivational paradigms. Two fully saturated paradigms have been attested. A highly regular paradigm is found for verbs formed from nouns, where only one gap has been identified. A fully regular paradigm is also that of adjectives derived from verbs. English deverbal adverb derivation also constitutes a highly regular paradigm.

The least systematic formation of derivational paradigms has been observed for French. Out of the three types of derivation examined, the desubstantival one is least saturated. No fully regular derivational paradigm has been identified for this type of derivation. French deadjectival derivation is the only type which constitutes a fully regular derivational paradigm, in particular, the adverbial one. Paradigms of nouns, adverbs and adjectives are less complete. Deverbal derivation in French can give rise to nouns, adjectives and verbs. Derivation of adverbs from nouns has not been ascertained. Deverbal derivation in French is highly regular for substantives and adjectives. Verbal paradigms are mostly semi-regular.

The results also show that the majority of derivational paradigms are constituted by means of the word-formation process of suffixation, much more frequently than by prefixation. All in all, the results of our research demonstrate that the concept of derivational paradigm is justified, and that the major difference between derivational and the inflectional paradigms bears on the degree of saturation of the individual paradigmatic systems. This difference appears to be of secondary importance because – as suggested in section 1 – the lower degree of the saturation of paradigmatic derivation compared to the inflectional saturation can be compensated for by the enormous potential capacity of derivational morphology.

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DERIVACIONE PARADIGME U ODREĐENIM KONCEPTUALNIM POLJIMA – KONTRASTIVNA ANALIZA

Ovaj rad bavi se prirodom derivacionih paradigmi i definiše ih kroz kombinaciju dva parametra koja sačinjavaju paradigmatiku mrežu. Rezultati ukazuju na to da nema ključnih razlika između inflekcionih i derivacionih paradigmi, kao i da se najveće razlike među njima svode na saturaciju, odnosno na stepen strukturne celovitosti paradigmatike mreže. U radu se naglašava da su reči samo jedan aspekt derivacione paradigmatičnosti, dok se drugi svodi na veličinu potencijalnog kapaciteta derivacionog sistema. Ovo kontrastivno, empirijsko istraživanje bavi se trima kognitivnim poljima u tri različita jezika, ne bi li ukazalo na značaj parametara stepena saturacije u kontrastivnoj analizi derivacionih sistema različitih jezika.

Ključne reči: derivaciona paradigma, paradigmatika mreža, stepen saturacije, kontrastivno istraživanje