

# Derivational paradigm – Is there any?

## A contrastive research

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*For a long time, the notion of paradigm was discussed only within the field of inflectional morphology. The presence of this notion has allowed for far reaching morphological explorations, especially in inflectionally rich languages. However, linguistic inquiries and a number of in-depth investigations favoured the discussion of this notion within the field of derivational morphology as well. This paper introduces the idea of derivational paradigm, examines its existence in selected European languages and investigates the degree of its regularity and uniformity. The research into the emerging concept of derivational paradigm maps the situation of derivational paradigms in English, Slovak and French in relation to the selected conceptual field and covers three directions of derivation; de-verbal, de-adjectival and de-substantival.*

**Keywords:** *derivational paradigm, de-verbal derivation, de-adjectival derivation. de-substantival derivation.*

### 1. Introduction

This article is based on my diploma thesis titled *Derivational paradigm – a contrastive analysis of selected conceptual fields*. The thesis discusses a number of aspects concerning the existence of derivational paradigms, their productivity, regularity, saturation and their typical characteristics. However, this article presents only partial results of the previous research and discusses solely the aspect of regularity. A derivational paradigm is here considered fully regular when it has no gaps in it. In other words, a fully regular derivational paradigm is formed when each of the base words of a given conceptual category can produce a derivative which is related to the said base in a semantically specific way.

The notion of paradigm has traditionally been discussed exclusively within the field of inflectional morphology and its introduction into derivational morphology was first received with scepticism. Nevertheless, some morphologists challenged a traditional belief that inflectional morphology is paradigmatic, while derivational is not and initiated research into the issue. Beecher, for instance, writes that “the concept of inflectional paradigm is deservedly generalizable to derivational morphology” (2004: 1) and Stump (1991: 710) even denies any objections to the notion. Even though the aim of this paper is not to present the past discussion on the issue, some brief theoretical background is outlined.

The results of my research presented herein show that the paradigmatic organization of derivational morphology is stronger than originally believed and that the notion should not be rejected *a priori*. A primary goal of this article is to find out if a fully regular morphological paradigm, the paradigm *par excellence*, can be ascertained within the scope of derivation morphology. Highly irregular paradigms are discussed, however not in great detail, for space considerations and for the narrow scope of this paper...

## 2. Brief remarks on previous research

### 2.1. Booij

Booij views derivational paradigms as a device of lexical enrichment. He explains that “in many cases new complex words are created on the basis of relations between existing words” (Booij 2008: 29). He ascribes importance to the phenomenon of paradigmatic word formation, the phenomenon which Booij exemplifies by the formation of Dutch female nouns in ‘-ster’ from their neutral counterparts ‘-er’, illustrated below.

	Verb	Noun	Female noun
(1)	<i>arbeid</i> ‘work’ <i>spreek</i> ‘speak’	<i>arbeid-er</i> ‘worker’ <i>spreek-er</i> ‘speaker’	<i>arbeid-ster</i> ‘female worker’ <i>spreek-ster</i> ‘female speaker’

### 2.2. Stump

Another approach to derivational paradigms comes from Stump. He introduces the term ‘paradigm function’, used mostly within the scope of inflectional morphology, defined as “a function from the root of a lexeme to one of the fully inflected words in the paradigm of that lexeme” (1991: 683). He applies the same principle to the concept of derivational paradigm and states that “every derivational rule R defines a simple two-member paradigm consisting of an input expression (which R takes as its argument) and the corresponding output expression (the value of R for that argument)” (1991: 708). He further argues that the relationship holding between the members of a derivational paradigm is a purely formal one, so that the paradigm function *Fist* linking ‘art’ to ‘artist’ is different from the function *Fer* which links ‘jewel’ to ‘jeweller’. As can be seen, he completely rejects semantically based approaches to derivational paradigms. He believes that it is a formal approach that allows for a uniform theory of paradigm function. He asserts that a semantic conception of derivational paradigm functions (DPFs) would make DPF completely different from inflection paradigm functions (IPFs) and exemplifies the case by the existence of derivational doublets, such as ‘basal/basic’, ‘conformance/conformity’, ‘conformer/conformist’, and others. He believes that the members of pairs such as ‘conform/conformer’, ‘breathe/breather’ or ‘coast/coaster’ are linked by one DPF *Fer*.

### 2.3. Van Marle

Van Marle’s reasoning is different. His approach discusses the relationships between elements in absentia. One such paradigmatic relationship is the “relationship between different types of complex words (where there is no question of one being the base and the other the derivative)” (1985: 84). He exemplifies the case with the two types of de-adjectival relativizing complex adjectives in Dutch: one ending in ‘-ig’ and the other in ‘-erig’: *groen-ig* vs. *groen-erig* (both having the same meaning ‘greenish’). The difference between the two complex adjectives is that the relativizing nature of the adjectives in ‘-erig’ is stronger than that in the adjectives ending in ‘-ig’. These two types of relativizing adjectives are paradigmatically related to one another. Thus, he concludes that “the semantics of these sets of words cannot be fully understood without taking the semantics of the other into consideration [...]” (1985: 86).

## 2.4. Dokulil

Dokulil (1962: 12-14) considers paradigm as a certain sort of pattern, where a sequence of derivational operations allows other words to form their derivatives, as illustrated below:

- (2) *list* 'leaf' N → *líst-ek* 'leaflet'N → *lístk-ový* 'leaflet'Adj → *lístkovitý* 'characterized by leaflets'
- (3) *květ* 'flower' → *kvít-ek* → *kvítk-ový* → *kvítkov-itý*  
*zub* 'tooth' → *zoub-ek* → *zoubk-ový* → *zoubkov-itý*  
*strom* 'tree' → *strom-ek* → *strom-ový* → *stromov-itý*

A fundamental difference in the approaches to the concept of derivational paradigm seems to concern mostly its form vs. meaning oriented understanding, *inter alia*. While some authors argue for a semantic approach, others favour a formal one. For other approaches to the notion of derivational paradigm see e.g. Pounder (2000), Beecher (2004) or Furdík (2004).

## 3. Empirical research

The research presented here analyses three languages: English, French and Slovak. The aim of the research is to find out if a fully regular morphological paradigm can be ascertained in derivational morphology and to examine and compare the degree of its regularity in different languages. The choice of lexemes selected from randomly conceptual categories was likewise arbitrary.

For nouns, the conceptual field of 'family members' is chosen and the following non-derived words were listed: *mother, father, daughter, son, cousin (male, female), aunt, uncle, groom, bride, sister, brother, husband, partner, nephew, niece, widow, parent, child* and *fiancé*. For adjectives, the following words were collected to represent the conceptual category of 'size and shape': *fat, tall, hard, deep, oval, big, small, round, narrow, slim, square, sharp, solid, light, dense, long, giant, thin, tiny* and *short*. The last conceptual category is that of 'verbs of motion'. The following entries were listed: *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*.

These conceptual fields represent three conceptual categories, in particular, SUBSTANCE, QUALITY and ACTION, and, at the same time, three different word-classes. Each of them includes 20 simple, underived words as a point of departure for the paradigm development. For each category, all the derived words, which are semantically related to the base word were identified and listed.

For the purposes of the current paper, the scope of the research was extended by encompassing potential words as well. I take Bauer's conception, that word-formation paradigms are based on the potential of filling in the existing paradigmatic gaps (1997: 253), as a starting point. This potentiality is, therefore, a crucial term for the concept of derivational paradigm, with availability of slots being one of its central features. It follows that the data were collected not only from printed sources, but also from the Internet as well. The Internet

is full of nonce-words and neologisms that would be, were it not for the Internet, considered as non-existing (i.e. potential words). Some of these non-existing words would surely have got lost throughout the time needed for their inclusion into printed dictionaries or reference books. Likewise, even if they were preserved in a language, at the time of carrying out the research, they would be treated as non-existing.

What should be said is that if potential words were not taken into account and the research allowed for actual words only, the picture of derivational paradigms would be completely different. This paper does not discuss the completeness of the respective derivational paradigms, nor does it discuss the role of individual word-formation processes in developing paradigms. As a result, any broader generalizations based on these results should be avoided.

### 3.1. Slovak

#### 3.1.1. De-substantival derivation

##### **Nouns → Nouns**

When a noun is derived from another noun, the most complete paradigm is a paradigm of diminutive forms of the source noun. For female diminutives, the most complete paradigm is undoubtedly formed with the diminutive suffix ‘-ka/-ička’, because each of the analysed female nouns forms its diminutive form by means of this suffix. The paradigm of female diminutives has for instance the following members:

- (4) *mamka<sub>N</sub>* and *mamička<sub>N</sub>* < *mama<sub>N</sub>* ‘mother’;  
*dcérka<sub>N</sub>* and *dcérička<sub>N</sub>* < *dcéra<sub>N</sub>* ‘daughter’; etc.

For male diminutives, the most productive suffix is the ‘-ko/-čko’ suffix and its variants ‘-čík’, ‘-čok’ and ‘-ček’. The suffixes give rise to diminutives such as:

- (5) *otecko<sub>N</sub>* < *otec<sub>N</sub>* ‘father’;  
*synko<sub>N</sub>*, *synček<sub>N</sub>* and *synáčík<sub>N</sub>* < *syn<sub>N</sub>* ‘son’;  
*braček<sub>N</sub>*, *bratko<sub>N</sub>* and *bratček<sub>N</sub>* < *brat<sub>N</sub>* ‘brother’; etc.

Many other suffixes and prefixes serve for the derivation of nouns from nouns, however, the paradigms they form are not fully regular. In view of the aims of this paper, irregular or gapped paradigms are of little importance. For more detailed overview of de-substantival paradigms refer to my diploma thesis.

##### **Nouns → Adjectives**

De-substantival derivation is also highly productive in deriving adjectives from nouns, although this type of derivation is limited to the formation of possessive adjectives. From the analysed substantives, every single noun derives its possessive adjective. Female possessive adjectives always end in the ‘-in’ suffix<sup>1</sup>, exemplified in (6), male possessive adjectives always end in ‘-ov’, illustrated in the examples (7).

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<sup>1</sup> The suffixes -in and -ov are polysemous in Slovak. They are often used to express possessive case as well.

- (6) *mama*<sub>N</sub> ‘mother’ → *mamin*<sub>Adj</sub> ‘pertaining to mother’;  
*dcéra*<sub>N</sub> ‘daughter’ → *dcérin*<sub>Adj</sub> ‘pertaining to daughter’; etc.
- (7) *partner*<sub>N</sub> ‘partner’ → *partnerov*<sub>Adj</sub> ‘pertaining to partner’;  
*manžel*<sub>N</sub> ‘husband’ → *manželov*<sub>Adj</sub> ‘pertaining to husband’; etc.

### Nouns → Verbs

The derivation of verbs from nouns generates rather incomplete and irregular paradigms and they are therefore not discussed in this article.

### Nouns → Adverbs

Nouns in Slovak do not derive adverbs.

#### 3.1.2. Slovak de-adjectival derivation

De-adjectival derivation can give rise to nouns, adjectives, verbs and adverbs.

### Adjectives → Nouns

The most regular derivational paradigm of nouns derived from adjectives is unquestionably obtained with the suffix ‘-ost’. Each of the adjectives in the research derives its nominal form by means of this suffix.

- (8) *tučnosť*<sub>N</sub> ‘fattiness’ < *tučný*<sub>Adj</sub> ‘fat’;  
*tvrdosť*<sub>N</sub> ‘hardness’ < *tvrdý*<sub>Adj</sub> ‘hard’; etc.

In Slovak, substantives originally derived from adjectives, such as *tučenie*<sub>N</sub> ‘gaining in weight’ derived from *tučný*<sub>Adj</sub> ‘fat’ can be further modified by means of prefixes as well. The most and almost fully regular paradigm of such prefixed nouns is obtained with the prefix ‘z-/s-’. There are only two gaps in the paradigm.

- (9) *stučenie*<sub>N</sub> ‘gain in weight’ < *tučný*<sub>Adj</sub> ‘fat’;  
*spevnenie/spevňovanie*<sub>N</sub> ‘strengthening’ < *pevný*<sub>Adj</sub> ‘solid’, etc.

### Adjectives → Adjectives

Adjectives can produce adjectival paradigms of diverse regularity, however, neither of them is fully regular. Relatively uniform formations can be seen in the derivation of diminutive and augmentative forms of adjectives. Deriving augmentative adjectives is possible predominantly by means of the suffixes ‘-čizný’ and ‘-ánsky’. Derivation of diminutive adjectives can be found with the suffix ‘-učký/-ičký’. An almost fully completed paradigm is found with the prefix ‘pri-’ as well.

- (10) *priučný*<sub>Adj</sub> ‘too fat’ < *tučný*<sub>Adj</sub> ‘fat’;  
*privysoký*<sub>Adj</sub> ‘too tall’ < *vysoký*<sub>Adj</sub> ‘tall’; etc.

### Adjectives → Verbs

The study of derivation of verbs from adjectives in Slovak did not reveal any fully regular paradigm.

### Adjectives → Adverbs

Fortunately, **the analysis of** the derivation of adverbs from adjectives established a fully regular derivational paradigm. Systematic formation of adverbs is, in Slovak, carried out by means of attaching the suffix ‘-o’. Each of the analysed adjectives formed its adverbial form by means of this suffix.

- (11) *tučno*<sub>Adv</sub> ‘fatty’ < *tučný*<sub>Adj</sub> ‘fat’;  
*tvrdo*<sub>Adv</sub> ‘hard’ < *tvrký*<sub>Adj</sub> ‘hard’; etc.

#### 3.1.3. Slovak de-verbal derivation

The most in-depth debate of de-verbal derivation in Slovak can be found in Buzássyová (1974) and Furdík (2004) who 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’.

- |      |                         |                                |                                    |                                   |
|------|-------------------------|--------------------------------|------------------------------------|-----------------------------------|
| (12) | <i>písať</i> ‘to write’ | → <i>pisateľ</i> <sub>n</sub>  | <i>pisár</i> <sub>n</sub> ‘writer’ | Agent of an action                |
|      |                         | → <i>pisadlo</i> <sub>n</sub>  | ‘writing implement’                | Instrument of an action           |
|      |                         | → <i>pisanie</i> <sub>n</sub>  | ‘writing’                          | Objectification of an action      |
|      |                         | → <i>pisáčka</i> <sub>n</sub>  | ‘act of writing’                   | Result of an action               |
|      |                         | → <i>pisareň</i> <sub>n</sub>  | ‘writing room’                     | Place of an action                |
|      |                         | → <i>pisanka</i> <sub>n</sub>  | ‘writing book’                     | Object of an action               |
|      |                         | → <i>pisací</i> <sub>adj</sub> | ‘writing’                          | Designed for writing <sup>2</sup> |
|      |                         | → <i>pisany</i> <sub>adj</sub> | ‘written’                          | Property of being written         |

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

### Verbs → Nouns

The suffix ‘-nie’ establishes an absolutely regular paradigm of verbal nouns. Each analysed verb in Slovak derives a verbal noun by means of this suffix.

- (13) *otáčanie*<sub>N</sub> ‘rotating’ < *otáčať*<sub>V</sub> ‘to rotate’;  
*chodievanie*<sub>N</sub> ‘walking’ < *chodiť*<sub>V</sub> ‘to walk’;  
*lietanie*<sub>N</sub> ‘flying’ < *lietať*<sub>V</sub> ‘to fly’; etc.

### Verbs → Adjectives

A fully regular adjectival paradigm is formed by the ‘-ucí/-ací’ suffix.

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<sup>2</sup> Used in the Slovak expressions such as: *pisacie potreby* ‘writing material’.

- (14) *otáčací*<sub>Adj</sub> and *otáčajúci*<sub>Adj</sub> ‘rotating’ < *otáčať*<sub>V</sub> ‘to rotate’;  
*chodiaci*<sub>Adj</sub> ‘walking’ < *chodiť*<sub>V</sub> ‘to walk’;  
*lietajúci*<sub>Adj</sub> and *lietací*<sub>Adj</sub> ‘flying’ < *lietať*<sub>V</sub> ‘to fly’; etc.

### Verbs → Adverbs

Although it is possible to derive adverbs from verbs, this type of derivation produces a merely semi-regular paradigm. Most of the adverbs in Slovak are derived by means of the ‘-(v)o’ suffix. In my research, more than half of the verbs under discussion produced their adverbial form by means of this suffix.

- (15) *otáčavo*<sub>Adv</sub> ‘in a rotator manner’ < *otáčať*<sub>V</sub> ‘to rotate’;  
*lietavo*<sub>Adv</sub> ‘in a flying manner’ < *lietať*<sub>V</sub> ‘to fly’; etc.

### Verbs → Verbs

The derivation of verbs from verbs in Slovak is highly productive, mainly by virtue of *aktionsart* (i.e. the property of verbal predicates, cf. Sokolová 2009, Esvan 2007, Isačenko 1960). As a result, de-verbal derivation can give rise to several fully regular derivational paradigms in Slovak. In the set of analysed data, each of the listed verbs derives another verb, the meaning of which is the same as that of the base verb. What is, however, changed, is the verbal aspect of the verb in question. To illustrate, Slovak verb *otáčať*<sub>V</sub> ‘to rotate’ has the imperfective aspect, while the verb *otočiť*<sub>V</sub> ‘to rotate’ has perfective aspect. While the former is a grammatical aspect used to describe a situation with internal structure, such as ‘ongoing’, ‘habitual’, ‘repeated’, etc.; the latter views a situation as a simple whole. The perfective aspect of, for instance, *chodiť*<sub>V</sub> ‘to walk’ is *chodiť*<sub>V</sub>; of *lietať*<sub>V</sub> ‘to fly’ it is *lietavať*<sub>V</sub>; of *utekať*<sub>V</sub> ‘to escape’ it is *utiecť*<sub>V</sub>; of *jazdiť*<sub>V</sub> ‘to ride’; it is *jazdiť*<sub>V</sub>; of *cestovať*<sub>V</sub> ‘to travel’ it is *cestovávať*<sub>V</sub>, etc.

The formation of regular de-verbal derivational paradigms is permitted by a wide range of prefixes as well. In the accomplished analysis, several fully regular paradigms were established which are fleshed out by means of prefixes. The following prefixes produced fully regular paradigms of motion verbs, without any gaps or peculiarities: ‘ne-’, ‘na-’, ‘nad-’, ‘od-’, ‘do-’, ‘s-/z-’, ‘v-/vy-’ and ‘po-’. Part of the paradigm obtained with the prefix ‘po-’ is illustrated in (16).

- (16) *pootočiť*<sub>V</sub> ‘to turn slightly’ < *otáčať*<sub>V</sub> ‘to rotate’;  
*pochodiť*<sub>V</sub> ‘to take a walk’ < *chodiť*<sub>V</sub> ‘to walk’;  
*popotápať*<sub>V</sub> ‘to dive a bit’ < *potápať*<sub>V</sub> ‘to dive’;  
*pokĺznuť*<sub>saV</sub> ‘to slip’ < *kĺzať*<sub>V</sub> ‘to slide’;  
*pogúľať*<sub>V</sub> ‘to roll a little’ < *gúľať*<sub>V</sub> ‘to roll’;  
*pohojdať*<sub>V</sub> ‘to swing a bit’ < *hojdať*<sub>V</sub> ‘to swing’;  
*potancovať*<sub>V</sub> ‘to dance a little’ < *tancovať*<sub>V</sub> ‘to dance’;  
*poplávať*<sub>siV</sub> ‘to swim a bit’ < *plávať*<sub>V</sub> ‘to swim’;  
*pocestovať*<sub>V</sub> ‘to travel a bit’ < *cestovať*<sub>V</sub> ‘to travel’;  
*popadať*<sub>V</sub> ‘to fall down’ < *padať*<sub>V</sub> ‘to fall’; etc.

## Summary

To sum it up, all three types of derivation in Slovak are able to generate fully regular derivational paradigms. Within the conceptual category of family members, no fully regular derivational paradigm is recognized in Slovak de-substantival derivation. Nevertheless, it needs to be emphasised that the derivation of, for instance, diminutives is carried out by two different suffixes, depending on the gender of the noun in question. Thus, the paradigm of female diminutive nouns is entirely regular, just like that of male diminutive nouns. Likewise, the derivation of adjectives from nouns within the field of size and shape adjectives has to do with gender. The derivation of verbs from nouns is performed in a less regular fashion. The derivation of adverbs is not ascertained.

De-verbal derivation, carried out mostly by means of prefixes, allows for the formation of fully regular derivational paradigms of motion verbs, without any gaps or other peculiarities. De-verbal derivation can also produce a fully regular derivational paradigm of substantives and adjectives. 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 studied derived the corresponding adverbial form.

De-adjectival derivation produces fully regular derivational paradigms of Slovak nouns and Slovak adverbs. Each adjective derives its substantival and its adverbial form. The derivational paradigms of verbs and adjectives are almost fully regular paradigms with few gaps.

## 3.2. English

### 3.2.1. De-substantival derivation

#### Nouns → Nouns

The most regular derivational paradigm of English substantives examined for the purposes of this research involves the suffix ‘-ship’. The derivation with this suffix is exemplified in (17). Other suffixes creating highly regular substantival paradigms are the suffixes ‘-ness’ and ‘-hood’.

- (17) ‘daughter<sub>N</sub>’ → ‘daughtership<sub>N</sub>’;  
‘father<sub>N</sub>’ → ‘fathership<sub>N</sub>’; etc.

Although not fully, but comparatively regular derivational paradigms of substantives taken from the conceptual category of family members are also found with several prefixes, such as with the prefix ‘step-’ or ‘non-’. The prefix ‘step-’ modified 15 out of 20 examined nouns and the prefix ‘non-’ modified 14 nouns.

#### Nouns → Adjectives

The derivation of adjectives from nouns is, in English, carried out by several suffixes. The most, almost fully regular adjectival paradigm is found with the suffix ‘-less’. This suffix can be added to 19 out of 20 English nouns examined for the purposes of the research. It should be, however, stated that the only noun to which the suffix cannot be added is the word ‘*fiancé*’, the word taken from French. If some other word was listed instead, the suffix ‘-less’ would probably form an entirely regular paradigm.



The picture of the derivational paradigm obtained for the ‘-less’ suffix is the following:

- (18) ‘aunt<sub>N</sub>’ → ‘auntless<sub>Adj</sub>’;  
‘uncle<sub>N</sub>’ → ‘uncleless<sub>Adj</sub>’;  
‘child<sub>N</sub>’ → ‘childless<sub>Adj</sub>’; etc.

Interestingly, almost any adjective, originally derived from the corresponding noun can be further modified by means of the prefix ‘un-’. Such paradigms are fairly regular.

- (19) ‘mother<sub>N</sub>’ → ‘mothered<sub>Adj</sub>’ → ‘**un**mothered<sub>Adj</sub>’;  
‘motherlike<sub>Adj</sub>’ → ‘**un**motherlike<sub>Adj</sub>’;  
‘motherish<sub>Adj</sub>’ → ‘**un**motherish<sub>Adj</sub>’; etc.

### 3.2.2. De-adjectival derivation

#### Adjectives → Nouns

Fully regular derivational paradigm of substantives derived from adjectives in English is found with the suffix ‘-ness’. The ‘-ness’ suffix can be attached to all the adjectives in question.

- (20) ‘fat<sub>Adj</sub>’ → ‘fatness<sub>N</sub>’;  
‘tall<sub>Adj</sub>’ → ‘tallness<sub>N</sub>’; etc.

#### Adjectives → Adjectives

The only suffix which derives, although not a fully, but a highly regular derivational paradigm of English adjectives is the suffix ‘-ish’. Nevertheless, the role of prefixes is of great importance in English de-adjectival derivation. There are several prefixes available for the formation of adjectival paradigms. The most, almost fully regular adjectival paradigms are found with the prefixes ‘un-’; ‘super-’ and ‘non-’.

#### Adjectives → Verbs

Not a fully regular paradigm is ascertained with this type of derivation, although the prefix ‘en-’ produces a derivational paradigm with three gaps only. Some of the members of the paradigm are, for instance: ‘to fatten<sub>V</sub>’; ‘to deepen<sub>V</sub>’; ‘to harden<sub>V</sub>’; ‘to sharpen<sub>V</sub>’; etc.

#### Adjectives → Adverbs

Fully regular adverbial paradigm is found with the suffix ‘-ly’. The suffix can be added to any of the adjectives of our sample.

- (21) ‘fat<sub>Adj</sub>’ → ‘fatly<sub>Adv</sub>’;  
‘deep<sub>Adj</sub>’ → ‘deeply<sub>Adv</sub>’; etc.

### 3.2.3. De-verbal derivation

#### Verbs → Nouns

Two suffixes, the suffix ‘-ing’ and the suffix ‘-er/or’ established fully regular derivational substantival paradigms. The former gives rise to nouns such as:

- (22) ‘to fly<sub>V</sub>’ → ‘fly**ing**<sub>N</sub>’;  
‘to walk<sub>V</sub>’ → ‘walk**ing**<sub>N</sub>’, etc.

The latter suffix derives nouns such as:

- (23) ‘walk**er**<sub>N</sub>’ < ‘to walk<sub>V</sub>’;  
‘fly**er**<sub>N</sub>’ < ‘to fly<sub>V</sub>’; etc.

The second most fully completed paradigm is found with the nouns converted from verbs. Each of the selected verbs, with the exception of the verb ‘to rotate’ exists as a noun as well. Thus, it is possible to find, for instance ‘a walk’, ‘a fall’, ‘a ride’, etc. The suffix ‘-(abil)ity’ also derives a highly regular derivational paradigm of English nouns, with only two gaps. The paradigm has among its members ‘rotability<sub>N</sub>’; ‘walkability<sub>N</sub>’; ‘flyability<sub>N</sub>’; ‘escapability<sub>N</sub>’; etc. Other suffixes, such as ‘-ment’, ‘-tion’ or ‘-ee’ do not produce regular paradigms. They are usually attached to only one or two of the examined verbs.

#### Verbs → Adjectives

The only fully regular derivational paradigm of adjectives derived from verbs is found with the suffix ‘-able’, by means of which adjectives such as those in (24) are derived:

- (24) ‘rotat**able**<sub>Adj</sub>’; ‘walk**able**<sub>Adj</sub>’; ‘fly**able**<sub>Adj</sub>’; ‘jump**able**<sub>Adj</sub>’; ‘escap**able**<sub>Adj</sub>’; etc.

#### Verbs → Verbs

The only way to modify already existing verbs is to attach a prefix, as in ‘to overjump’ or ‘to underfly’. Nevertheless, even if the verb derives other verbs by means of adding a prefix, the paradigms tend to be irregular. Just a few semi-regular verbal derivational paradigms were identified in the research.

#### Verbs → Adverbs

De-verbal derivation allows for the formation of, an although not fully, but still a highly regular adverbial paradigm by means of the suffix ‘-ly’. It should be, however, stated that it is necessary to derive an adjective first. There are two gaps in the paradigm. Its members are, for example:

- (25) ‘rotat**ively**<sub>Adv</sub>’ < ‘to rotate<sub>V</sub>’;  
‘danc**ingly**<sub>Adv</sub>’ < ‘to dance<sub>V</sub>’; etc.

## Summary

To summarize, all three types of derivation are, in English, productive in the formation of derivational paradigms. De-substantival derivation enables the productive formation of nouns and adjectives. Derivation of verbs from nouns is possible with conversion, however, the paradigm is gappy. Derivation of adverbs from nouns is not ascertained. Several highly regular derivational paradigms are found with this type of derivation; however, the only highly regular derivational paradigm is that of English nouns. The paradigm is formed by the suffix ‘-ship’.

Looking at English de-verbal derivation, the most productive derivation is the derivation of nouns. Two suffixes derive fully regular substantival paradigms, while highly regular paradigms are found with converted verbs and with a few other suffixes and prefixes as well. De-verbal derivation gives rise to fully regular adjectival paradigms as well. The paradigm of adverbs is almost fully regular. Only two gaps were identified in the paradigm. The derivation of verbs from verbs is fairly unproductive.

De-adjectival 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 regular paradigm of English nouns is one in which the nouns end in the suffix ‘-ness’. Fully regular is also the adverbial paradigm obtained by means of the suffix ‘-ly’. Derivation of verbs from adjectives produced merely a relatively regular paradigm. Deriving adjectives from adjectives is represented mostly by means of prefixes, such as ‘super-’, ‘non-’ and ‘un-’.

### 3.3. French

#### 3.3.1. De-substantival derivation

De-substantival derivation in French is rather unproductive. This type of derivation does not give rise to any regular derivational paradigm. It is even impossible to refer to semi-regular paradigms.

#### 3.3.2. De-adjectival derivation

De-adjectival derivation in French is capable of producing nouns, adverbs, verbs and other adjectives.

### Adjectives → Adverbs

A fully regular adverbial paradigm is formed by means of the suffix ‘-ment’.

- (26) *gros*<sub>Adj</sub> ‘fat’ → *grossièrement*<sub>Adv</sub>/*grossissement*<sub>Adv</sub> ‘fatty’;  
*profond*<sub>Adj</sub> ‘deep’ → *profondément*<sub>Adv</sub> ‘deeply’; etc.

### Adjectives → Nouns

Several suffixes derive nouns from adjectives. The most regular paradigm is found with the suffix ‘-eur’, however the paradigm is merely semi-regular.

### Adjectives → Adjectives

The derivation of adjectives from adjectives is rather irregular in French. Three suffixes derived adjectives from adjectives in the analysed sample. However, neither of the three derived regular adjectival paradigm. To illustrate, the suffix ‘-able’ gives rise to *basable*<sub>Adj</sub> ‘one which can be decreased’; *corsable*<sub>Adj</sub> ‘one which can be sharpen’ and *déliable*<sub>Adj</sub> ‘one which can be slimmed’.

### Adjectives → Verbs

The derivation of verbs from adjectives is also rather irregular. The derivation is enabled by the following suffixes: the suffix ‘-er’ and the suffix ‘-ir’. The former derives a semi-regular derivational paradigm with verbs such as *profonder*<sub>V</sub> ‘to deepen’; *baisser*<sub>V</sub> ‘to lower’; *mincer*<sub>V</sub> ‘to slenderize’; *carrer*<sub>V</sub> ‘to square’; *solidifier*<sub>V</sub> ‘to harden’; etc. The latter derives a rather incomplete paradigm with the following four verbs only: *grossir*<sub>V</sub> ‘to get fat’; *durcir*<sub>V</sub> ‘to harden’; *grandir*<sub>V</sub> ‘to enlarge’ and *mincir*<sub>V</sub> ‘to thin’.

#### 3.3.3. De-verbal derivation

De-verbal derivation in French allows for the formation of nouns, adjectives and verbs. The derivation of adverbs from verbs is not ascertained.

### Verbs → Nouns

The most regular derivational paradigm of nouns derived from verbs, however still not fully regular, is found with the suffix ‘-eur’, which produces the paradigm of male agentive nouns as exemplified below:

- (27) *marcheur*<sub>N</sub> ‘walker’ < *marcher*<sub>V</sub> ‘to walk’;  
*danseur*<sub>N</sub> ‘dancer’ < *danse*<sub>V</sub> ‘to dance’; etc.

Female agentive nouns are derived from verbs by means of the suffix ‘-euse’, a variant of the suffix ‘-eur’, which also produces a rather regular derivational paradigm with few gaps only.

- (28) *marcheuse*<sub>N</sub> ‘female walker’ < *marcher*<sub>V</sub> ‘to walk’;  
*nagereuse*<sub>N</sub> ‘female swimmer’ < *nager*<sub>V</sub> ‘to swim’; etc.

### Verbs → Adjectives

The most complete paradigm of adjectives derived from verbs is found with the suffix ‘-ant’. The paradigm is, unfortunately, not fully regular and has members such as *tournant*<sub>Adj</sub> ‘rotary’; *marchant*<sub>Adj</sub> ‘walking’; *voletant*<sub>Adj</sub> ‘flying’; etc.

### Verbs → Verbs

De-verbal derivation gives rise to verbs as well. The paradigm of verbs in French is formed by the suffix ‘-er’. The paradigm is semi regular because only half of the examined verbs derive other verbs by means of this suffix. Possible verbs are illustrated in (29).

- (29) *tournailler*<sub>v</sub> ‘to turn’ from *tourner*<sub>v</sub> ‘to rotate’;  
*voleter*<sub>v</sub> ‘to flutter’ from *voler*<sub>v</sub> ‘to fly’; etc.

### Summary

To conclude, out of all the three examined languages, the formation of derivational paradigms is the most unproductive in French. De-substantival derivation is the weakest one. Although the derivation makes it possible to derive nouns, adverbs, adjectives and verbs, no fully regular paradigm is found with this type of derivation. Unfortunately, nor can one speak about semi-regular paradigms formation.

De-adjectival derivation in French serves for the derivation of nouns, adverbs, verbs and other adjectives. The paradigm of adverbs which are derived from adjectives is the only fully regular one. 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. Paradigms of adjectives are semi-regular.

Verbs in French can derive nouns, adjectives and verbs. French de-verbal derivation is unproductive in deriving adverbs. This type of derivation is most productive in generating substantival derivational paradigms. The derivation of adjectives from verbs is carried out in a pretty regular way as well. The paradigms of verbs derived from other verbs are mostly semi-regular.

### 4. Conclusion

The research into the role of paradigms within the scope of derivational morphology revealed that the paradigmatic treatment of derivational morphology should not be rejected *a priori*. The results of the research show that all the examined types of derivation, de-verbal, de-adjectival and de-substantival can give rise to fully regular derivational paradigms in all the examined languages. With each of these types, at least one of the established derivational paradigms is fully regular and a number of them are highly regular.

In Slovak, the most productive out of the three types of derivation is unquestionably the de-verbal one. De-verbal derivation in Slovak generates several fully regular verbal derivational paradigms by virtue of *aktionsart*. Deriving nouns and adjectives from verbs is, in Slovak, likewise absolutely productive. Slovak de-adjectival derivation is fully productive in deriving nouns and adverbs and highly productive in deriving paradigms of adjectives and verbs. Although de-substantival derivation can give birth to regular adjectival and substantival paradigms, neither of them is fully regular. Verbal paradigms are rather irregular, while adverbial paradigms are not ascertained.

In English, de-substantival derivation allows for the derivation of nouns and adjectives. Paradigms of verbs and adverbs derived from nouns are not ascertained. Only the substantival paradigm is fully regular. What should be stated is that most of the affixes would give rise to fully completed adjectival derivational paradigm, if some other noun than the French *fiancé* was listed instead. English de-adjectival derivation is productive in deriving nouns, adverbs and adjectives. The derivation of verbs from adjectives is less productive, but possible. A fully regular paradigm is found with the derivation of nouns and adverbs from adjectives. De-verbal derivation is surely most productive in the formation of substantival

derivational paradigms. Two fully regular paradigms are attested. A highly regular paradigm is found with converted verbs, where only one gap is identified. A fully regular paradigm is also that of adjectives derived from verbs. English de-verbal derivation constitutes a highly regular adverbial paradigm as well.

The least productive formation of derivational paradigms is seen in French. Out of the three examined types of derivation, the de-substantival one is the least productive. No fully regular derivational paradigm is ascertained with this type of derivation. Unfortunately, nor can one speak about semi-regular paradigms formation. French de-adjectival derivation is the only type which is capable of constituting a fully regular derivational paradigm. This paradigm is the adverbial one. Paradigms of nouns, adverbs and adjectives are rather irregular. De-verbal derivation in French can give rise to nouns, adjectives and verbs. The derivation of adverbs from nouns is not ascertained. De-verbal derivation is the most productive in deriving substantives and adjectives. Verbal paradigms are mostly semi-regular.

All in all, the results of the research demonstrate that the concept of derivational paradigm is well defined and that its introduction into derivational morphology might provide for new linguistic discoveries.

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