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Inflection vs. derivation: How split is Latvian morphology?[1]

> *"But if we do not understand how the systems themselves work, how can we find out whether their workings conform to our putative general claims?"* (Aronoff 1994: 166)

Abstract

This article investigates the proposed distinction between inflectional and derivational morphology in Latvian, concluding that the division is not valid for this language. Most of the morphological processes surveyed here cannot be arranged on a continuum between typical inflection and typical derivation, and any border that one might draw would be arbitrary. This can be interpreted as a characteristic feature of agglutinative languages. Further parameters showing that Latvian morphology is split between the fusional and the agglutinative type are also discussed.

1. Introduction

The term "split morphology" has been used by linguists with two different meanings. To my knowledge, it was first coined by Stephen Anderson (1982) to express the claim that morphological theory must distinguish between morphological processes operating in the lexicon and those which are connected to syntactic rules (cf. also Perlmutter 1988). Essentially, this is a way to incorporate the traditional distinction between derivation and inflection into a formal theory of grammar. Recently, Frans Plank (1999) has used the same term to describe the fact that parts of a language's morphology can be of a fusional type, while other parts meet criteria that characterize agglutination. In this paper, I will deal with "split morphology" in both senses. The majority is devoted to the question of how inflectional and derivational processes may be distinguished in Latvian. In section 5, I will deal with the characteristics of fusional and agglutinative morphology that are found in Latvian. Furthermore, I will show that the two divisions – the two readings of "split morphology" – are related. The distinction between inflection and derivation is not the same and, especially, it is not of equal importance in languages of different types. This fact is probably common knowledge in some parts of the linguistic world (cf. Percov 1996: 42; Plungian 1994), but it has been largely ignored in others.

Basically, the distinction between inflection and derivation is lexicological, as it is concerned with what forms (as part of concrete utterances) belong to which lexeme, i.e., abstract lexical unit. Inflectional processes create stems and wordforms associated with one lexeme, while the output of derivational processes belongs to a different lexeme than the input. Now

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the notion of lexeme and the division between inflectional and derivational processes are mutually dependent and cannot be used to define one another; otherwise the definitions would be circular. For this reason, among others, linguists started to search for criteria that would allow classifying a given process as inflectional or derivational, without presupposing a delimitation of lexemes. At the same time it has been questioned whether dividing morphological processes into those inflectional and those derivational was at all important for the grammatical analysis, and if so, what the exact nature of the division was and how it should be handled. The subject has been much debated in the 1980s and 1990s in several fields of linguistics (cf. BEARD 1998; BOOIJ 1998; BYBEE 1985; DRESSLER 1989; PERCOV 1996; PLANK 1994; STUMP 1998; WURZEL 1984: 40–51). Despite some fundamental challenges and alternative views, the majority of linguists still seem to agree that the division is useful and should be kept. Among typologists, further points of consent apparently are:

(i)   The distinction is gradual and not categorial, that is, a given process may be "more" or "less" inflectional/derivational; this view may involve the notion of prototypicality (BAUER 1988: 86 f.; DRESSLER 1989; PERCOV 1996).

(ii)   The division is language specific, i.e., what is (more) inflectional in one language may be (more) derivational in another; there are however categories which are crosslinguistically more likely to be expressed by inflection than others (see esp. BYBEE 1985).

(iii)   The difference between inflection and derivation can be described by a number of parameters with opposite values, for example productivity, regular meaning, obligatoriness. To my knowledge, the most extensive list of such parameters (namely, 28) has been given by PLANK (1994). Each single parameter may also be disregarded in some languages, but in sum, they will define inflection and derivation as opposing end points of a scale (cf. also PERCOV 1996, who gives counterexamples for almost all parameters).

In my eyes, it is an important question whether all these assumptions should hold universally or not. Some linguists have discussed parameters distinguishing inflection and derivation for a single language (see e.g. BASSARAK 1985 for a thorough investigation of Turkish verb forms). In most of the discussion, however, a variety of languages is taken into consideration, and it is assumed that the same parameters will be valid for the inflection/derivation distinction in any language.

I am skeptical of this assumption. A list of possible parameters as given by PLANK (1994) is useful for language comparison in providing some framework for the discussion (to ensure we are talking about similar phenomena in languages of different types). But the validity and relative importance of the parameters is dependent on the structural properties of the individual language and will differ for languages of different types. Also, the "poles" of the continuum (if there is a continuum), or the typical cases of inflection and derivation, should be determined on language specific grounds.

In this paper, I will therefore begin by singling out these typical cases in Latvian; this will be done without much justification, though tacitly assuming some of the recurrent arguments in the linguistic discussion. From these typical cases, I will derive the parameters that are of importance for Latvian morphology. In section 3, several processes that seem to be neither typical inflection nor derivation will be surveyed, and the parameters elaborated in section 2 will be used to determine their position relative to the typical instances of inflection and derivation. After having tired the reader with a lot of details, I will sum up my con-

clusions in section 4. My major claim will be that the division into inflectional and derivational processes is not relevant for Latvian morphology and syntax. We can neither draw a border line that divides the two areas in a non-arbitrary way, nor does it make sense to arrange all morphological processes on a continuum between typical inflection and typical derivation. The second claim, that all this has to do with morphological typology and the mixed fusional-agglutinative nature of Latvian, will be explained rather sketchily in section 5, drawing on some ideas expressed by VLADIMÍR SKALIČKA (SKALIČKA 1979 [1966]).

2. Typical instances of inflection and derivation

2.1. Basic concepts

To start, some explanations of my terminology as well as some basic facts about the make up of Latvian words will be necessary. I will consider here only the major parts of speech: nouns, verbs, and adjectives. All general claims should be read as referring to words of these classes only (which make up the major part of the lexicon).

A basic distinction is that between the **lexeme**, an abstract unit associated with a meaning and a set of potential forms, and the **wordform**, a word as it appears in spoken and written text, realizing a lexeme. Wordforms consist of a **stem** and an **ending**. The ending is usually the last segmentable part (the last suffix) of a wordform (exceptions are found in forms of reflexive verbs, see section 3.3). In some instances, I will assume zero-endings (2SG and 3rd person present of some verbs, adverbial ending after comparative suffix). A stem may be morphologically simple or complex. A simple stem consists of the root only, a complex stem contains the root plus one or several suffixes, and/or a prefix, or may involve more than one root. For the present purpose, only suffixes will be of importance. Examples:

simple stem + ending: *aktier-is* 'actor, nom.sg.'; *las-u* 'read, 1SG, present tense'

complex stem + ending: *dziedā-tāj-s* 'singer' (root + suffix ('agent') + nom.sg [m])
                          ap-kaun-o-j-oš-a 'shameful'(see ex. (3))
                          1   2   3 4 5 6
                          1 prefix   2 root ('shame')   3 suffix (verbalizer)
                          4 glide   5 suffix (present participle)   6 ending (nom.sg.f)

I will use the term **suffix** as a cover term for all non-lexical morphemes that follow the root; hence, endings are suffixes, too. Suffixes which are not endings will be called **stem-deriving** suffixes, as they attach to a stem (simple or complex) and create another stem (complex).

In this paper, I follow the common usage of citing verbs with their infinitive form, nouns and adjectives by their nominative singular forms. To facilitate the recognition of the part of speech, I will use the following conventions: the citation form of verbs will not be segmented, for example *vilkt* 'to pull' (the final -*t* marks the infinitive); for nouns, I will divide the stem and the nominative singular ending, e.g. *gald-s* 'table', *galv-a* 'head', and for adjectives, I will give both masculine and feminine singular endings of the citation form, for example *lab-s, -a* 'good'.

The traditional part of speech labels **noun**, **verb**, and **adjective** will be used solely with reference to **lexical categories**, that is, classes of lexemes (not of wordforms). The categorization is based on inherent properties of the lexemes and not on the syntactic behavior of their wordforms. Therefore, a given wordform is "verbal", as long as it is understood as belonging to a lexeme of the category verb, regardless of its syntactic function and morphological marking (in other words: participles aren't adjectives). The term **syntactic category**, on the other hand, will be used in a much narrower sense than usual. Here, it is wordforms that are categorized, based on syntactic criteria such as distribution, agreement, and government. For example, the English wordforms *sings, sung, singing* belong to three different syntactic categories in my terminology. An example of a syntactic category in Latvian (as well as in English) is "finite verb".

Besides lexemes and wordforms, stems may also be classified: based on the range of endings which may attach to it, each stem can be assigned to a **stem category**. Roughly, there are five stem categories in Latvian. They are associated with the lexical categories and named after these: nouns have stems of category N which take case+number endings, adjectives have stems of category A which take two sets of endings expressing case+number+gender plus an adverbial ending. Verbs have several stems. Three of them are exclusively verbal and do not (or not necessarily) contain a stem-deriving suffix; these are traditionally called present, past and infinitive stem. I will also refer to them as V1, V2, and V3, respectively, or as first, second and third stem, to avoid confusion of the "infinitive stem" and the "infinitive" as a form. In addition, verbs have derived stems of type A which turn up in the participles (see section 3.2).

2.2. Setting the poles

Processes which are undisputedly inflectional in Latvian are: (i) case and number inflection of nouns, (ii) case, number, gender inflection of adjectives, (iii) person inflection in verbs. Example paradigms:

Noun inflection: case and number *gald-s* 'table'		Adjective inflection: case, gender and number *lab-s, -a* 'good'			
Class 1, m. a-decl.		masculine		feminine	
singular	plural	singular	plural	singular	plural
Nominative	*gald-s*	*gald-i*	*lab-s*	*lab-i*	*lab-a*	*lab-as*
Genitive	*gald-a*	*gald-u*	*lab-a*	*lab-u*	*lab-as*	*lab-u*
Dative	*gald-am*	*gald-iem*	*lab-am*	*lab-iem*	*lab-ai*	*lab-ăm*
Accusative	*gald-u*	*gald-us*	*lab-u*	*lab-us*	*lab-u*	*lab-as*
Locative	*gald-ā*	*gald-os*	*lab-ā*	*lab-os*	*lab-ā*	*lab-ās*

Note: There are 6 different declension classes for nouns (but only one for adjectives). The adjective paradigm given here is also called the indefinite paradigm. For the corresponding definite forms, see section 3.3.

Verb inflection: person and tense
vilkt 'to pull, draw'

	present tense		past tense		future tense	
1sg pl	*velk-u*	*velk-am*	*vilk-u*	*vilk-ām*	*vilk-š-u*	*vilk-s-im*
2sg pl	*velc*	*velk-at*	*vilk-i*	*vilk-āt*	*vilk-s-i*	*vilk-s-iet*
3	*velk*		*vilk-a*		*vilk-s*	

skatīt 'to look at'

	present tense		past tense		future tense	
1sg pl	*skat-u*	*skat-ām*	*skatīj-u*	*skatīj-ām*	*skatī-š-u*	*skatī-s-im*
2sg pl	*skat-i*	*skat-āt*	*skatīj-i*	*skatīj-āt*	*skatī-s-i*	*skatī-s-iet*
3	*skat-a*		*skatīj-a*		*skatī-s*	

It is less obvious what the most typical cases of derivation are. I chose the following three, one for each part of speech:

(i)   Derivation of nouns by the suffix *-īb-*: *bērn-s* 'child'> *bērn-īb-a* 'childhood'; *person-a* 'person'> *person-īb-a* 'personality'; *bagāt-s,-a* 'rich'> *bagāt-īb-a* 'riches, wealth'; *vadīt* (first stem: *vad-*) 'to lead, direct'> *vad-īb-a* 'leadership, guidance'.

(ii)   Derivation of adjectives by the suffix *-īg-*: *draug-s* 'friend'> *draudz-īg-s, -a* 'friendly'; *person-a* 'person'> *person-īg-s, -a* 'personal'; *apaļ-š, -a* 'round'> *apaļ-īg-s, -a* 'roundish'; *smaidīt* 'to smile'> *smaid-īg-s, -a* 'smiling'; *redzēt* 'to see'> *redz-īg-s, -a* 'sharp-eyed'.

(iii) Derivation of causative verbs by the suffix *-inā²-*: *augt* 'to grow (itr.)'> *audz-inā-t* 'to educate'; *raudāt* 'to weep, cry'> *raud-inā-t* 'to move to tear'; *glud-s,-a* 'smooth'> *glud-inā-t* 'to iron, to press'; *god-s* 'honour'> *god-inā-t* 'to do homage'.

There are quite a lot of such derivational suffixes in Latvian, especially for the derivation of nouns. There is also a subsystem of word formation for international words of Latin or Greek origin which I will not consider in this paper (cf. METUZĀLE-KANGERE 1985).

2.3. Deriving parameters

By comparing these typical cases of inflection and derivation, we can conclude parameters which may characterize the opposition between the two spheres in Latvian.

First, we can consider the **output** of the processes:

(1)   The typical inflectional processes create **wordforms**, while the derivational processes cited create **stems**.

(2)   The wordforms created by the typical inflectional processes come in sets. The forms and the endings that define them stand in opposition to other forms and endings; therefore, the processes can be called "**paradigm-creating**". The stems created by derivational processes are not in paradigmatic opposition to other stems.

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² There is evidence for splitting this suffix up into *-in-* (causative) + *-ā-* (stem building element, not in the present stem); for simplicity, I follow the Latvian tradition and treat it as a single suffix.

The input of a morphological process is less easy to determine; for all examples so far, it seems to be stems (rather than roots or lexemes or wordforms).

The next parameters concern **categories**. It is often said that inflectional processes never "change the category" of a word, while derivational sometimes do. To make sense of such a statement, we have to state more precisely what is meant by "category", and what is the standard of comparison for claiming a "change". The part of speech or lexical category is of limited use here; inflectional processes by definition create wordforms belonging to one and the same lexeme, so they cannot alter the lexical category and it would be redundant to state that. It is also not clear to me whether stems alone can be assigned to a part of speech, which would be a prerequisite for judging a change when a suffix is added. With the prerequisites laid out above, the following statements hold:

(3)   Typical derivational suffixes determine the **stem category** of the stem they derive. Inflectional suffixes attach only to a stem that belongs to a certain category, while a typical derivational suffix attaches to stems of various categories.

(4)   The **syntactic category** (e.g. "finite verb") is determined by the ending of a wordform. Only wordforms belong to a syntactic category: neither stems nor lexemes do. Therefore, inflectional endings "create" rather than "change" the syntactic category. Derivational processes that are stem-deriving can influence the syntactic category only indirectly, by determining the stem category.

In addition, we may regard the semantic category, such as, for example, object, quality, action, state:

(5)   The **semantic category** of a word is determined by the stem. Within a derived stem, typical derivational suffixes determine the semantic category – for example, while *draug-s* 'friend' denotes a person, *draudz-ig-s* 'friendly' refers to a manner or quality. A typical inflectional ending does not change the semantic category of the stem.

To distinguish inflectional from derivational processes reference is often made to **grammaticality**. But this is either a very vague notion or it is a complex that has to be split up into several independent, though probably related, parameters, some of which are themselves rather vague, e.g. "abstractness". There is also a danger of circularity (a category is grammatical if it is expressed by inflection, and inflectional categories are grammatical). The notion of "obligatoriness", which can be considered an important part of "grammaticality", lacks precision, too (cf. MASLOVA 1994; PERCOV 1996).

In Latvian, we can avoid these notions which are vague and difficult to handle because there is one which is unambiguous and easy to apply:

(6)   The categories case, number, gender and person, which are expressed by the inflectional processes, are all subject to **agreement**; i.e., they are either agreement categories in the sense of ANDERSON (see e.g. ANDERSON 1985; ANDERSON 1988a), as gender in adjectives, person in verbs; or they have to be marked on several elements of the phrase, as case and number in nouns, adjectives and determiners.

Finally, **the form:meaning relationship** can be taken into consideration; here, it is interesting to note differences between nominal and verbal inflection.

(7)   In nouns and adjectives, inflectional suffixes (endings) are **cumulative**, i.e., they express more than one category simultaneously (case+number, case+gender+number).

In verbs, this is not always so: segmentable parts, such as the personal endings -*u*, -*i*, etc. and the future suffix -*s*- have only one meaning[3]; but within the paradigms of present tense, there are also unsegmentable forms, and here tense and person are marked cumulatively in one form (e.g. *velc* 'pull:prs:2.sg' against *velk* 'pull:prs:3').

(8)   Endings as well as wordforms may have **homonyms**, e.g. within noun inflection, -*u* denotes 'accusative singular' and 'genitive plural'; the first person verb form *augu* of the verb *augt* 'to grow' is the same in present tense and past tense. In many verbs, the 2.SG and 3 in present tense are homonyms, having zero ending, e.g. *strādā* of *strādāt* 'to work'. In noun inflection, there is also considerable **synonymy** of endings, due to declensional classes (thus, 'dative singular' has the morphs -*am*, -*im*, -*um*, -*ai*, -*ei*, -*ij*). In verbal inflection, synonymy of endings is limited to the present tense; for example, depending on conjugation class, the 2.SG can be marked by zero, the suffix -*i* and/or stem alternation. There are no declensional classes and therefore no synonyms in adjective declension.

Summing up, typical inflectional processes in Latvian can be defined as processes creating wordforms that stand in strict paradigmatic opposition to other forms, belong to a syntactic category and express grammatical categories involved in agreement. Within inflectional paradigms, homonymy and synonymy is possible. Nominal inflectional suffixes are cumulative, verbal are not. Typical derivational processes, on the other hand, create stems, for which they determine both stem category and semantic category. They are neither paradigm-creating nor subject to agreement. Typical derivational suffixes attach to different kinds of stems, don't fuse with other morphs, and have neither synonyms nor homonyms.

There are other features that the reader may have felt lacking so far, for example, means of expression, productivity and regularity of meaning. In my eyes, these do not distinguish inflection and derivation in Latvian. The typical means of expression in both cases is suffixation, and suffixes can have the same kind of shape in both inflection and derivation, e.g. V, C, VC, CV (the most popular suffix shape in Latvian is probably VC). Also, typical derivational processes are highly productive in Latvian, and the meaning is quite regular. For inflectional processes, even if they are called "fully productive", there may be exceptions, e.g. there are impersonal verbs that do not inflect for person, and some words are reasonably called nouns although they do not inflect at all (but, for example, have inherent gender). There are probably differences in degree, but this does not make productivity and regularity reliable criteria. They will however be considered in the subsequent discussion.

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[3]   While in some languages it is justified to see the meaning of 'I' and 'we' as containing two categories, person and number, this is not the case in Latvian (cf. NAU 1998: 29). What distinguishes the personal pronouns as well as the personal endings in verbs is a single category, namely person, which has five exponents (1. SG, 2. SG, 3, 1. PL, 2. PL).

3. Between the poles? Not so typical instances

3.1. Overview

I will now turn to morphological processes that I suspect to be neither typical inflection nor derivation. These comprise all remaining processes traditionally called inflectional as well as some of the processes commonly called derivational. Most of them belong to verbal morphology, which is especially rich in Latvian. The following tables give an overview of the forms that will be discussed in the following subsections. The third column gives the traditional assignment of the process, "F" standing for inflection, and "D" for derivation. The rightmost column names the output (stem or form).

Nouns (*bērn-s* 'child'):

Name	Example	Trad.	Output
Diminutive	*bērn-iņ-š*	D	stem
Vocative	*bērn*	F	form

Adjectives (*lab-s* 'good')

Comparative	*lab-āk-s, -a*	F	stem
Adverbial form	*lab-i*	D	form
Definite paradigm	*lab-ai-s, lab-ā*	F	?

Verbal morphology (ex. *skatīt* 'to look at', where possible; stems: V1: *skat-*, V2 = V3: *skatī(j)-*):

Name	Example	Trad.	Output
Past active participle	*skatīj-is, -usi*	F	stem (?)
Past passive participle	*skatī-t-s,-a*	F	stem
Present active participle	*augt* 'to grow'> *aug-oš-s,-a*	F	stem
Present passive participle	*skat-ām-s,-a*	F	stem
Debitive	*jā-skat-a*	F	form
Evidential	*skat-ot*	F	form
Short form	*skat* 'look!'	D	form
Converb1 (*-ot*)	*skat-ot*	F	form
Converb2 (*-dam-s*)	*skatī-dam-s,-a,-i,-as*	F	form (?)
Converb3 (*-am, -ām*)	*skat-ām*	F	form
Adverbial form (*-us*)	*vilkt* 'to pull'> *vilkš-us*	D	form
Infinitive	*skatī-t*	F	form
Verbal noun (*-šan-a*)	*skatī-šan-a*	D	stem
Actor (*-tāj-s, -ēj-s*)	*skatī-tāj-s* 'spectator'	D	stem
Other deverbal nouns	*skatīj-um-s* 'aspect'; *skat-ien-s* '(a) look'	D	stem
Reflexive verb	*skatīt-ies* 'to look at; to stare'	D/F	?

These processes differ from the typical processes in various ways. They may resemble typical inflection in some parameters and typical derivation in others, or neither in still other instances. The list is not exhaustive. As I have restricted my investigation to suffixes, I didn't include verbal prefixation, a very productive device that poses similar problems.

I will now briefly discuss these processes and their status with regard to inflection and derivation. They will be grouped together according to the first parameter, the output. Besides stem-deriving and wordform-deriving processes, there are two that can be grouped with neither: reflexive verbs and the definite endings of adjectives; these will be discussed at the end of the section.

3.2. Processes creating stems

Stem-deriving processes are supposed to be derivational and not inflectional. The processes discussed in this section, however, differ in some respects from typical derivation, or they may have features in common with typical inflection. Some of them – the comparative and the participles – are usually thought of as inflectional, the others – diminutives and verbal nouns – as derivational. This division is based on tradition and hardly justified on other grounds.

Diminutives

In Latvian, diminutives are very frequent and can be formed from every noun. Diminutives of other lexical categories are possible, but limited in the standard language[4]. I will consider here only noun diminutives. The formation of diminutives is a stem-deriving process, the output is a single stem and it is subject neither to agreement nor government. It differs from typical derivation by the existence of several synonyms, the choice of which is partly determined by declension class: for nouns of class 1 (a-masc.) and 2 (a-fem.), the most common diminutive suffix is *-iņ-*, for nouns of class 3 (e-fem.) and 4 (i-masc.), it is *-īt-*; examples: *dēl-s* 'son'> *dēl-iņ-š*, *meit-a* 'daughter'> *meit-iņ-a*, *pel-e* 'mouse'> *pel-īt-e*, *lāc-is* 'bear'> *lāc-īt-is*. There are other suffixes which may combine with nouns from various declension classes, e.g. *-el-*, but they are much rarer in the standard language. As the above examples already show, the most frequent diminutive suffixes do not determine gender and declension class which are important parts of the stem category (words with the typical derivational suffix *-īb-* are always feminine and belong to class 2). Nor do they determine the semantic category, which is always the same as without the suffix. As expected, diminutive suffixes have no influence on the syntactic category. With this behavior regarding categories, the formation of diminutives differs from both typical derivation and typical inflection. The only feature it shares with inflection is synonymy due to declension class. In other words: it is less typical derivation without approaching inflection. Perhaps this is connected with the function of the suffix: the category expressed is neither fully semantic, nor is it in any way grammatical. The main function of diminutives is pragmatic: they are used to make speech more friendly or polite, in speaking with children, in ironic speech and other special styles.

Comparative

The comparative degree of adjectives is formed by adding the suffix *-āk-* to the stem, followed by the ending; example: *lab-s,-a* 'good'> *lab-āk-s,-a* 'better'. Both indefinite and definite endings are possible. The process thus does not change the stem category, which is A with and without the suffix. It attaches always to stems of this category, i.e. to adjectives and participles. Examples:

(1)   *Naud-as*   *at-mazgā-šan-a*   *Baltij-as*   *valst-īs*   *nav*
        money-GEN   PFX-wash-VN-NOM   Baltic-GEN   state-LOC.PL   NEG:COP.3
        iz-platī-t-āk-a   *kā*   *citur.*
        PFX-spread-PPP-COMP-NOM.F   than   elsewhere
        'In the Baltic states, money laundering is not more widespread than anywhere else.'
                                                      (Diena, 21. 9. 96)

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[4] See RŪĶE-DRAVIŅA (1959) for details about diminutives in several varieties of Latvian.

(2)   **Vis-latvisk-āk-ai-s**   *no*   *vis-iem*   *komponist-iem*   *ir*
      SUP-Latvian-COMP-DEF-NOM.M   of   all-DAT.PL   composer-DAT.PL   COP:3
      Alfrēds Kalniņš.
      Alfrēds Kalniņš.
      'The most Latvian of all composers is Alfrēds Kalniņš.'   (Vasks)

As in many languages, the formation of comparatives is not fully productive in that only a semantically definable subset of adjectives and participles take this suffix. The suffix is found also with other stems, though rarely: the preposition *pēc* 'after' is the base for the adverb *pēc-āk* 'later'.

The only criterion that makes comparatives inflection-like, in my eyes, is the possibility of making up a paradigm, as is done in grammar books, of the positive, the comparative, and the superlative: *lab-s,-a : lab-āk-s,-a : vis-lab-āk-ais,-ā* 'good : better : best'. However, the opposition between comparative and superlative is not so strong; the prefix *vis-*, which in this paradigm distinguishes the superlative from the definite comparative, is not obligatory; in example (2), it could be omitted with no change of meaning.

Participles

Participles are notorious for raising problems with lexical categorization, with the delimitation of lexemes and with distinguishing inflection and derivation. In Latvian linguistics, participles are classified as wordforms of a verbal lexeme. By loosening the association to other wordforms of this lexeme, a participle may lexicalize and become a lexeme of its own. Lexicalized participles belong to the lexical category of adjectives. Since the process of lexicalization is gradual, there are often cases of uncertainty about whether a given item is a participle or an adjective.

From the point of view of morphology, participles are sets of wordforms associated with a derived stem. The stem category is A, i.e., there are an indefinite and a definite paradigm consisting of 20 forms each (5 cases x 2 numbers x 2 genders) and an adverbial form with the ending *-i*. If they denote a gradable manner or quality, they can combine with the comparative suffix, too (see ex. (1)). There are four such participles, each with its own stem-deriving suffix: present active participle (*-oš-*), present passive participle (*-am-* or *-ām-*), past passive participle (*-t-*), and past active participle (*-uš-*). Examples:

(3)   *Man-ā*   *biogrāfij-ā*   *ir*   *arī*   *kād-a*   *pavisam*
      my-LOC   biography-LOC   COP:3   also   some-NOM.F   entirely
      apkaunoj-oš-a   *epizod-e.*
      disgrace-PA-NOM.F   episode-NOM
      'There is also a very shameful episode in my biography.'   (Mielavs)

(4)   *Tik*   *ļoti*   *grib-as*   *pie-ņem-t*   *lēm-um-u,*   *kur-am*
      So   very   want:PRS-3:RFX   PFX-take-INF   decide-NO-ACC   PREL-DAT.M
      bū-tu   *uzreiz*   **redz-am-s**   *rezultāt-s!*
      COP-SUB   at.once   see-PP-NOM.M   result-NOM
      'How I long to make a decision which would have an immediate visible result!'
                                                                                (Mozgis)

(5)   *Atcer-os,*   *kād-s*   **pazīst-am-s**   *aktier-is*   *tagad*
       remember:PRS-1SG   some-NOM.M   know-PP-NOM.M   actor-NOM   now
       veiksm-īg-s   *uz-ņēm-ēj-s*   *reiz*   *stāstīj-a,*   *kā*   **pārsteidz-is**
       success-ADJ-NOM.M PFX-take-AGT-NOM once   tell:PRT-3   how   surprise-PAP.M.SG
       sav-as   *kolēģ-es*   *las-ām*   "Sant-u",   *kā,*   *grēk-ā*
       PRPO-PL.F   colleague-NOM.PL   read-cv3   Santa-ACC   how   sin-LOC
       pieķer-t-as,   *es-ot*   **sāk-uš-as**   *atvaino-t-ies,*   *ka*
       catch-PPP-NOM.PL.F AUX-EVI begin-PAP-PL.F   excuse-INF-RFX   that
       žurnāl-s   *te*   **mētāj-ies,**   *parast-i*   *jau*   *viņ-as*
       journal-NOM   here   lie.around-PAP:RFX   usual-ADV   PART   3-NOM.PL.F
       ne-las-ot.
       NEG-read-EVI

       'I remember a well known actor, now a successful entrepreneur, once told how he had
       caught his colleagues [female] reading "Santa", how they, caught in sin, started to
       apologize, the journal had just been lying around, normally they of course wouldn't
       read [something like that].'   (Santa 10/2000: 31)

The four participles differ considerably with respect to frequency, productivity, lexicaliza-
tion propensity and "derivationality", these four criteria leading to the same ordering[5]. Thus,
the present active participle is the least productive, the least frequent in type and token, its
exponents are most likely to lexicalize, and it resembles typical derivation in most param-
eters. On the other end of the scale, the past active participle is productive with any verb, it
is by far the most frequent in texts, there are only few lexicalizations, and it is the most inflec-
tional according to my parameters. The two passive participles are somewhere in between,
the present passive being more derivational and the past passive more inflectional. For lack
of space, the passive participles will not be discussed here.

The present active participle suffix *-oš-* (see ex. (3)) is similar in function to the suffix *-īg-*
which I have chosen as a typical derivational device. Both derive stems of category A, and
the wordforms are used mainly in the syntactic functions characteristic for adjectives: as
modifiers, non-verbal predicates in copula clauses and (with the ending *-i*) adverbially. Both
at least partly determine the semantic category – while *smaidīt* 'to smile' is an action, *smaid-
oš-s,-a* 'smiling' is a quality (involving an action). The semantic load of *-īg-* is sometimes
more important and not always fully predictable. In some instances the suffixes *-īg-* and *-oš-*
compete (cf. MLLVG-I 1959: 635), for example, both *smaid-oš-s, -a* and *smaid-īg-s, -a* exist
for 'smiling' (*smaidošs* is used for a smiling face and *smaidīgs* for a smiling person). If there
is a lexicalized derivation with the suffix *-īg-*, the present active participle is less likely to be
built. The most important difference between the suffixes *-īg-* and *-oš-* is probably that the
latter combines only with verbs. More precisely, it combines with V1 stems, mainly of intran-
sitive and atelic verbs. The suffix *-īg-* is not restricted to verbs and attaches to different kinds
of stems.

The past active participle should be analyzed from two points of view: its potential and its
most common uses. It is in the latter that its inflectional properties most clearly appear. The
most common use of this participle is within the predicate, with or without a finite auxiliary,
as in the forms *pārsteidzis, esot sakušas,* and *mētājies* in ex. (5). In this position, it has only
four forms, namely the nominatives, e.g. *runāt* 'to talk'> *runāj-is* (m.sg.), *runāj-usi* (f.sg.),

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[5] Statistics supporting this claim can be found in EICHE (1983).

runāj-uš-i (m.pl.), *runāj-uš-as* (f.pl.).The stem-building suffix shows up only in the plural forms, while the singular forms are marked only by their ending[6]. Therefore, the process is stem-deriving as well as form-deriving. The singular forms are also cumulative. As part of the predicate, the forms are in paradigmatic relation to the simple tense forms. This is an additional and rather strong link to other wordforms of the lexeme which the present participles do not have. In other words, this participle is more tightly bound into the verbal paradigm as a whole. When used without an auxiliary, the past active participle has the same distribution as finite verbforms; thus it encompasses the syntactic category as the typical inflectional forms.

Besides this common use, the past active participle is also used attributively in all case forms, with indefinite as well as definite endings. The suffix *-uš-* shows up in all forms except for nominative singular. In these functions, the participle is in paradigmatic relation to the other participles, for example *lid-oš-i putni* 'flying birds' (*lidot* 'to fly') – *aiz-lidoj-uš-i putni* 'birds having flown away' (*aizlidot* 'fly away'), *es-oš-ais* 'the current' – *bij-uš-ais* 'the former' (of *būt* 'to be'). A third syntactic possibility for this participle is its use as a converb (cf. Nau 1998: 44); here, it is opposed to the two converbs that I will discuss later. Attributive and converb use of the past active participle are relatively rare, but not restricted to lexical subclasses; they are possible with any verb.

Verbal noun, deverbal nouns

There are several suffixes for the derivation of deverbal nouns. The most productive and the most frequently employed is *-šan-*, the outcome is called "verbal noun" (see *atmazgā-šan-a* 'laundering' in ex. (1)). This suffix attaches to the third stem of any verb. It is typically derivative in determining the stem category, declension class (2, a-fem.) and gender (feminine). But it does not change the semantic category, which remains action, state, process etc. according to the meaning of the base. The English translation equivalent of the verbal noun is the gerund (e.g. '(the) washing'), the German equivalent is the "substantivierter Infinitiv" ('(das) Waschen'). The suffix is not cumulative, and there is neither homonymy nor synonymy. That means, the process is purely derivational by all formal criteria, but inflectional by functional criteria.

The suffixes *-um-* and *-ien-* are a bit more specific than *-šan-*; besides making nouns out of verbs, they add nuances of meaning. Of the two, *-ien-* attaches only to verbal stems; it is very productive with primary verbs (class 1) but only sporadically employed with secondary verbs (classes 2 and 3); examples: *skat-ien-s* '(a) look'< *skatīt* 'to look', *lēc-ien*-s '(a) jump'< *lēkt* 'to jump'. The functional addition of this suffix is often aspectual: the derivates denote momentaneous or delimited actions or processes, or their results. But there are also other meanings, as in *ēd-ien-s* 'food'< *ēst* 'to eat'. The suffix *-um-* may also denote results, but the meaning of the derivates is less predictable. It is more productive than *-ien-* and attaches not only to verbs, but also to nouns and adjectives; examples: *lēm-um-s* 'decision'< *lemt* 'to decide', *jautāj-um-s* 'question'< *jautāt* 'to ask', *ātr-um-s* 'speed'< *ātr-s, -a* 'quick'.

While these three suffixes are formally derivational but approach inflection functionally, the opposite can be found in the suffix *-tāj-*, which derives nouns denoting agents. According to the academy grammar (MLLVG-I 1959: 152), it is almost fully productive with secondary verbs. From primary verbs, agents are derived by the suffix *-ej-*; thus there is synonymy

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[6] The singular feminine ending *-usi* may also be interpreted as *-us-i*, where *-us-* is an allomorph of *-uš-* and *-i* is the ending.

according to conjugation class, which is a formal property of typical inflection. The two suf-
fixes do not determine gender, which is assigned according to the sex of the referent, e.g.
skolo-tāj-s 'teacher (male)', *skolot-tāj-a* 'teacher (female)', *slauc-ēj-s* 'milker (male)', *slauc-
ēj-a* 'milkmaid'. Furthermore, nouns with one of these suffixes may retain verbal features,
such as valency and combinability with adverbs (MLLVG-I 1959: 107 + 152). In the follow-
ing example, the noun *stāvē-tāj-a* (of *stāvēt* 'to stand) governs the locative of the noun *mala*
'border'[7]:

(6)   *Ja   es   tagad   ne-met-os   viņ-ām   klāt   un   ne-iegāž-u*
      if   1SG   now   NEG-throw:PRS-1SG:RFX   3-DAT.PL.F   PART   and   NEG-hit:PRS-1SG
      ģim-ī   ne-izdzer-t-o   kafij-u   – vai   es   esmu
      face-LOC, NEG-drink.up-PPP-ACC.DEF coffee-ACC QU   1SG   COP:PRS:1SG
      mal-ā   stāvē-tāj-a?
      edge-LOC   stand-AGT-NOM[F]
      'If I don't throw myself upon them now and splash the undrunk coffee in their faces –
      will I be one who stands aside?'   (RL 6/2000, editorial)

3.3. Processes creating wordforms

In this subsection I will examine the formation of the infinitive, modal verbforms, adver-
bial forms of verbs and adjectives, and the vocative of nouns. All of these are wordforms and
therefore related to a syntactic category, and none of the processes involves a change of
meaning. However, they are not easily identified as inflectional, but differ from the typical
cases in various ways.

Infinitive

The Latvian infinitive is not a noun, as it is in German or Latin. It is a single wordform,
formed by the ending *-t* from the third stem of verbs. It also differs syntactically from nouns
and noun phrases. Its uses are very similar to the English infinitive with the preposition *to*:
for example, as an argument of some verbs, such as *gribēt* 'to want', *spēt* 'to be able to', *sākt*
'to begin'. An example can be seen within ex. (4): *gribas* **pieņem-t** *lēmumu* '[I] want **to make**
a resolution'. A special use of the Latvian infinitive is as an argument of another form of the
same lexeme (*figura etymologica*), which may be translated by 'as to v-ing, I do (don't)', e.g.
melo-t *es nemeloju* 'as to lying, I don't'.

As the infinitive is a wordform, the ending determines the syntactic category. There is also
no change of the semantic category, and it is specific to verbs (V3 stems). But it does not share
the other characteristics of typical inflection: it is not in tight paradigmatic opposition to
other forms and therefore only loosely bound into the verbal paradigm, it is not involved in
agreement, is not cumulative and has no synonyms. Homonymy is marginal: a few verbs have
3rd person present tense forms that are homonymous to the infinitive, e.g., *nīst* 'to hate'.

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[7] The form *mala* may also be regarded as a particle or adverb (of the same class as *klāt*), meaning
     'aside'. This would not change the point I'm making here, since such particles generally don't com-
     bine with nouns, but modify verbs.

Subjunctive, evidential, debitive

The three processes that I will turn to now all create verbal wordforms with modal mean-ing[8]. None of them inflects for person. The evidential consists of two forms, present (*skat-ot*) and future (*skatī-š-ot*); it thus is paradigm-creating, though minimally. The subjunctive (*skatī-tu*) and debitive (*jā-skat-a*) have only one simple form each. The debitive is unusual in that it uses a prefix, *jā-*, which attaches to the 3rd person present tense. No other form-deriving pro-cess within verbal morphology uses prefixation, nor takes a form, not a stem, as its base[9].

The evidential and the subjunctive belong to the same syntactic category as the (typical inflectional) simple tense forms, namely, finite verb. My understanding of a finite verb in Lat-vian is the following (cf. Nau 1998: 27): a verb form is finite, if it is used as the nucleus of a verbal predicate and does not combine with an auxiliary. In constructions containing an aux-iliary and a main verb, the auxiliary is a finite form. The debitive, on the other hand, is a non-finite verbform that is used as (part of) the predicate and combines with a finite form of the auxiliary *būt*. In this it resembles the past participles, but contrary to those, it has no other syntactic uses. The debitive construction includes a change of valency as compared to the active clause; therefore, it should be classified as a voice rather than a mood (see Nau 1998: 37, 39–40 for details). Although in Standard Latvian, subjunctive and evidential are in para-digmatic opposition, in dialects they may be combined, the two suffixes amalgamating into *-tuot* (Endzelin 1922: 762 [§ 772]).

The three forms, and especially the debitive, thus differ considerably from the typical inflectional forms. But they do not resemble typical derivation, either.

Converbs and deverbal adverbs

Converbs, also called adverbial participles, are special verbforms used as clause adjuncts ("adverbials"). In Latvian, there are two such converbs. One has the ending *-ot* and is homonymous to the simple evidential (ex. (7) and (9)). The other is formed by the suffix *-dam-*, to which one of four possible endings is attached, in agreement with gender and num-ber of the subject of the clause (ex. (8)); thus, there are four forms: *-dam-s* (m.sg.), *-dam-a* (f.sg.), *-dam-i* (m.pl.), and *-dam-as* (f.pl.). This converb therefore may be interpreted either as a stem-deriving suffix, where the stem it creates is of a subcategory of category A, or as a set of four endings. I prefer the latter, as the syntactic category is determined by the whole, not by the presumed ending alone.

Whether the two converbs may be said to form a paradigm is not clear to me. Their oppo-sition is rather weak. Both are fully productive and common, though not very frequent in colloquial styles. Examples:

(7) *Rok-as,*   *jaun-dzim-uš-o*   **operēj-ot,**   *ļoti* *bieži* *ir*
     hand-NOM.PL   new-be.born-PAP-ACC operate-CV1   very   often   COP:3
     jā-fiksē,   *jā-atbalsta*   *uz*   *gald-a*   *vai*   *jā-operē*   **sēd-us.**
     DEB-fix   DEB-lean.on   on   table-GEN   or   DEB-operate   sit-VADV
     'When operating on a new-born, one very often has to fix the hands; one must leàn
     on the table or operate seated.'   (Mozgis)

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[8] See Holvoet (this volume) for a more thorough discussion of these and other forms of modality in
     Latvian. As his article provides many examples, I will keep this section short.; see ex. (4) for a sub-
     junctive, (5) for evidentials and (7) for debitives.
[9] Here and elsewhere, I follow the traditional view, although I find the alternative proposed by Andro-
     nov (2000) quite convincing. Under his analysis, the final *-a* in the example *jā-skat-a* isn't an ending
     but part of the stem.

(8) *Tur*   *mēs*   *dūšig-i*   *dzēr-ām.*   *Nāc-ām*   *pa*   *šosej-u*
     There   1PL:NOM   heartily-ADV   drink:PRT-1PL   come:PRT-1PL   on   street-ACC
     dziedā-dam-i   *un*   ***danco-dam-i.***
     sing-CV2-PL.M   and   dance-CV2-PL.M
     'We drank heartily there. We came into the street singing and dancing.'   (Sodums)

It is probably due to their productivity that they are without hesitation considered inflectional in Latvian linguistics, while another process which is functionally very similar is often taken to be derivative: the formation of deverbal adverbs by the suffix *-us*, which attaches to the first stem (sometimes the future stem) of several verbs, mainly motion verbs (see *sēdus* 'in a sitting position, seated' in ex. (7), derived from *sēdēt* 'to sit').

There is another form that is usually grouped with the converbs, though its function is different. It has the suffix *-am* or *-ām*, depending on conjugation subclass, and is used in constructions with a perception verb and an argument, comparable to Latin "ACI" or English *I saw him* <u>coming</u>. An example is the clause *pārsteidzis savas kolēģes* **lasām** *"Santu"* 'having caught his colleagues **reading** "Santa"' in ex. (5). This form is very rare in modern Latvian, but its productivity is not limited to a single verbal subclass.

All four suffixes presented attach only to verbal stems and don't change the meaning of the stem. They are traditionally classified as inflectional (the form *-us* not always), but they seem to be quite different from typical inflection. On the other hand, they don't have much in common with typical derivation, either.

Adverbial form of adjectives

As a rule, for all descriptive adjectives there is a form that may be called the adverbial form; traditionally, it is thought of as a separate word, a manner adverb derived from the corresponding adjective. A few of these adverbial forms are ideosyncratic, or rather, derived by a process that is no longer productive, for example, the suffix *-u* as in *tāl-u* 'far away' from *tāl-s* 'distant'. The great majority of adverbial forms, however, is created by the suffix (i.e., ending) *-i*, as in *as-i* 'sharply' from *as-s*, *-a* 'sharp', *nopietn-i* 'serious-ly' etc. This process is almost fully productive, much more so than the corresponding derivation by the suffix *-ly* in English. Example:

(9) *Lēm-um-i*   *šeit*   *tiek*   *pie-ņem-t-i,*   ***as-i***
     decide-NO-NOM.PL   here   AUX:PRS:3   PFX-take-PPP-PL.M   sharp-ADV
     strīd-ot-ies   *un*   ***nopietn-i***   *diskutēj-ot.*   *Tas*   *ir*   ***lab-i,***
     dispute-CV1-RFX   and   serious-ADV   discuss-CV1   That   COP:3   good-ADV
     bet ***grūt-i***   *un*   ***lēn-i.***
     but   difficult-ADV   and   slow-ADV
     'Here, decisions are made by disputing violently and discussing seriously. That is good, but [it is] difficult and slow.'   (Mozgis)

For adjectives in the comparative or superlative degree the adverbial form is built by dropping the ending, in other words, the adverbial ending is zero after the comparative suffix *-āk-*, e.g. *lab-āk* 'better', *lēn-āk* 'more slowly'.

Adverbial forms are used not only in the functions typical for adverbs, i.e., modification of verbs, adjectives, and clauses. Another use is as (part of) the predicate in nonverbal clauses, where the subject (or pseudo-subject) is a clause, a verb phrase or the demonstrative *tas* in so-called discourse deictic function, referring to an action or state or a larger com-

plex of what has been talked of, e.g. *tas ir lab-i* 'that's good' in the second sentence of ex. (9). In this function, it is also called the neuter form. In fact, the adverbial form of Latvian adjectives is functionally very similar to the neuter short form of adjectives in Russian, e.g. *xoroš-o* 'good, well', *bystr-o* 'quick, fast', which also is used adverbially and predicatively. The difference is that Russian has a neuter gender in nouns and the same form is also used as a noun modifier for these, while Latvian has no neuter gender in nouns.

The adverbial form is inflectional in that it determines the syntactic category but does not influence the semantic category of the word. It may also be claimed that it is involved in agreement: It is possible to think of *tas* in discourse deictic function as having neuter gender (cf. MLLVG-I: 520). Then, in a clause like *tas ir lab-i*, we may speak of gender agreement between subject and nonverbal predicate. However, I don't find this approach very convincing, as I doubt that *tas* in such constructions is really a subject (and verb phrases or clauses that apparently fill the position of subjects are even less likely to trigger agreement).

Vocatives and verb clipping

Vocative forms of nouns, which are traditionally grouped as case forms, differ in several respects from the other case forms of the typical nominal inflection. Their productivity is limited; first, as could be expected by the lexical meaning of the noun, they are mostly built from proper names and nouns that designate persons and are used as forms of address (kinship terms, professions). But the formation is also limited by morphological and phonological features, namely number, declension class and stem length. There are vocatives only in the singular. Nouns of class 5 (i-fem.) don't have vocative forms, and for classes 2 (a-fem.) and 3 (e-fem.), the possibilities are limited in several ways (for example, the vocative with monosyllabic stems is strongly restricted).

For nouns of class 1 (a-masc.), 2 (a-fem.), and 3 (e-fem.), the vocative consists of the bare stem, e.g. (all examples are Christian names): *Edvard!* (nom. *Edvard-s*), *Olit!* (nom. *Olīt-a*), *Sarmīt!* (nom. *Sarmīt-e*). For nouns of class 4 (i-masc.) and 6 (u-masc.), the form consists of the stem and the characteristic vowel, e.g. *Nauri!* (nom. *Naur-is*), *Miku!* (nom. *Mik-us*); these forms are homonymous to the accusative forms. It is not clear to me what the base of this process is; it could be the stem or the nominative wordform. In the latter case the process would consist of a reduction in a wordform.

The syntactic category of a vocative form is different from that of the other case forms – it is used neither as an argument, nor as a noun modifier, nor as a nonverbal predicate. Syntactically, vocatives are like interjections. However, some nominal properties are retained: vocatives may be modified by adjectives. The modifying adjective has to be in the definite form; it may either be in the nominative (*mīļais* 'dear (m.)', *mīļā* 'dear (f.)', or in what looks like the accusative but could be interpreted as a vocative form of adjectives (*mīļo* for both genders). By this interpretation, the vocative is involved in agreement.

There is in my eyes a similar process which works on verbal lexemes and derives interjections. Its means of expression is clipping off the base (which is probably the stem, but might also be a wordform): *skatīt* 'to look at'> *skat!* 'look (at this)!', *klausīt* 'to listen'> *klau!* 'listen!', *pagaidīt* 'to wait'> *paga!* or *pag!* 'wait a minute!'. This process is still more restricted than the formation of vocatives, and formally less regular.

3.4. Other processes

There are two processes which cannot easily be classified as either stem-deriving or form-deriving, as the output could be interpreted as a stem or as a set of forms. These are reflexive verbs and definite adjectives.

<u>Reflexive verbs</u>

The formation of reflexive verbs from non-reflexives is a very productive and regular process in Latvian. Input as well as output is a verbal lexeme with all its forms. The reflexive marker is a postfix, it attaches to the rightmost end of any verbal wordform. It is thus not limited to a specific stem, but combines only with forms of verbal lexemes. In some word-forms of reflexive verbs, the reflexive marker is segmentable as -*ies*, e.g. *skatīt-ies* infinitive, 'to look, gaze', *skatām-ies* (1PL.PRS), *skatot-ies* (evidential) etc. But when it attaches to a form ending in a vowel, the reflexive marker amalgamates with the ending[10], e.g. *skat-u* (1SG.PRS)> *skat-os*, *skat-a* (3.PRS)> *skat-ās*, *skatīs-i* (2.SG.FUT)> *skatīs-ies*. In these instances, the ending is cumulative, and the function "reflexive" is part of the paradigmatic opposition between wordforms.

Since each reflexive wordform corresponds to a non-reflexive, and these wordforms belong to several syntactic categories, the reflexive does not determine the syntactic category. Neither does it determine the stem category or the conjugation class. It may change the valency of the verb, but this is not always the case. Reflexive verbs may also be transitive. The semantic contribution is varied and not fully predictable for each verb (see GENIUŠIENĖ 1987 for functional groupings of Latvian reflexive verbs).

Although there are formal similarities to inflectional processes, the formation of reflexive verbs in my eyes should be classified as derivational, as it creates new lexemes. This then provides a counterexample to the claim that derivational and inflectional morphology are never cumulated (ANDERSON 1988b: 171; PLANK 1999: 292): in the amalgamated forms, reflexive and person or mood are marked together in one portmanteau morph. Compare the following forms of the reflexive verb *atvainoties* 'to apologize' and its non-reflexive partner *atvainot* 'to excuse, to pardon':

reflexive:	*atvainoj-os*	*atvaino-tos*	*atvainoj-ies*
	excuse-1SG:RFX	excuse-SUB:RFX	excuse-PAP:M.SG.:RFX
	'(I) apologize'	'would apologize'	'(has) apologized'
nonreflexive:	*atvainoj-u*	*atvaino-tu*	*atvainoj-is*
	excuse-1SG	excuse-SUB	excuse-PAP:M.SG.
	'(I) excuse'	'would excuse'	'(has) excused'

<u>Definite adjectives</u>

There are some similarities between the reflexive form of verbs and the definite form of adjectives, concerning the shape of the formative and the wordform. The definite suffix, too, is sometimes segmentable and sometimes it amalgamates with the wordform. In the first case, it has the shape -*aj*- (spelled -*ai*- before consonants), e.g. *jaun-s* 'young, new' (indef., m.sg.nom)> **jaun-ai-s**, *jaun-am* (m.sg.dat.)> **jaun-aj-am**, *jaun-ā* (m./f.sg.loc.)> **jaun-aj-ā**

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[10] For this morphonological process which also appears in the definite endings discussed in the next subsection see FENNELL (1971). ANDRONOV (2000) offers a different interpretation, where the reflexive marker consists of -*s* only, and -*ie*- is part of the preceding ending, which is an allomorph to the ending of non-reflexive verbs. Interesting as it is, I do not adopt this view.

Examples of amalgamated endings are *jaun-a> **jaun-ā*** (f.sg.nom. or m.sg.gen.), *jaun-u> **jaun-o*** (m./f.sg.acc. or pl.gen.), *jaun-i> **jaun-ie*** (m.pl.nom.). As the examples show, amalgamated forms are cumulative and may have homonyms.

(10) *Daudz-i*   **vec-āk-ās**   *un*   **vidēj-ās**   *paaudz-es*
      many-M.PL   old-COMP-GEN.F:DEF   and   middle-GEN.F:DEF   generation-GEN
      komponist-i *patiešām* *ir*   *stipr-i*   *iz-sis-t-i*   *no*   *lidzsvar-a*
      composer-PL   indeed   COP:3   strong-ADV   PFX-beat-PPP-PL   of   balance-GEN
      un   *ar*   *grūt-īb-ām*   *mēgin-a*   *ie-jus-t-ies*   **jaun-aj-ā**
      and   with   difficult-NO-DAT.PL   try:PRS-3   PFX-feel-INF-RFX   new-DEF-LOC
      sistēm-ā,   *bet*   *man*   *ir*   *liel-s*   *priek-s*   *par*   *to,*   *ka*
      system-LOC   but   1SG:DAT COP:3 big-NOM.M   joy-NOM   about   DEM:ACC   that
      ir   **jaun-ā**   *paaudz-e,*   *kur-a*   *sev-i*
      COP:3 young-NOM.F:DEF   generation-NOM   PREL-NOM.F   PRFX-ACC
      ap-liecin-a   *taisn-i*   *tā, kā* **jaun-aj-ai**   *paaudz-ei*
      PFX-testify:PRS-3   exact-ADV   so   as   young-DEF-DAT.F   generation-DAT
      vajag   *sev-i*   *ap-liecinā-t –*   *viņ-i*   *idej-isk-i*
      need:PRS(3)   PRFX-ACC   PFX-testify-INF   3-NOM.PL.M   idea-ADJ-ADV
      no-liedz   *sav-us*   *priekšgājēj-us.*
      PFX-forbit:PRS(3)   PRPO-ACC.PL.M   predecessor-ACC.PL
      'Many composers of the older and middle generation are indeed strongly put off bal-
      ance and try with difficulty to become familiar with the new system, but I am very
      happy that there is a young generation, which confirms itself exactly in the way the
      young generation has to confirm itself – they deny their predecessors ideologically.'

The formation of definite adjectives from indefinites is fully productive, and the meaning does not depend on the base. The semantic category is not influenced. If we think of the process as stem-deriving, the stem-category is the same as that of the base (there is however no adverbial form). But it is probably better to see the process as forming a set of endings, thus being form-deriving and paradigm-creating, and to leave these endings unsegmented even where the suffix *-aj-* shows up. Definite endings are not restricted to adjectives and partici-ples. They are also found in ordinal numbers; here, the base is a cardinal number which may be indeclinable, e.g. *vienpadsmit-ais, -ā* 'eleventh'< *vienpadsmit* 'eleven'. There are also a few other "definita tantum", i.e., definite adjectives without corresponding indefinite forms, and some of them are probably also derived from a non-adjectival base, e.g. *pērn-ais, ā* 'last year's'< *pērn* 'last year' (adverb).

Syntactically, the functions of indefinite and definite adjectives partly overlap; both are used as attributes. Within the noun phrase, definite adjectives can also be determiners and they are more likely to be heads than are indefinites. On the other hand, their predicative use is limited, and, having no adverbial form, they are not used adverbially. Another argu-ment for calling the formation of definite adjectives inflectional, in my eyes, is that it is involved in agreement. When a noun phrase contains a determiner that is inherently definite or indefinite, an attributive adjective is used in the corresponding form[11], for example *tas vec-ai-s suns* 'that old dog' vs. *kāds vec-s suns* 'a/some old dog'.

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[11] I admit that this is a simplification of matters and that the agreement analysis is not undisputed and has certainly some weak points.

4. Conclusions

Having surveyed several processes and evaluated their status with respect to inflection and derivation, I conclude that there is neither a clear border between the two spheres, nor can all morphological processes be arranged on a continuum between two poles. On the whole, the division seems to be of importance only for lexicology, but not for the analysis of morphology or syntax in Latvian. I will now gather my arguments for this claim.

4.1. No border

The morphological processes presented in the preceding section can hardly be arranged along a single scale, nor even in a two dimensional field. The parameters that I have used to measure their resemblance to or deviation from typical inflectional and derivational processes do not allow drawing a border that would divide all the processes into "(more) inflectional" and "(more) derivational" ones. The distinction might as well be left to the speakers' intuition about what forms belong to the same lexeme.

Some linguists have tried to identify inflection by a single necessary condition, namely as processes that are in one way or another relevant to syntax, "in the sense of being determined by or accessible to essentially syntactic rules" (ANDERSON 1988b: 168). Although this statement is closely connected to a certain theoretical framework and may become meaningless when considered outside of it, I would like to add some comments to the idea that lies at the bottom of it.

Of the processes surveyed, there are only a few that can be considered not to be syntactically relevant. First, all wordform-deriving processes are clearly connected to syntactic constructions, because they create the syntactic category that is needed by the construction. Second, stem-deriving processes in most cases have an indirect connection to syntactic categories in that they determine the stem-category and therefore the range of possible syntactic categories. Thus, both the infinitive (with the ending -t) and the verbal noun (with the suffix -šan-) are formations with relevance to syntax, determined by syntactic rules, though the former is a form-deriving process and the latter a stem-deriving one. If a speaker wants to use a verbal lexeme in the syntactic function of an argument, s/he has to use it in a form that fits this function, i.e., depending on the construction, either the infinitive or the verbal noun. In the same way, participles and converbs are syntactically determined. But then, it is hard to draw a border – if the present active participle is a device that allows a verbal lexeme to appear in attributive function, then the suffix -ig- (one of my examples for typical derivation) can do exactly the same. Also, the various suffixes that derive nouns from verbs share the function of making a verbal lexeme fit for noun phrase functions; they differ in parameters that are outside the realm of syntax, e.g. productivity, regularity of meaning, range of bases, and the amount of semantic contribution they give to the lexeme.

The formation of diminutives of nouns is probably the only process that is not relevant to syntax at all. Comparatives include some changes in the syntactic behavior of adjectives, such as possible modifiers, e.g., positive: ļoti / *daudz lab-s, -a 'very / *much good', but comparative: *ļoti / daudz lab-āk-s<-a '*very/much better'. Reflexive verbs often, though not always, differ from their base forms in syntactically relevant features such as valency (see BERG-OLSEN, this volume).

If a rigid definition of inflection were needed, this could be the one I gave for the typical

cases – paradigm-creating form-deriving processes that express categories involved in agree-
ment. This would further include the definite paradigm of adjectives, but no other pro-
cesses. But I would not like to call all remaining processes "derivational". For the descrip-
tion and understanding of Latvian morphological processes other distinctions, such as that
between stem-deriving and form-deriving, seem to be more useful than any of the possible
interpretations of inflection and derivation[12].

4.2. No continuum

The processes discussed here do not form a continuum between the poles set out in sec-
tion 2.2. They both resemble and differ from typical inflection and typical derivation in vari-
ous ways.

What is less typical inflection does not approach derivation. Cases in point are the infini-
tive and the modal forms of verbs (subjunctive, evidential, and debitive). Starting at the
other end, there are indeed derivational processes that share some features with typical
inflection. But in my eyes, the choice of these features is random: Diminutives resemble
inflection only in that there is synonymy due to differing lexical classes. The deverbal nomin-
alizer -ien- is sensitive to the stem-category (it attaches to V2 stems, rarely to V1). The reflex-
ive marker fuses with personal and modal endings. Only if we posit binary oppositions does
non-inflectional logically entail derivational and vice versa. But in that case, resemblance
would often be due only to the lack of a feature, which in my eyes is not as interesting as shar-
ing a common feature. For example, the negative value "not determining the syntactic cate-
gory" in my eyes is weaker evidence for derivation than the positive feature "determining the
semantic category".

What is most striking is the fact that formal and functional/semantic features do not cor-
relate. The comparative marker of adjectives is traditionally classed as inflectional, the func-
tion it carries is held to be grammatical. Yet it differs from typical inflection almost com-
pletely. On the other hand, the derivation of agentive nouns from verbs, which affects the
lexical semantics and therefore would hardly be classed as inflectional, shows synonymy due
to class, sensitivity to stem-category, and preservation of verbal syntactic features (valency
and modifiers) – all rather formal inflectional properties.

A structured continuum ranging from typical inflection to typical derivation implies that
there are correlations between parameters, or, as PLANK puts it, we have to look for "system-
atic interdependence between elementary distinctions" (PLANK 1994: 1678). In Latvian,
there are few such correlations outside the typical cases, and most of them are directly con-
nected to the nature of the process. As I pointed out, all and only form-deriving processes
determine the syntactic category, while only stem-deriving categories have the potential of
determining the semantic and the stem category. It also comes as no surprise that stem-deriv-
ing processes are not involved in agreement – though technically it would be possible, and
the formation of definite adjectives can be interpreted in that way.

On the whole, then, there is no way to construct a continuum or a scale in the fashion of

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[12] Fortunately, I am not confronted with the problem which morphological processes belong to "the
   lexicon" and which are part of "the syntax" of Latvian. A prerequisite for such a question is to believe
   that a linguistic system can (or should, or has to) be divided into two (or more) separate components
   (autonomous or not so autonomous). I do not share this belief.

the famous grammaticalization scales (cf. LEHMANN 1982)[13]. A (somewhat bold) conclusion is that inflection is not "more grammatical" than derivation. There are more grammatical and less grammatical processes in both fields.

Many interesting questions remain that can be addressed independently of the distinction between inflection and derivation, for example, how syntactic categories and lexical entities are created, or how different processes interact, or which different functions a single process can have.

4.3. Multifunctional processes and lexicalization

Another argument against a clear division of inflection and derivation comes from the fact that inflectional processes can also create new lexical items. This is evident in at least two cases: the definite endings and the genitive.

Of all the "dubious" cases, the formation of definite endings of adjectives has been proven to be the most similar to typical inflection – it creates a paradigm of wordforms, the grammatical category it carries is subject to agreement, and some of the endings are cumulative and have homonyms. But the same process is also used to derive new lexemes. First, all adjectives and participles can be made into nouns by adding the definite ending. A recent example is *mobil-ais* 'cellular phone'. When nominalized, these words no longer inflect for gender, and the "definite" ending marks definiteness no longer; compare the wordform *jaundzimušo* 'a new-born (acc.)' in example (7), where -*o* formally is a definite ending. Second, there is a productive device for forming nouns designating an instrument out of transitive verbs, which consists of the present passive participle (suffix -*am*-, -*ām*-) and the definite ending, e.g. *rakst-ām-ais* 'something to write with', (< *rakstīt* 'to write'), *brauc-am-ais* 'vehicle' (< *braukt* 'to drive'). Third, as mentioned above, not only adjectival stems can combine with definite endings. In ordinal numbers, the endings are derivational when we oppose these words to the corresponding cardinal numbers; at the same time, they are inflectional in forming the paradigm of wordforms of the lexeme. The same holds for the derived adjective *pern-ais, -ā*.

The genitive, first of all, is a nominal wordform, part of the case paradigm that without doubt is the output of an inflectional process. The genitive has several functions in Latvian; a very important one is as an adnominal modifier and determiner. And it is in this function that the formation of a genitive (or of what looks like a genitive) appears also as a derivational process, a process creating a new lexical item that is no longer a noun. This is most clear in words that are used only in this form, most of them compounds or prefixed words, e.g. *mūsdienu* 'modern' (*mūsu* 'our' + *dien-a* 'day'), *daudzbērnu* 'having many children' (daudz 'much, many' + *bērn-s* 'child'), *bezmaksas* 'free of charge' (*bez* 'without' + *maks-a* 'charge'). This pattern of compounding plus genitive ending is very productive in modern Latvian. The output is called a "ģenitīvenis" in Latvian, which can be translated as "genitivling" (cf. NAU 1998: 26 f.) or genitive word. Genitive words are indeclinable and used mainly as modifiers. The difference between a genitive word and a genitive as a wordform of a noun

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[13] Such a scale can be successfully established in an area that at first glance seems to be related, namely the opposition of compounding and derivation (cf. HAASE 1989). In Latvian, the distinction between compounding and prefixation is certainly gradual; there is also a set of items traditionally called "semi-prefixes".

is that the former has no paradigmatic relations to other wordforms, while the latter is part of a paradigm. But there may also be cases in between these two possibilities, namely when a genitive as a wordform loosens its relations to the other wordforms of the lexeme and becomes lexicalized. This is a gradual process that does not necessarily come to an end. For example, the genitive of some words denoting a material (such as *kok-a* 'wooden' = gen. of *kok-s* 'tree; wood', *zelt-a* 'of gold = golden') may be suspected of living a life of its own aside from being part of the noun paradigm. To underpin this suspicion we would need more detailed investigations of the frequency, syntax and semantics of such forms. But I speculate that if the word for 'tree' were replaced by another word, the genitive *koka* would still survive with the meaning 'wooden'. In fact, something similar happened in certain cases, as with the word *vācu* 'German', former genitive plural of the word *vāc-s* which has been replaced by *vāciet-is* 'a German'.

It is a common phenomenon that wordforms loosen their relations to other wordforms and lexicalize as separate items. In addition to the genitive becoming a modifier, this may happen with other case forms, too – datives, accusatives and locatives lexicalize as adverbs, e.g. *zemē* 'down', loc. of *zem-e* 'earth, ground'; *kājām* 'on foot', dative (former instrumental) plural of *kāj-a* 'foot, leg'. Of verbs, participles and converbs often lexicalize, e.g. *beidzot* 'at last', converb 1 of *beigt* 'to end'; *iespējam-s, -a* 'possible, potential', present passive participle of *iespēt* 'to be able to'.

But the opposite also happens: a wordform can tighten its links to other wordforms and thus become (more) bound into the paradigm. That is why processes that are derivational at one time or in one variety of the language may be inflectional at another time or in another variety. For example, in some Latvian dialects, an evidential mood is formed using a form of the deverbal noun with the suffix *-um-* (cf. ENDZELIN 1922: 246 [§ 163]; POIŠA 1985: 62 f.). In these dialects, these forms are integrated into the verbal paradigm, while in the modern standard language, as discussed above, the stem-deriving suffix *-um-* is rather derivational.

5. Where's typology?

While I postulate that the division of inflectional and derivational processes is not important for Latvian morphology and syntax, I do not claim that this is the same in all other languages. In fact, I assume that languages differ as to whether the distinction between the two spheres of morphological processes is clear cut or not. I further assume that this is a feature that usually occurs along with other features in the language and thus is interesting for language typology. I owe this idea to VLADIMÍR SKALIČKA (SKALIČKA 1979 [1966]), who included the distinction or non-distinction of inflection and derivation in his "bundle of matching characteristics" (*Bündel aufeinander abgestimmter Eigenschaften*) that for him defined a linguistic type, or rather, "a typological construct"[14]. According to SKALIČKA, a sharp opposition between inflection and derivation is a feature of fusional languages, while in the agglutinative type there is no clear border. In the following table, SKALIČKA's parameters for the fusional and the agglutinative type are presented and applied to Latvian.

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[14] I won't go into details of SKALIČKA's typology and the notion of construct here; cf. SGALL (1993).

Parameter	fusional type	agglutinative type	Latvian
1. Structure of wordforms	stem + ending	stem (+ suffix) (+ suffix) ...	fusional
2. Grammatical meaning expressed by	ending	suffix	both
3. Part of speech distinction	clear cut	not clear cut	fusional
4. Main device for creating new lexemes	conversion	derivation	agglutinative
5. Inflection/derivation distinction	clear cut	not clear cut	agglutinative
6. Formal properties of grams	probably non-syllabic cumulation synonymy homonymy	syllabic no cumulation no synonymy no homonymy	both
7. Agreement	yes	no	both
8. Secondary predication by	finite subordinate clauses	non-finite verb forms (participles, converbs, gerunds ...)	both

As can be seen from the table, Latvian scores equally high with both the fusional and the agglutinative type. Besides the non-distinction of inflection and derivation, it is agglutinative in using derivation as the main device for building new lexemes and in being rich in participles and converbs. On the other hand, features belonging to SKALIČKA's fusional type are a clear distinction of lexical classes and subclasses, wordforms consisting of stem and ending (which includes a distinction of endings and stem-deriving suffixes) and the existence of finite subordinate clauses. With three more of SKALIČKA's parameters, Latvian displays both settings: grammatical meaning is expressed by endings (fusional) as well as by stem-deriving suffixes (agglutinative); there is agreement (fusional), but not everywhere where it would be expected; the third parameter in question concerns formal characteristics of grammatical morphs: syllabicity, cumulation, synonymy and homonymy. As was shown in this paper, these features have different values for different processes.

Latvian thus is split between two morphological types. In a recent paper, PLANK (1999) has argued for systematicity of such splits. He identified eleven single properties that make up the opposition of the fusional and the agglutinative type and found that there are non-trivial correlations between them in single languages as well as cross-linguistically. A more detailed account of these ideas would be far beyond the scope of this paper. Instead, I want to conclude by drawing attention to some features that are interesting for both the division of derivational and inflectional morphology and that of fusional and agglutinative languages.

It became clear during my investigation that there is a remarkable difference between nominal and verbal morphology in Latvian. With some simplification one may say that nominal morphology is fusional, while verbal morphology is rather agglutinative. This was shown in the typical examples: there is almost no cumulation in the formation of tense forms; personal endings do not amalgamate with tense markers (only when there is zero ending does the wordform contain a portmanteau), and the future marker is segmentable and invariant for all verbs – it is in fact a stem-deriving suffix. There is also no homonymy of endings, and synonymy according to declension class is limited to certain forms in the present tense. While this may be only weak evidence against fusion in verbs, the agglutinative character becomes clearer in all other inflectional processes: with the modal forms (subjunctive, evidential, deb-

itive) there is neither cumulation nor homonymy or synonymy at all, nor is there agreement. Also, verbal morphology is rich in stem-deriving processes which are also of an agglutinative nature.

In addition there is a syntactic difference between nouns and verbs connected to the morphological difference. Nouns in their typical inflected form (i.e., with a case+number marker) can be used in several quite different syntactic functions: as arguments, adjuncts, modifiers and predicates. Verbs, on the other hand, have different forms for different syntactic functions: a finite verb is used only as a predicate, the infinitive only as an argument. Some functions require forms attained by stem-deriving processes, which is never the case for nouns. Further, it should be mentioned that there are several devices to form nouns from verbs and these are productive, regular and specific (in that the suffixes attach only to verbal stems), while devices for deriving verbs from nouns are non-specific and much less productive and regular.

I hope to have shown in this paper, if nothing else, that there is a lot more to find in Latvian morphology than the good old Indo-European fusional system which one might suspect on a superficial glance. Both linguistic typology and grammatical theory call for more in-depth studies of languages of different types – not only to prove or disprove universal claims, but to arrive at a deeper understanding of language.

Abbreviations

ACC	accusative	NO	suffix deriving nouns
ADJ	suffix deriving adjectives	NOM	nominative
ADV	adverbial ending	QU	question particle
AGT	agent (derivational suffix)	PA	present active participle
AUX	auxiliary	PAP	past active participle
COMP	comparative	PART	particle
COP	copula	PFX	prefix
cv1	converb 1 (-ot)	PL	plural
cv2	converb 2 (-dam-)	PP	present passive participle
cv3	converb 3 (-am, -ām)	PPP	past passive participle
DAT	dative	PREL	relative pronoun
DEB	debitive	PRFX	reflexive pronoun
DEF	definite	PRPO	reflexive possessive pronoun
DEM	demonstrative pronoun	PRS	present tense
EVI	evidential	PRT	preterite (past tense)
F	feminine	RFX	reflexive
FUT	future	SG	singular
GEN	genitive	SUB	subjunctive
INF	infinitive	SUP	superlative
LOC	locative	VADV	deverbal adverb (suffix)
M	masculine	VN	verbal noun (suffix)
NEG	negation		

Sources

Diena, a daily newspaper.
Mielavs = Interview with the songwriter AINARS MIELAVS, Santa 100 (2000), 38–42.
Mozgis = Interview with DZINTARS MOZGIS, surgeon and director of a children's hospital, RL 11/1998, 42–49.
RL = Rigas Laiks, a magazine
Santa, a women's magazine.
Sodums = Interview with the poet and translator DZINTARS SODUMS, RL 1/1998, 40–47.
Vasks = Interview with the composer PĒTERIS VASKS, RL 2/1998, 44–49.

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