A Law of Elision of unstressed Vowels in Western Romance Languages

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Abstracts: the present article gives a detailed description of the distribution of the voiced/voiceless reflexes of the L. *-k(+a)-* in intervocalic position in the Western Romance languages. Previous attempts to explain this distribution are analyzed but are ultimately found lacking. A new sound law is proposed. A tentative classification of the Western Romance languages based on the presence of voiced/voiceless reflexes is outlined.

Key words: Western Romance languages, lenition, interdialectal borrowing, elision of unvoiced vowels

1. Introduction

According to Edouard Bourciez (1921: 159–166), the Latin *k* (spelt *c*) before *a* yields, depending on its position within the etymon, the following reflexes in Old French (the same rules apply to early borrowings from Celtic and Germanic languages into Latin):

1. In the beginning of the word (palatalization of *k* before *a*): *k* > *ʧ* (spelt *ch*) - CARRU > OFr. *char*;[1]
2. In medial position after a vowel:
   2.1. If the vowel preceding L. *k(+a)* did not undergo elision (typically for *-ca-* after or before a stressed vowel in di- and trisyllabic oxytona) – the preserved vowels triggered the full lenition of *c* in the intervocalic position: *k* > *j* (after *a*, *e* and *i*), this *j* may later merge (partially or completely) with the preceding vowel – L. PACARE > OFr. *paier*, L. DECAN > OFr. *deien*, L. BACA > OFr. *baie*; *k* > 0 (after *o* and *u*) – L. JOCARE > OFr. *juer, joer*;

[1] French etymologies are given according to the TLFi.

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2.2. If the preceding vowel underwent elision at a relatively late stage (usually before the stressed *a* in the beginning of the penultimate syllable in oxytona with more than three syllables) – the surrounding vowels triggered a partial lenition of *k* in the intervocalic position, but this lenition stopped early due to the elision of the preceding vowel, the lenited *k(g)* later underwent palatalization: *k* > *g* > *dʒ* (spelt *g* before *ie* in OFr.) - VL. MANDUCARE > OFr. *mangier*;

2.3. If the preceding vowel underwent elision at a relatively early stage (normally in the beginning of the last syllable of proparoxytona) – the *k* did not undergo lenition (the preceding vowel disappeared before the process of lenition started), but was palatalized before *a*: *k* > *ʧ* (spelt *ch*) L. MANICA – OFr. *manche*;

3. In medial position after a consonant (this case also includes the geminated *k*) – palatalization of *k* before a (with preliminary simplification of the geminated *kk*): *k* > *ʧ* (*kk* > *k* > *ʧ*) – L. ARCA > OFr. *arche*, L. TOCCARE > OFr. *tocher*.

This distribution seems to be very clear and unambiguous. Obviously (and it is clearly stated in rules above) the development of *k(+a)* (presence or absence of lenition) depends completely on the development (elision or preservation) of the surrounding vowels. Therefore, in order to understand the evolution of L. *k(+a)*, we have to study the evolution of its vocalic environment.

The situation with *k* in a post-consonant and word-initial position is absolutely clear, so we will focus on the evolution of *k* in vocalic environment.

The L. *a* was preserved in Old French, even though it underwent sound changes. Therefore we will consider the vowels that preceded *k*. The rules of vowel elision in Old French (or, better, a part of rules of vowel elision that determine the evolution of L. *k+a*) are as follows:

A. Vowels in initial and stressed syllables generally do not syncopate. Obviously, this rule is governing the point 2.1 above: BACA > OFr. *baie*, L. PACARE > OFr. *paier*;

B. Non-initial unstressed vowels located immediately before the stress syncopated at a relatively late stage, thus triggering

partial lenition of *k* (point 2.2 above): VL. MANDUCARE > OFr. *mangier*;

C. Unstressed vowels located between the stress and the clear final vowel in Latin proparoxytona underwent elision at a very early stage, before the lenition of *k* took place (point 2.3 above): L. MANICA – OFr. *manche*.

The rules ABC (I would propose to call this set of rules "Bourciez's law" as they were proposed by Edouard Bourciez) seem to correctly explain all possibilities of vowel elision in situations related with *k*(+*a*) and are still accepted as the explanation of these phenomena.

However, this sound law has numerous exceptions for cases covered by points 2.2 and 2.3 above where we have *ʧ* instead of expected *ʤ* and *vice versa*. Examples of these exceptions are shown in table 1 (in order to simplify the presentation I include in table 1 Modern French forms, not Old French ones).

Table 1

Regular development		Irregular development	
k > *g* > *ʤ*		*k* > *ʧ*	
JUDICARE	> *juger*	PRAEDICARE	> *prêcher*
*FETICARE	> *figer*	CABALLICARE	> *chevaucher*
BULLICARE	> *bouger*	COLLOCARE	> *coucher*
VINDICARE	> *venger*	PENDICARE	> *pencher*
MANDUCARE	> *manger*	*k* > *g* > *ʤ*	
CLERICATU	> *clergé*	SERICA	> *serge*
BERBICARIU	> *berger*	BARICA	> *berge*
*FILICARIA	> *fougère*	BALEARICA	> *baillarge*
k > *ʧ*		GRANICA	> *grange*
MANICA	> *manche*		

According to the Neo-Grammarians' approach, these exceptions should be explained by another sound law, but one can easily see that it is impossible to group all these cases within one pattern of sound evolution: BULLICARE > *bouger*, but CABALLICARE > *chevaucher*, VINDICARE > *venger*, but PENDICARE >

pencher, MANICA > *manche*, but GRANICA > *grange*. Then, following the Neo-Grammarians' model, if our attempts to find such a law failed, we should either try to explain these exceptions by analogy or by interdialectal borrowings.

An attempt to clarify this issue was made by Charles Joret who limited himself to reflexes of L. *k*(+*a*) in suffixes -DICARE and -TICARE. According to Joret (1874: 297–298), *k*(+*a*) in these groups usually yields *ʤ* by fusion of *j* (< *k*) with the preceding *d* (original or from the L. intervocalic *t*): L. JUDICARE > MFr. *juger*, VL. *FETICARE > MFr. *figer*. However, in some cases this *d* is assimilated to the following *k* thus yielding *ʧ*: L. EXCORTICARE > MFr. *écorcher*. Unfortunately, as there is no description of conditions that lead to the development *k* > *ʧ*, this statement as a simple observation or a phenomenological rule at best, but not a sound rule.

Jean Bastin (1894, XLIII) says that L. *k*(+*a*) may yield *ʤ* if supported by the preceding consonant, while the regular development is *k* > *ʧ* (even in an intervocalic position – *sic*!). Unfortunately, Bastin neither clarifies the phonological meaning of "support" provided by the preceding consonant nor lists the conditions necessary for this support. In addition, this approach rejects the lenition of Latin stops in an intervocalic position which contradicts our knowledge of Romance historical phonology. This is why Bastin's statement should be discarded.

In order to explain the unexpected development of *k* in verbs that ended in -CARE, Bourciez supposed that there was a leveling of all verbal forms by analogy (Bourciez 1921: 163–164). The basis of analogy was either the 3rd per. sing. pres. (*coucher* < *couche* < COLLOCAT according to the rule C above, hence *coucher* instead of expected – according to the rule B - **couger*, OFr. **colgier* < COLLOCARE) or the infinitive (CARRICARE > *charger* – rule B, hence *il charge* < CARRICAT, instead of *il* **charche* – according to the rule C).

The situation with irregular proparoxytona (SERICA > *serge* etc) remains unexplained. Bourciez just states that the development *k* > *g* > *ʤ* in this position is not normal (in later editions of

the Bourciez's book the editor added that this development is not typical for the North of France (Bourciez 1958: 126) – we will see below that this observation could have been very helpful for the understanding of reasons underlying this irregular development). In addition he made a very important observation: in *forge* < FABRICA *i* is preserved (thus triggering the lenition of *k*) thanks to the preceding group of consonants BR. Unfortunately he did not develop this idea.

Bourciez also states that some words with the irregular *ʃ* instead of *ʤ* (MFr. *empêcher*, *prêcher*) are early borrowings from the (Vulgar) Latin where the lenition of *k*(+*a*) in an intervocalic position did not occur (Bourciez 1921: 165).

The hypothesis of analogical leveling, despite its attractiveness, seems dubious: there are two different bases of analogy, and it is impossible to explain when and why one of them is given preference.

Edouard Schwan made an amendment to Bourciez's theory in order to reduce the role of analogy and to study the influence of positional factors. According to Schwan, L. *k* (within the the stressed intervocalic group *k*+*a*) underwent lenition in all cases, thus yielding *g*. However, after the elision of the preceding unstressed vowel this *g* may become voiceless again if the preceding was voiceless (MASTICARE > **mastigare* > **mastiʤar* > **masʃier* > *maschier*) – this devoicing being due to the contact with the voiceless consonant (progressive assimilation). If this consonant was voiced, the voiced reflex remained voiced (PLUMBICARE > **plombigare* > **plombiʤar* > **plom(b)ʤar* > *plongier*) (Schwan 1963: 93) – the voicedness of *g* being supported by the voicedness of the preceding consonant. We can see that Schwan tried to find a sound law responsible for these exceptions from Bourciez's law staying within the classical Neo-Grammarians' paradigm.

However, his theory (which can be named "Schwan's rule" and represents a further development of Joret's observations) has weak points, too.

First, it fails to explain cases like PENDICARE > *pencher*, where a voiced reflex is expected according to Schwan.

Second, cases like EXCORTICARE > *écorcher* have problems too: during the phonetic development of this word from Vulgar Latin to Old French we should expect a form **escorticʒar* > *escorchier* – but it is very difficult to imagine from the phonetic point of view how a voiceless stop between two voiced consonants (more precisely, between a sonorant and a voiced consonant) can trigger devoicing of the following voiced affricate. It would be much more logical to expect that the voiceless stop *t* in this position will be assimilated to the following voiced consonant, thus yielding **écorger* in Modern French.

Third, the irregular development of proparoxytona is unexplained.

Fourth, progressive assimilation is a rather rare phonetic phenomenon, and it is especially rare in the Romance languages, so its use in this case is, in my opinion, unjustified.

Fifth, MFr. *figer* < *FETICARE should have shown a voiceless reflex.

The combination of these five problems makes us reject Schwan's rule of assimilation.

However, Schwan noticed the link between the voicedness of the preceding consonant and the voicedness of the reflex of L. *k*(+*a*). Unfortunately, he did not try to develop this idea either.

To sum up, we may state that the scholars who investigated the exception from Bourciez's law tried to explain them by analogy or by effects of a law of assimilation, but these explanations either were incomplete or had flaws. To the best of my knowledge, these scholars did not propose a new sound law that could regroup all these exceptions. Neither did they try to develop the idea of interdialectal borrowings.

So the problem of distribution of voiced and voiceless reflexes of the L. *k*(+*a*) in intervocalic position has not been solved. Some scholars accept that the rules of this distribution are unclear (Katagoščina *et al.* 1976: 23) or simply indicate that

L. *k*(+*a*) may yield either voiced or voiceless reflexes (Borodina 1961: 113).[2]

In the present paper I shall try to demonstrate that a law covering all these exceptions indeed existed and that the concept of interdialectal borrowings is very fruitful for in-depth understanding of this law.

2. The law of vowel elision in Swiss Romansh

As one can seen from table 1, it is difficult to fit all these exceptions within one path of sound evolution – words with nearly the same phonetic structure yield different reflexes of L. *k*(+*a*). However, it is a well known fact in comparative linguistics that the same sound law can act in several genetically related languages – in some of these languages the effects of this law can be absolutely transparent, while in other languages these effects can be hidden by later phonetic development. So we should try to look for a Romance language where the L. *k*(+*a*) behaved the same way, yielding both voiced and voiceless reflexes in an intervocalic environment.

These languages are Puter and Vallader that belong to the Engadine branch of the Swiss Romansh. Swiss Romansh is an umbrella term for a group of genetically related dialects (or idioms, as the native speakers prefer to call them) spoken in Switzerland (canton Graubünden). It belongs to the Rhaeto-Romance group of languages that includes, in addition to Swiss Romansh, Ladin and Friulian. The precise position of the Rhaeto-Romance group within the Romance family is still argued – some scholars believe that it is an independent group, some include it in the Gallo-Romance languages. At last, some linguists consider the Rhaeto-Romance languages to be a geographical group, not a genetic one. These specialists divide them into Italian-like (Friulian and Ladin) and French-like

[2] Interestingly enough, the bibliography of (Borodina 1961) includes (Bourciez 1958), but none of Bourciez's statements are mentioned.

(Swiss Romansh) languages, and assign them to the Italo-Romance and the Gallo-Romance languages respectively.

Swiss Romansh can be divided into two groups of dialects: Rhine dialects (Sursilvan, Sutsilvan and Surmiran) and Engadine dialects (spoken Puter and Vallader). The names of these groups of dialects reflect the geographical zones of Graubünden they are spoken in.

Let us compare the French words having reflexes of the L. *k*(+*a*) with their cognates in Puter and Vallader (table 2)[3].

Table 2

Latin	French	Puter	Vallader
CARRICARE	*charger*	*charger*	*chargiar*
FABRICARE	*forger*	*faverger*	*favergiar*
PREDICARE	*prêcher*	*predger*	*predgiar*
MASTICARE	*mâcher*	*mas-cher*	*mas-char*
CABALLICARE	*chevaucher*	*chavalger*	*chavalgiar*
EXCORTICARE	*écorcher*	*scorcher*	*scorchar*
MANICA	*manche*	*mangia*	*mongia*
PERTICA	*perche*	*percha*	*percha*
DOMENICA	*dimanche*	*dumengia*	*dumengia*

Table 2 clearly shows that the distribution of voiced and voiceless reflexes of the L. *k*(+*a*) in Puter and Vallader is absolutely regular: the reflex is voiced if the preceding consonant of the Latin etymon is voiced, and is voiceless if the preceding consonant is voiceless.

At first glance this regular distribution should make us rehabilitate Schwan's rule of progressive assimilation. However, as we tried to show above, the character of reflexes of the L. *k*(+*a*) (voiced/voiceless) in Old French is determined by the elision of the preceding vowel. So, before we accept Schwan's rule as the explanation for the mysterious exceptions from Bourciez's law,

[3] Swiss Romansh cognates of the French words were kindly provided to me by Mr. Jean-Jacques Furer, the author of a Romansh-French dictionary (Dictionnaire Romanch Sursilvan-Français, 2001). I am happy to express my sincere gratitude to Mr. J.-J. Furer.

we should analyze how the voicedness of the preceding consonant could influence the elision of the unstressed vowel.

As soon as we formulate the question, we can almost immediately find the answer: it is well known from general linguistics that an unstressed vowel[4] located between two voiceless consonants tends to syncopate (this phenomenon is attested in many languages, for example, in Japanese [Lavrent'ev 2007: 22]). One can easily see from tables 1 and 2 that unstressed vowels preceding the L. *k*(+*a*) are mostly high vowels (*i* and *u*). So the distribution of reflexes can be explained on a basis of elision, there is no need for progressive assimilation. So Schwan's rule can be discarded on basis of Occam's razor.

Therefore we can formulate the following sound law that was active at the stage of disintegration of Proto-Romance in the Engadine area:

> If the consonant preceding the unstressed vowel before the L. *k*(+*a*) was voiceless, it triggered a relatively early elision of this vowel – before the process of lenition started. The voicedness of the preceding consonant delayed the elision of the unstressed vowel so that the latter syncopated later, after the beginning of lenition.

Instead of Schwan's rule, this law rather develops Bourciez's idea that the L. group *-br-* before an unstressed vowel postpones the elision of this vowel (Bourciez 1921: 163) but extends it to all voiced consonants.

3. Geographical distribution of the effects of the Swiss Romansh law of elision

The effect of this sound law is the presence of lenited and non-lenited reflexes of the L. group *k*(+*a*) depending on the relative chronology of elision of the unstressed vowel before this group.

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[4] Mostly, but not exclusively, - a high-rise vowel.

Therefore, we will exclude from our study the languages that do not show alternation of voiced and voiceless reflexes, namely:

1. Eastern Romance languages (Romanian (Repina 2002: 81–87) and Dalmatian [Repina, Narumov 2001: 685]) the lenition of intervocalic stops did not occur.[5] Here we should also mention the Campidanese dialect of Sardinian where the L. *-k-* in an intervocalic position was preserved (Hall 1976: 68);
2. Languages in which L. *k*(+*a*) regularly underwent lenition: the Logudorese dialect of Sardinian (Narumov 2001b: 166–167), Portuguese (Hall 1976: 68), Spanish (Zauner 1921: 35, Hall 1976: 68), Catalan (Hall 1976: 68), Occitan (Schultz-Gora 1906: 49), Ladin (Narumov 2001a: 397, Grzega 2005), Friulian (Narumov, Suchačev 2001: 372), dialects of Northern Italy (Coco 1970: 70–71). It is important to highlight that Rhaeto-Romance languages beyond Swiss Romansh do not show effects of this law. An important exception is Friulian *cjavalgjâ* < VL. CABALLICARE (Crevatin *et al.* 1987: 378) which will be analyzed below.

In Italian the alternation of lenited and non-lenited reflexes does occur, but the distribution is irregular and is better explained by interdialectal influences, words with voiced reflexes having been borrowed from Northern dialects (a detailed account of problems linked with the irregular lenition in Italian was written by Herbert Izzo [1980]). Therefore Italian will not be analyzed here either.

So the only remaining languages are Francoprovençal, Rhine dialects of Swiss Romansh (Sursilvan, Sutsilvan and Surmiran) and French (or, better, various *langue d'oïl* dialects).

Rhine dialects of Swiss Romansh are very close phonologically to each other, so we will analyze just one of them, namely the Sursilvan which seems to comply with the proposed law (*tg* is pronounced as the voiceless alveo-palatal affricate [tɕ]):

SS. *cargar* < L. CARRICARE
SS. *fravegiar* < L. FABRICARE
SS. *mustigiar* < L. MASTICARE

[5] Except of L. intervocalic *-b-* in Romanian (Repina 2002: 83–84).

SS. *mongia* < L. MANICA
SS. *pertga* < L. PERTICA
SS. *dumengia* < L. DOMENICA.

Latin *k*(*g*) underwent palatalization before *a* in Rhaeto-Romance, so there should have been **cargiar* instead of *cargar*. However, during its phonological evolution Sursilvan lost this original palatalization in most words, so the form *cargar* should not be surprising.[6]

Mustigiar seems to be an exception as here we have a voiced reflex instead of a voiceless one. However, this word is most probably a later formation or an early borrowing from (Vulgar) Latin,[7] so it does not witness against the law. Therefore we should conclude that the law is respected in Surselvan and this statement can be safely extended to other Rhine idioms of Swiss Romansh.

It is well known that the Francoprovençal vocalic system is in general similar to that of Occitan, while its consonant system is close to that of French (Zagryazkina, Čelyševa 2001: 309). So the alteration of voiced and voiceless reflexes indeed exists in FPr. and is much more regular in Francioprovençal than in Modern French.

For example, according to Lotte Zörner the distribution of these reflexes in one of FPr. dialects is regular and is governed by the following rule (Zörner 2004: 32–33): the L. intervocalic group *k*(+*a*) regularly undergoes lenition; if *-ka* in a word-final position is preceded by stressed *i* then *k* gets lenited to *j* or even to 0 (L. FORMICA > FPr. *foʁmija*, *fuʁmia*); in proparoxytona ending in -CA *k* > *ʤ* (lenition + palatalization, L. DOMENICA > FPr. *dimenʤi*) except if the unstressed *i* is preceded by *-rt-* – in this case *k* > *ʧ* (L. PERTICA > FPr. *pɛrʧi*); if *a* is stressed and the unstressed vowel before *k* is preceded by a voiced consonant then *k* yields *ʤ* (VL. BERBICARIU > FPr. *baʁʤɛʁ*, VL. MANDU-

[6] Paul Videsott, Freie Universität Bozen, Italy, private communication, 07.12.2007.
[7] I am grateful to Prof. Ricarda Liver for this information.

CARE > FPr. *mindʒiʁ*); at last *k* between *au-* and *-a-* remains unchanged (L. AUCA > FPr. *oka*). Evidence from other dialects shows that *k* > *ʃ* also after -ST-: FASTICARE > *fâshî* (Viret 2006: 737), COACTICARE > *cachè*, *cacher* (Lexique patois forézien: 8); the latter word cannot be a borrowing from French as its meaning is completely different (MFr. "to hide", FPr. "to harm, to wound"). Words where *k* > *ʃ* after a voiced consonant should be considered as borrowed from French: EXRADICARE > *arashé* (Viret 2006: 147) – as in other dialects we have the expected voiced reflex (EXRADICARE > *érazhî* [Viret 2006: 147]). So the proposed sound law exists in Francoprovençal, possible exceptions being due to the French influence.

Now we come to the most difficult problem – the distribution of voiced and voiceless reflexes in French. One can easily see that the law in its basic form does not hold in Modern French – voiceless reflexes appear too often instead of expected voiced ones: MFr. *chevaucher* < VL. CABALLICARE (**chevauger*), MFr. *pencher* < VL. PENDICARE (**penger*), MFr. *prêcher* < L. PRAEDICARE (**prêger*). Sometimes voiced reflexes appear instead of expected voiceless ones: MFr. *figer* < VL. *FETICARE.

However, let us remember that in Ibero-Romance, Gallo-Italian and Occitan the Latin *k*(+*a*) in intervocalic position always undergoes lenition (or, which is the same, the preceding unstressed vowel does not undergo elision before lenition). These languages are located in the South-Western part of the Romance area. If we travel to the North, we arrive to the Swiss Romansh and Francoprovençal zones, where the chronology of elision of the unstressed vowel before the L. *k*(+*a*) is governed by voicedness/voicelessness of the preceding consonant – according to the law that was formulated above. It would be logical to expect that if we travel further to the North, at last we should arrive to the zone(s) where the unstressed vowel syncopated before the L. *k*(+*a*) in all positions prior to lenition, thus yielding voiceless reflexes of the L. *k*(+*a*) in all cases.

Let us test this hypothesis. Information from the peripheral Northern and Western zones of the *langue d'oïl* area shows that

the voiceless reflexes occur very often: VL. PLUMBICARE > Wal. *plonkî*,[8] Pic. *plontcher*[9] (cf. MFr. *plonger*), VL. BERBICARIU > Pic. *bertcher* (MFr. *berger*), VL. *FILICARIA > Wal. *fetchire*, Pic. *feutchére* (MFr. *fougère*), VL. *RODICARE > Gallo [10] *rouchae* (cf. OFr. *rugier*, not preserved in MFr. [TLFi: *ronger*]). The data from these dialects are especially important as the words *bertcher* (Pic.) and Wal. *fetchire*, Pic. *feutchére* show voiceless reflexes where, according to Bourciez, we should expect voiced ones (Bourciez 1921: 163). Analogical leveling proposed by Bourciez for voiceless refelexes in verbs in -CARE cannot be accepted here as these words are names, and therefore no analogical level is possible due to the loss of declensions. At last, devoicing by assimilation to the preceding voiceless consonant (Schwan 1963: 93) is not possible either as the preceding consonants are voiced in both Vulgar Latin etyma. Therefore, explanations proposed by Bourciez and Schwan should be discarded and voiceless reflexes in these words should be explained by a sound law.

Information from the Eastern periphery of the *langue d'oïl* zone is unfortunately unavailable. However, data from the Reichenau Glosses (RG), belonging to the North-Eastern part of this area indicates that the elision of the unstressed vowel before the L. *k*(+*a*) occurred there very early: VL. CARRICATUS > VL. of the RG CARCATUS. So it leads me to the conclusion that the tendency for elision of the unstressed vowel before the L. *k*(+*a*) was predominant in the peripheral zones of the *langue d'oïl* area, which confirms my hypothesis.

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[8] Wal. words were kindly provided by Mr. Stéphane Quertinmont, Mr. Pablo Saratxaga and Mr. Lucien Mahin, Union Culturelle Wallonne (Belgium). I am grateful to Stéphane, Pablo and Lucien for their help.

[9] Pic. words were kindly provided by Mr. Jean-Luc Vigneux, Ch'Lanchron (Picard Cultural Association, France). I am sincerely grateful to Mr. Vigneux for his cooperation.

[10] A Romance language spoken in Lower Brittany, thus the Westernmost languages from the *langue d'oïl* group. Information on Gallo was kindly provided by Mr. Michaël Genevée, President, L'Andon dou Gallo (the federation of Gallo cultural associations, France). I express my deep gratitude to Mr. Genevée.

At early stage of its history the French language existed in form of many dialects with a gradual passage to the Occitan in the South and to the Francoprovençal in the East; later local written variants formed on basis of these dialects. The most prestigious variant was that used in Ile-de-France, but it coexisted with many other local written variants of French (Čelyševa 2001: 251). Mutual lexical borrowing between these dialects (and local written variants) were quite common, as well as between French, Occitan and Francoprovençal, and many words from other *langue d'oïl* dialects entered literary French preserving their dialectal phonetic shape (Čelyševa 2001: 251), (Bastin 1894: XLIII). Therefore I may suppose that the sound law that was proposed in part 2 of the present paper was also active in Old French; words with irregular voiceless reflexes were borrowed from peripheral dialects where voicelessness of the reflexes of the L. *k*(+*a*) was regular. Some such words may have been borrowed from Vulgar Latin as Bourciez indicates (MFr. *empêcher* < IMPEDICARE, *prêcher* < PRAEDICARE [Bourciez 1921: 165]).

This interdialectal influence may explain the existence of parallel words with voiced and voiceless reflexes in OFr. (some of these pairs were preserved in MFr.): VL. PENDICARE > OFr. *pengier* ~ *penchier* (MFr. *pencher*), VL. BARICA > OFr. *berge* ~ *berche* (MFr. berge), L. VINDICARE > OFr. *revengier* ~ *venchier* (MFr. *venger*, *revancher* (< OFr. *re* + *venchier*) – with different meanings).

Therefore I may formulate the following sound law of elision (which I will abbreviate to SLE and which includes as a particular case the law of vowel elision in Swiss Romansh formulated above):

> The unstressed vowel before the L. *k*(+*a*) was preserved till the lenition of this *k* was complete in Ibero-Romance, Gallo-Italian, Occitan, Friulian and Ladin. In Swiss Romansh, Francoprovençal and French this unstressed vowel was pre-served till the lenition of *k* started after voiced consonants only; after voiceless consonants it

underwent elision before the lenition began. In peripheral[11] zones of the *langue d'oïl* area this unstressed vowel syncopated after all consonants before the lenition of *k* started.

The phonological basis of this law is the well known fact that vowels between voiceless consonants often undergo reduction and elision. This effect was predominant in Swiss Romansh, Francoprovençal and French and did not exist in Ibero-Romance and Gallo-Italian and in peripheral zones of the *langue d'oïl* area.

It is interesting to try to explain the irregular voiced reflex in *figer* < FETICARE. I think that the lenition of the intervocalic *t* occurred before the elision of unstressed vowels before the L. *k*(+*a*). The voicing of *t* could have postponed the elision of the unstressed *i* in *FETICARE in some Old French dialects according to the proposed sound law. Another hypothesis – a very exotic one, indeed – would be that the sound [ð] which is the product of lenition of the intervocalic *t/d* might be a liquid in the pre-Old French stage, and this liquid may have delayed the elision of the unstressed *i*. This hypothesis has typological parallels (Ballard, Starks 2005: 4) but requires additional materials.

If any of these two hypotheses is true then the sound law for Old French should be amended – secondary *d* (< L. *t* in an intervocalic position) can also postpone elision.

If we mention liquids then it is necessary to explain why *l* – contrarily to *r* – did not prevent elision in all cases (VL. BULLICARE > MFr. *bouger*, but VL. CABALLICARE > MFr. *chevaucher*). Unfortunately, the situation with this sound is very unclear. The hypothesis that all words with voiceless reflex of the L. *k*(+*a*) after *l* were borrowed from a dialect where the lenition did not occur unfortunately does not hold. In Friulian the word *cjavalgjâ* (< VL. CABALLICARE [Crevatin *et al.* 1987: 378]) exists. The L. *k*(+*a*) in Friulian in this position usually gets lenited to 0, so *-gj-* is irregular. It could appear only if the lenition of *k*(+*a*) stopped at the intermediate stage – *g*. There-

[11] Northern, Western and North-Eastern peripheral zones.

fore, the unstressed vowel in Friulian before the L. *k*(+*a*) after *l* syncopated before the lenition was complete – just like in Old French which makes us think that the incomplete lenition (or absence of lenition) in words with *l* before the unstressed vowel was a specific feature of these words in unclear dialectal or phonological conditions.

I also may propose a more complicated hypothesis for the distribution of voiced and voiceless reflexes of the L. *k*(+*a*) in French. It can be easily seen from table 1 that the L. *k*(+*a*) usually yields a voiced reflex after: 1) a nasal + a voiced stop: VL. PLUMBICARE > MFr. *plonger*; 2) a voiced stop + *r* (in any order): VL. FABRICA > MFr. *forge*, VL. BERBICARIU > MFr. *berger*; 3) simple or double *r*: L. CARRICARE > MFr. *charger*. After all other consonants and groups of consonants both voiced and voiceless reflexes may occur. Therefore we may admit these pts. 1–3 as the adaptation of the proposed sound law to Old French (let us call these points the Old French rule): the L. *k*(+*a*) yields a voiced reflex in Old French if the unstressed vowel before this *k* is preceded by consonants or consonant clusters listed in pts. 1–3.

The theoretical basis of this Old French rule is difficult to explain. Obviously, the preservation of the unstressed vowels after these consonants and consonant clusters took place because they had a phonological (or phonetic) feature that simple voiced stops did not possess in the North-Gallic Vulgar Latin. Following hypothesis may be proposed:

The consonant clusters listed in pts. 1–2 above partially belong to the *muta cum liquida*, so the preservation of the unstressed vowels after them can be explained by the effect of these *muta cum liquida* – it is well known that the latter had specific phonological meaning in Classical Latin, and it is possible to conclude that their specificity survived in the Vulgar Latin spoken in Northern Gaul, thus sparing the unstressed vowels from elision. This explanation is to be preferred within classical Romance linguistics However, two important problems immediately arise:

1. To the best of my knowledge, no CL. words having *k*(+*a*) after other types of voiced *muta cum liquida* (for example, after -DL-) survived in Old French, so it is not possible to say for sure that the unstressed vowel before *k*(+*a*) would have been preserved after all voiced *muta cum liquida*;

2. The second problem is much more important – the proposed Old French rule include stops and liquids in any order, while in Latin only the order plosive + liquid is allowed for *muta cum liquida*.

Therefore, it is obvious that the precise phonological reason of the proposed Old French rule is obscure.

The only exception from the Old French rule seems to be the verb *pencher* (< VL. PENDICARE). However, as I indicated above, it had in the Old French a parallel form *pengier* (TLFi: pencher), so at least in some OFr. dialects the Old French rule was active, while in other dialects – in full accordance with our hypothesis – the lenition of *k*(+*a*) did not take place due to the early elision of the preceding unstressed vowel.

As stated above, after all groups of consonants – except those listed in the Old French rule – the L. *k*(+*a*) yields either voiced or voiceless reflexes. Words showing voiced reflexes – which are irregular according to the Old French rule – may go back to a dialect (or a group of dialects) where the Old French rule was not active, but the proposed sound law did operate (hence GRANICA > *grange* – according to the main sound law but not to the Old French rule). The words which show unexpected voiceless reflexes were either taken from a dialect where the elision of the unstressed vowel before the L. *k*(+*a*) took place at a very early stage thus impeding the lenition of *k* or borrowed from CL. or VL.

Irregular (according to the Old French rule) voiced reflexes in some words may be explained by the particular sound evolution of these words. For example, L. JUDICARE > MFr. *juger* (instead of **jucher* by the Old French rule) due to the assimilation to *dʒ* in the initial position and in order to avoid confusion with *jucher* "to perch".

The proposed Old French rule is simply a form of the more general sound law of elision SLE for the Central and Northern

French dialectal area. This rule makes the transition from Francoprovençal to Walloon more gradual, and this is, indeed, one of the advantages of this theory. However, this hypothesis is too complicated and the former one – without the Old French rule – is more likely to be true.

4. Classification of the Gallo-Romance Languages

There are several different classifications of the Romance languages, but the detailed analysis of these schemes is beyond the scope of the present paper. I simply will analyze how the proposed sound law can be used to divide the Romance languages into sub-groups. As the SLE is valid for Gallo-Romance, Gallo-Italian and Rhaeto-Romance languages, only these languages will be analyzed.[12]

First of all, it should be noted that the genetic unity of the Rhaeto-Romance family (which supposedly includes Swiss Romansh, Friulian and Ladin) is not recognized by all linguists. M. A. Borodina considers them to be a *Sprachbund* within the Romance family rather then a language group (Borodina 1973: 107–109). In addition, the position of the Rhaeto-Romance languages is not clear either as they show features typical for both Western and Eastern Romance languages. Širokova (2005: 211) includes the Rhaeto-Romance languages into the Central Romance group (along with Italian, Dalmatian and Sardinian). In the traditional classification (Alisova, Čelyševa 2001: 26) the Rhaeto-Romance languages are considered an independent subgroup within the Romance family. Modern classifications suppose that the Rhaeto-Romance family does not exist as a linguistic unit and its components are independent languages (Suchačev, Gorenko 2001: 335–336; Narumov, Suchačev 2001a: 365–366; Narumov 2001a: 392). In the popular online encyclopedia Wikipedia (Gallo-Iberian) Swiss Romansh, Friulian and Ladin

[12] The SL is also valid for Ibero-Romance, but these languages remain beyond the topic of the present research.

are included as independent languages in the Gallo-Romance family. Moreover, many scholars think that Ladin is not an autonomous language (Borodina 1973: 108) but rather a dialect belonging either to Swiss Romansh or to Northern Italian.

Ladin (Narumov 2001a: 397) shows regular lenition of the intervocalic stops in all position which is the characteristic feature of Gallo-Italian dialects (Coco 1970: 70–71). Therefore on basis of this lenition it is possible to ascribe Ladin to the Gallo-Italian languages. Friulian has the same feature and may be included in the Gallo-Italian group, too. But obviously one isogloss is not enough for language classification. As Friulian and Ladin do not share many other features typical for the Gallo-Italian group, it would be more logical to consider them separate languages within the Gallo-Romance family (I would propose a tentative name for this alleged group – Italo-Rhaetian).

The Swiss Romansh idioms share with French and Franco-provençal the common feature: preservation of the voiceless vowel before the L. *k*(+*a*) if this vowel is preceded by a voiced consonant. I would therefore conclude that Swiss Romansh is closely related to French and Francoprovençal and is separated from Ladin and Friulian.

So I may propose the following tentative classification of the Gallo-Romance languages:

1. Gallo-Italian – dialects of Northern Italy;
2. Italo-Rhaetian – Friulian and Ladin;
3. Gallo-Rhaetian:

   3.1. Franco-Romance: French, *langue d'oïl* dialects, Franco-provençal. This group includes two sub-groups: central languages and peripheral languages (Walloon, Picard and possibly Gallo) where the elision of the unstressed vowel before the L. *k*(+*a*) took place prior to lenition;

   3.2. Rhaetian: Swiss Romansh idioms;
4. Gallo-Occitan: Occitan (Gascon may form a separate sub-group within this group).

This classification of the Gallo-Romance languages does not depend on the proposed sound law of elision. Indeed, even if the

phonological basis of this law is incorrect and the different chronology of elision of unstressed vowels before the L. *k*(+*a*) did not have place, voiceless reflexes being due either to analogical leveling (Bourciez 1921: 163–164) or to devoicing after voiceless consonants (Schwan 1963: 93) the sound law of elision can be simply replaced by the statement that the frequency of voiced and voiceless reflexes of the L. *k*(+*a*) is different in these areas (this statement being a phenomenological law of geographical distribution of reflexes).

5. Conclusion

The sound law proposed in the present paper seems to correctly explain the distribution of voiced and voiceless reflexes of the L. *k*(+*a*) in intervocalic position in languages where both reflexes are allowed. For the French language two hypotheses are proposed, but, in my opinion, the simpler one should be given preference. I hope I managed to demonstrate that my explanation of this distribution is more logical and more supported by the general phonological concepts than those proposed in classical sources (Bourciez 1921: 159–166), (Schwan 1963: 93). But, of course, only the scholarly community can decide how sound the proposed sound law is.

The classification of the Gallo-Romance languages, outlined in part 4 of the present paper, describes relations of the languages that form this group in a more correct way than existing classifications. Obviously, further investigations are necessary in order to clarify the precise position of Walloon and Occitan within this group.

List of abbreviations:

FPr. – Francoprovençal
L. – Latin
MFr. – Modern French
OFr. – Old French
Pic. – Picard
RG – The Reichenau Glosses
SS. – Sursilvan
TLFi – Le Trésor de la Langue Française informatisé
VL. – Vulgar Latin
Wal. – Walloon

References

Alisova, T. B. & I. I. Čelyševa (2001): Romanskie jazyki. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki.* Moskva: Academia, 15–56.

Ballard, E. & D. Starks (2005): Liquids: laterals and Rhotics or Much More? In: I. Mushin, ed. *Proceedings of the 2004 Conference of the Australian Linguistic Society.* Available online at: http://scs.library.usyd.edu.au/handle/2123/102.

Bastin, J. (1894): *Dictionnaire français-russe étymologique et comparé.* St. Petersburg: Izdanie knizhnago magazina N. Fenu i Ko.

Borodina, M. A. (1961): *Phonétique historique du français (avec éléments de dialectologie).* Léningrad: Éditions scolaires d'état du Ministère de l'instruction publique de la R.S.F.S.R., section de Léningrad.

– (1973): *Sravnitel'no-sopostavitel'naja grammatika romanskix jazykov. Retoromanskaja podgruppa (èngadinskie varianty).* Leningrad: Izdatel'stvo "Nauka", Leningradskoe otdelenie.

Bourciez, E. (1921/1958): *Précis historique de phonétique française.* Paris: Librairie C. Klinksieck.

Čelyševa, I. I. (2001): Starofrancuzskij jazyk. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki.* Moskva: Academia, 250–277.

Coco, F. (1970): *Il dialetto di Bologna. Fonetica storica e analisi strutturale.* Bologna: Forni Editore.

Crevatin, F., G. Frau, M. Doria, C. Marcato, P. Rizzolatti, G. B. Pellegrini, M. Marinucci & M. Cortelazzo. 1987. *Dizionario etimologico storico friulano.* Udine: Casamassima Editore.

Gallo-Iberian. In: *Wikipedia, the free encyclopedia.* Available online at: http://en.wikipedia.org/wiki/Gallo-Iberian_languages. Retrieved on 06.08.2008.

Grzega, J. (2005): *Materialen zu einem etymologischen Wörterbuch des Dolomitenladinischen.* Eichstätt. Available online at http://www1.ku-eichstaett.de/SLF/EngluVglSW/MEWD.pdf. Retrieved on 28.07.2008.

Hall, R. A. Jr. (1976): *Proto-Romance phonology.* New York, Oxford, Amsterdam: Elsevier.

Izzo, H. J. (1980): On the voicing of Latin intervocalic /p, t, k/ in Italian. In: H. J. Izzo, ed. *Italic and Romance. Linguistic Studies in Honor of Ernst Pulgram. Current issues in linguistic theory 18.* Amsterdam: John Benjamins, 131–155.

Joret, Ch. (1874): *Du C dans le langues romanes.* Paris: Librairie A. Franck.

Katagoščina, N. A., M. S. Guryčeva & K. A. Allendorf (1976): *Istorija francuzskogo jazyka.* Moskva: "Vysšaja Škola".

Lavrent'ev, B. P. (2007): *Samouchitel' japonskogo jazyka.* Moskva: Zhivoj jazyk.

Lexique patois forézien. Available online at http://patois.vivant.free.fr/images/patoisvivantlexique.pdf. Retrieved on 30.07.2008.

Le Trésor de la Langue Française informatisé. Available online at http://atilf.atilf.fr/. Retrieved on 30.07.2008.

Narumov, B. P. (2001a): Ladinskij jazyk. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki*. Moskva: Academia, 392–410.

– (2001b): Sardinskij jazyk. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki*. Moskva: Academia, 160–187.

Narumov, B. P. & N. L. Suchačev (2001): Friul'skij jazyk. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki*. Moskva: Academia, 365–391.

Repina T. A. (2002): *Istorija rumynskogo jazyka*. St. Petersburg: Izdatel'stvo Sankt-Peterburgskogo universiteta.

Repina, T. A. & B. P. Narumov (2001): Dalmatinskij jazyk. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki*. Moskva: Academia, 681–694.

Schultz-Gora, O. (1906): *Altprovenzalisches Elementarbuch*. Heidelberg: Carl Winter's Universitätsbuchhandlung.

Schwan, E. (1963): *Grammatik des Altfranzösischen. Neu bearbeitet von Dieter Behrens*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Širokova, A. V. (2005): *Ot latyni k romanskim jazykam*. Moskva: Dobrosv'et.

Suchačev, N. L., Gorenko, G. M. (2001): Retoromanskij jazyk. In: *Jazyki mira. Romanskie jazyki*. Ed. by Čelyševa I. I., Narumov B. P., Romanova O. I., 335–365. Moskva: Academia.

The Reichenau Glosses. Available online at: http://www.orbilat.com/Languages/Latin_Vulgar/Vocabulary/Reichenau_Glosses.htm. Retrieved on 05.08.2008.

Viret, R. (2006): *Dictionnaire français-savoyard*. Available online at http://aca.arpitania.eu/documents/Dictionnaire_Viret_Francais_Savoyard.pdf. Retrieved on 29.07.2008.

Zauner, A. (1921): *Altspanisches Elementarbuch*. Heidelberg: Carl Winter's Universitätsbuchhandlung.

Zagryazkina, T. Ju. & I. Čelyševa (2001): Frankoprovansal'skij jazyk. *Jazyki mira. Romanskije jazyki*. In: I. I. Čelyševa, B. P. Narumov & O. I. Romanova, eds. *Jazyki mira. Romanskije jazyki*. Moskva: Academia, 304–321.

Zörner, L. (2004): *Il dialetto francoprovenzale della Val Soana*. Cuorgnè: Edizioni CORSAC.