

# Diachronic and Areal Aspects of Macedonian Hiatus Resolution

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## 1 Introduction

Many dialects of modern Macedonian are characterized by the productive elimination of certain consonants (most frequently, /j/, /v/, and /d/) in intervocalic position. This results in a sequence of two vowels, which may then develop in one of four ways: preservation (VV > VV), contraction / coalescence (VV > V), glide epenthesis (VV > VjV or VvV), or glide formation (VV > V̥V or V̥V̥) (Vidoeski 1979). All four outcomes are attested, and some dialects attest all four possibilities. An example of this is the urban dialect of Ohrid, which preserves /ao/ (*graor* < \**graxor* “sweet pea”, *ǵaol* < \**ǵavol* “devil”), contracts /oa/ sequences (*Jo:n* < *Jovan* “[proper name]”, *to:* < *toa* < \**tova* “that-NEUT”, *to:r* < *toar* < *tovar* “load, goods”), has facultative epenthesis in /ea/ sequences (*bea* / *beǵa* < *bea* < \**beaxa* “be-3PL.AOR”, *nosea* / *noseǵa* < *nosea* < \**noseaxa* “bear-3PL.AOR”), obligatory epenthesis in /ua/ and /uo/ sequences (*mva* < \**mua* < \**muxa* “fly”, *uvo* < \**uo* < \**uxo* “ear”), and glide formation in /Vi/ sequences (*snaj̆* < *snai* < \**snaxi* ‘sisters-in-law’, *streǵ̆* < *strei* “eaves”, *leboǵ̆* < *leboi* < \**lebovi* ‘loaves of bread’, *muĭ* < *mui* < *muxi* ‘flies’) (Vidoeski 1998: 245-255). In addition to being relevant for Macedonian dialectology, the diversity and complex distribution of hiatus resolution strategies in Macedonian are of broader relevance for the ongoing study of cross-linguistic patterns of hiatus resolution (Casali 1997, Casali 1998, Baković 2007, Kabak 2007).

Since southwestern Macedonia and neighboring areas of Albania and Greece are known for historically intense multilingualism resulting in widespread grammatical transfer between the languages spoken in the area, a prerequisite to the synchronic analysis of hiatus resolution patterns in southwestern Macedonian is the determination of whether areal influence from neighboring languages may have played a role in the Macedonian developments. If so, this could provide a motivation for the coexistence of diverse hiatus resolution strategies in Macedonian. The question of potential areal influence is made particularly relevant by the existence of close formal parallels to Macedonian VV contraction in Albanian, Aromanian, and Greek. However, in this paper, I argue that a close examination of the chronology of specific VV contraction patterns in Macedonian, Albanian, Aromanian, and Greek demonstrates that the diverse hiatus

resolution patterns present in Macedonian are most likely to have arisen independently.

On the basis of a brief presentation of data pertaining to the Ohrid-Struga dialect group of Macedonian, the emergence of heterogeneous VV sequences is shown to be datable to the 18th century, and that their elimination through various hiatus resolution strategies is therefore likely datable to the 19th century. Parallel developments in Albanian are discussed, and it is argued that the lack of temporal and geographical overlap with the relevant SW Macedonian dialects makes areal influence unlikely in these instances. The formal parallels that exist in Aromanian are shown to be more recent than the corresponding Macedonian innovations, such that the directionality of any possible areal influence in this case is from Macedonian into Aromanian rather than vice-versa. Possible parallels in Greek and Turkish are discussed, but shown to be independent developments. These considerations are relevant for a synchronic analysis of hiatus resolution strategies in Macedonian insofar as they demonstrate that the diversity of these strategies must be motivated internally.

## 2 Hiatus Resolution in Macedonian

In addition to distinguishing vowel contraction from preservation, epenthesis, and glide formation, it is necessary to distinguish multiple types of vowel contraction. Heterosyllabic vowel sequences not caused by intervocalic consonant loss frequently occur on clitic boundaries. In much of Macedonian and even in some varieties of Serbian, the resulting vowel sequences are contracted through the elision of the first vowel (Vidoeski 2000, Ivić 1956). The resolution of VV sequences obtained through the loss of intervocalic consonants also varies based on whether or not the vowels in question are identical. Homogeneous VV sequences contract in a much wider geographic range than heterogeneous VV sequences. The contraction of homogeneous VV sequences is broadly characteristic of western dialects of Macedonian and extends, to some extent, into the southeastern dialect zone (Vidoeski 2000). Heterogeneous VV sequences are contracted in a subset of these dialects, which vary considerably in their treatment of VV sequences. This paper will focus on dialects with maximally robust patterns of vowel contraction, in particular the Ohrid-Struga dialect group.

### 2.1 The Ohrid-Struga Dialect Group: Synchrony

Throughout western Macedonian, vowel sequences with /i/ as their second element contract from  $V_i > V_i$  (Vidoeski 1998: 245). Data pertaining to other vowel sequences in the Ohrid-Struga dialect group is presented below. Following Vidoeski 1998, the Ohrid-Struga dialect group will be divided into the Ohrid dialect proper, which is subdivided into the Ohrid urban dialect, the Peštani-Ljubaništa dialect, and the Debarca dialect and the Struga dialect zone, which is itself subdivided into the Struga dialect proper and the Radožda-Vevčani dialect (Vidoeski 1998: 247). The data presented below is based on that presented

in Vidoeski 1998, Vidoeski 2000 and Marković n.d. (Marković n.d.: 62-80, Vidoeski 1998: 245 -276, Vidoeski 2000).

The Ohrid-Struga dialect group is spoken within a small and contiguous geographical area more or less along the boundary of Lake Ohrid. Even in such an environment, at least two distinct patterns of vowel contraction are found, as well as certain smaller-scale patterns of variation. This will be presented on the basis of data from the Ohrid urban dialect, the Struga dialect, and the Radožda-Vevčani dialect. Information from the non-urban Ohrid dialects will be presented when necessary to supplement the data from the urban Ohrid dialect.

### 2.1.1 Ohrid

The urban dialect of Ohrid displays a mixed pattern of reflexes, in which some vowel sequences are contracted while others are preserved. Epenthesis is optional with /ea/ sequences and obligatory in \*/uo/ and \*/ua/ sequences, which diachronically derive from the elimination of intervocalic \*x. The contraction of /oa/ to [o:] is particularly productive.

- /ea/ is preserved, with facultative [j]: *lea* “flower bed”, *strea* “eave”, *parea* “steam”, *nea* “her”, *rea* “smell”, *beja* < \**bexa* “be-3PL.AOR”, *noseja* < \**no-sexa* “carry-3PL.IMPF”.
- /ae/ is preserved when it does not include inflectional morphology: *tegaec* < *tegavec* “plantain”, *dvaeset* < *dvadeset* “twenty”
  - /ae/ > [e:] in 3pl present: *vike:t* < *vikaet* “call-3PL.PRES” and facultatively in verbal adverbs: *vikaeščem* / *vike:ščem* “call-VB.ADV”.
  - /ae/ > [aj] in verbs: *jaiš* < *jadeš* “eat-2SG.PRES”, *jait* < *jadet* “eat-3SG.PRES”, *jaimē* < *jademe* “eat-1PL.PRES”, *jajte* < *jadete* “eat-2PL.PRES”, also *daiš* < *dadeš* “give-2SG.PRES”, *klaiš* < *kladeš* “put-2SG.PRES”, *klait* < *kladet* “put-3SG.PRES”, /oi/ > [oi] in *oiš* < *odiš* “go-2SG.PRES”. Examples like *izeit* < *izedet* “eat.up-3SG.PRES” suggest an intermediate stage in which thematic verbal endings in /i/ were generalized before the loss of intervocalic consonants. Otherwise, one would predict *izedet* > *izeet* > *ize:t* due to the contraction of homogeneous VV sequences.
- /oa/ > [o:] when not on a derivational morpheme boundary: *Jo:n* < *Joan* < *Jovan* “Jovan”, *to:* < *toa* “that-NEUT”, *to:r* < *toar* < *tovar* “load, goods”, *tro:* < *troa* < *troša* “a little, a crumb”, *osno:* < *osnoa* < *osnova* “foundation”, *so:l’ka* < *soal’ka* < *soval’ka* “shuttle”, *bro:m* < *broam* < *brojam* “count-1SG.PRES”, *sto:m* < *stoam* < *stojam* “stand-1SG.PRES”, *nego:* < *negoa* < *negova* “his-FEM.SG”.
- /ao/ is preserved in some lexemes: *graor* < \**graxor* “sweet pea”, *gaol* < *gavol* “devil”.

- \*/ua/ > /uva/, \*/uo/ > /uvo/: *muva* < \**mua* < *muxa* “fly”, *suvo* < \**suo* < \**suxo* “dry-NEUT.SG”, *suva* < \**sua* < \**suxa* “dry-FEM.SG”, *ruvo* < \**ruo* “raiment, attire”, *uvo* < \**uo* < *uxo* “ear”.

### 2.1.2 Struga

**Struga** The Struga dialect includes the city of Struga and the villages Vranište, Oktisi, Višni, Labuništa, Podgorci, Borovec (on the west side of the Drim), and Prisovjani, Globočica, Brčevo, Bogovica, Tašmaruništa, and Ložani (on the east side of the Drim). The Struga dialect is most remarkable for its productive tendency to form falling diphthongs (ie, ia, io; va [ua], ve [ue]) from (a) sequences of two mid vowels and (b) some sequences of high vowels followed by mid vowels. Data illustrating this contraction pattern is presented below.

- /ie/ > [ie]: *izmien* < *izmien* “wash-PART.MASC.SG”, *go fatie* < *go fatie* “CL.3SG.MASC.ACC catch-3PL.AOR”.
- /ia/ > [ia]: *lovdžia* < *lovdžia* “hunter”, *kopria* < *kopria* “bridge”, *raĳia* < *raĳia* “rakija, brandy”, *maštia* < *maštia* “mother-in-law”, *sudĳa* < *sudĳa* “judge”, *šamĳa* < *šamĳa* “scarf” (Str); *poĳialo* < *poĳialo* < *poĳivalo* “be.at.rest-PERF.NEUT.SG”, *prežiat* < *prežiat* < *preživat* “survive-3PL.PRES”, *prežiaĳ* < *prežiaĳ* < *preživaĳ* “survivor”, *spĳa* < *spĳa* “sleep-3SG.AOR”, *siromaštia* < *siromaštia* “poor person”, *piĳaĳ* < *piĳaĳ* “drinker” (Taš); *spĳa* < *spĳa* “sleep-3SG.AOR” (Vran).
- /io/ > [io]: *belĳiot* < *beliot* “white-MASC.DEF.SG”, *ĳarnĳiot* < *ĳarnĳiot* “black-MASC.DEF.SG”, *seĳio* < *seĳio* “blade”, *peĳio* < *peĳio* “baked goods”, *varĳio* < *varĳio* “cooked vegetables” (Str); *gluĳiot* < *gluĳiot* “deaf-MASC.DEF.SG”, *slabĳiot* < *slabĳiot* “weak-MASC.DEF.SG”, *prostĳiot* < *prostĳiot* “simple-MASC.DEF.SG”, *si odvit* < *si odvit* “CL.REFL.DAT go-3SG.PRES” (Taš); *ĳelĳiot* < *ĳeliot* “whole-MASC.DEF.SG”, *nivĳiot* < *nivĳiot* “their-MASC.NOM.SG” (Lož).
- /ea/ > [ia]: *nĳia* < *nea* “her”, *se smĳa* < *se smea* “laugh-3SG.AOR”, *glĳia* < *glea* < *gleda* “look-3SG.PRES”, *ispĳiano* < *ispeano* “drink.up-PART.NEUT.SG”, *ĳerĳa* < *ĳerea* < *ĳereva* “bowels” (Str); *otsĳian* < *otsean* “sift-PART.MASC.SG”, *lĳia* < *lea* “flower bed”, *izlĳal* < *izleal* “pour.out-PERF.MASC.SG”.
- /eo/ > [io]: *ĳerĳio* < *ĳereo* < *ĳerevo* “bowel”, *nĳiolĳa* < *neol’a* < *nevol’a* “trouble”, *orĳiot* < *oreot* “walnut-MASC.DEF.SG”, *Petrĳio* < *Petreo* < *Petrevio* “Peter’s-NEUT.SG” (Str); *orĳion* < *oreon* “walnut-MASC.DIST.SG”, *telĳio* < *teleo* < *televo* “calf-NEUT.PROX.SG” (Taš); *Petrĳio* < *Petreo* < *Petrevio* “Peter’s-NEUT.SG”, *Stolĳio* < *Stoleo* < *Stolevo* “Stole’s-NEUT.SG” (Vran); < *ĳereo* < *ĳerevo* “bowel” (Viš, Lab).
- /oa/ > [ua] (written /va/): *kvaĳ* < *koaĳ* < *kovaĳ* “blacksmith”, *tva* < *toa* “that-NEUT.SG”, *tvar* < *toar* < *tovar* “load, goods”, *nekvaš* < *nekoaš* < *nekogaš* “sometime, once”, *nikvaš* < *nikoaš* < *nikogaš* “never”, *negva* < *negoa* < *negova* “his-FEM.SG”, *bukva* < *bukoa* < *bukova* “beech-POSS.FEM.SG”,

*dabva* < *daboa* < *dabova* “oak-POSS.FEM.SG”, *sval’ka* < *soal’ka* < *soval’ka* “shuttle”, *čva* < *čoa* “woolen broadcloth” (Str); *gotva* < *gotoa* < *gotova* “finished-FEM.SG”, *stva(m)* < *stoam* “stand-1SG.PRES” (Taš); *nekva* < *nekoa* “some-FEM.SG”, *nikva* < *nikoa* “no/none-FEM.SG” (Viš); *tvar* < *toar* < *tovar* “load, goods”, *kvač* < *koač* < *kovač* “blacksmith”, *negva* < *negoa* < *negova* “his-FEM.SG”, *Gligorva* < *Gligorova* < *Gligorova* “Gligor’s-FEM.SG”, but *Jo:n* < *Joan* < *Jovan* “Jovan”, *osno:* < *osnoa* < *osnova* “foundation” (Dras); *kva* < *koa* “which-FEM.SG”, *stva* < *stoa* < *stoja* “stand-3SG.AOR”, *tva* < *toa* < *tova* “that-NEUT.SG” (Lož).

- /oe/ > [ue] (written /ve/): *čvek* < *čoek* < *čovek* “person”, *gvedo* < *goedo* < *govedo* “ox, bull”, *gvedar* < *goedar* < *govedar* “herdsman, cowhand” (Viš); *jazvec* < *jazoec* < *jazovec* “badger”, *rekve* < *rekoe* “say-3PL.AOR”, *dojdve* < *dojdoe* “come-3PL.AOR” (Str); *gvečko* < *goečko* < *govečko* “beef/cow-ADJ.NEUT.SG”, *čvek* < *čoek* < *čovek* “person”, *stvel* < *stoel* < *stojel* “stand-PERF.MASC” (Taš); *stvet* < *stoet* < *stojet* “stand-3PL.PRES”, *najdve* < *najdoe* “find-3PL.AOR”, *tərgvec* < *tərgoec* < *tərgovec* “merchant”, *gvedo* < *goedo* < *govedo* “ox, bull”, *stveše* < *stoeše* “stand-3SG.IMPF”, *rekve* < *rekoe* “say-3PL.AOR” (Dras); *čvek* < *čoek* < *čovek* “person”, *gvedo* < *goedo* < *govedo* “ox, bull” (Vran, Lož).

This process does not take place on derivational morpheme boundaries, e.g. *ni+eden* “not one”, *i+ako* “although”, *pri+aka* “to roam over”, *pri+odi* “to approach”, *pri+uči* “to teach, train”. However, examples like *si odvit* < *si odvit* “CL.REFL.DAT go-3SG.PRES”, *bel’ot* < *beli-ot* “white-MASC.DEF.SG”, and *rekve* < *reko-e* “say-3PL.AOR” show that contraction can take place over inflectional morphology and clitics.

This process of contraction can be blocked by phonotactic restrictions, as well as possibly by morphological identity considerations. In this case, other strategies are used to resolve hiatus. Examples that appear to be phonotactically driven include: *osno:* < *osnoa* < *osnova* “foundation”, *Jo:n* < *Joan* < *Jovan* “Jovan (proper name)”, *tro:* < *troa* < *troša* “a little”, *kre:t* < *kroet* “cut-3PL.PRES”, *greet* < *grexot* “sin-DEF.SG”, *bre:* < *broe* “count-3SG.PRES”, *bre:t* < *broet* “count-3PL.PRES”, *bre:l* < *broel* “count-PERF.MASC.SG”. Both phonotactic and morphological considerations may be relevant for blocking the above pattern of falling diphthong formation in the following examples: verbs such as *spi-et* “sleep-3PL.PRES”, *žni-et* “reap-3PL.PRES”, *ši-et* “sew-3PL.PRES”, and *po+ili* < *po+eli* < *po+veli* “please, here you go” and pronouns like *mie* “we”, *tie* “they”, etc. Preserved /ie/ sequences may be optionally broken up through the insertion of a glide, e.g. *sp<sup>i</sup>iet*, *m<sup>i</sup>ie*, etc.

Furthermore, /ae/ > [e] more productively than in Ohrid: *ze:k* < *zaek* “rabbit”, *zne:t* < *znaet* “know-3PL.PRES”(Viš); *ze:ci* < *zaeci* “rabbits”, *zne:* < *znae* “know-3SG.PRES”, *ze:dno* < *zaedno* “together”, *de:t* < *daet* “give-3PL.PRES”, *de:n* < *daen* “give-PART.MASC.SG” (Taš). However, /æ/ is preserved in the rare instances where it occurs: *zæk* “rabbit” (Lab), *znæel* “know-PERF.MASC.SG”. Like Ohrid, in the Struga dialect zone, \*/uo/ and \*/ua/ sequences obtained through the loss of intervocalic \*x have a /v/ epenthesized: /uvo/ and /uva/.

**Radožda-Vevčani** In most regards, the Radožda-Vevčani dialect, which includes the villages of Radožda, Vevčani, Lin, and Mali Vlačj, parallels the Struga dialect. Of note is the fact that in this area, /æ/ sequences contract to [æ] instead of [e:] as in the Struga dialect. More broadly, [e:] obtained through the contraction of vowel sequences is lowered to [æ]: *čvæk* [č̣væk] < \*č̣ue:k < *čovek* “person”. However, /æ/ sequences in numerals are contracted to [aj], e.g. *dvašet* < \*dvadeset “twenty”, *dvanašet* < \*dvanadeset “twelve”. Furthermore, /oa/ and /oe/ > [ua] and [ue] quite regularly, possibly more regularly than in the Struga dialect proper.

## 2.2 Diachrony

The balance of available evidence suggests that the widespread loss of intervocalic consonants in Macedonian dates to no earlier than the 18th century. Vowel contraction, as such, can be observed earlier; for instance, the form *ubiice* < *ubiice* “murderer-ACC.PL” is found in the Codex Marianus. Somewhat later, the third singular form *upovatī* < \**upovaetū* “trust” is found in the Dobrejša manuscript (Koneski 2001: 192). However, these developments must be analyzed separately from those discussed above; in the original form *ubiice*, no intervocalic consonant was ever present between /i/ and /i/, and the development of forms such as *upovatī* can be said to be morphologically conditioned insofar as they are limited to certain inflectional categories.

The need to separate (1) morphologically driven contractions, (2) the loss of intervocalic consonants more broadly, and (3) the contraction of the resulting vowel sequences in a diachronic account may be illustrated by the dialect of Boboščica, spoken in the Korça area of Albania. This dialect loses intervocalic consonants productively but preserves the resulting vowel sequences, e.g. 3pl aorist forms such as *rekoē* < \**rekoɣ* “say-3PL.AOR”, *približae* < *približaxɣ* “approach-3PL.AOR” (Mazon 1938: 24-25). However, verbal paradigms such as *zn̄ām*, *zn̄āš*, *zn̄ā*, *zn̄āme*, *zn̄āte*, *zn̄ā* “know (present paradigm)” and *baram*, *baraš*, *bara*, *barame*, *barate*, *bare* “look for (present paradigm)” are representative of a class of paradigms in which original desinences in \*-aje-, \*-jaje-, and \*-ėje- were contracted (Mazon 1938: 76-80).

In the 18th century, toponyms in -eo < \*-evo begin to be recorded around the Kruševo area. The basic timetable that this suggests is compatible with the locally microvariable results of intervocalic consonant loss and resulting hiatus resolution patterns and with the presence of a few Macedonian toponyms on Albanian territory in which intervocalic consonants are lost, such as Langaica and Deolani in the Ohrid / Black Drim area (Koneski 2001: 265).<sup>1</sup>

A valuable source in this regard is the Tetraglosson of Hadži Daniil of Moskopole, which was published first in 1794 in Venice. This work contains parallel text in Macedonian, Albanian, Aromanian, and Greek; the Slavic sec-

<sup>1</sup>In general, Macedonian toponyms in Albania preserve intervocalic consonants. Since the spread of Albanian in this area preceded more or less from west to east, it is likely that the Macedonian toponyms in Albania reflect a chronological layering such that more recent phonological innovations in Macedonian are likely to be reflected only towards the east.

tion was translated by an Ohrid priest, a fact which allows an unusually precise chronological and geographical characterization of the language reflected in this text. The Tetraglosson reflects a stage where the loss of intervocalic \*x, \*j, and \*v is frequent if not absolutely regular (compare *prodaam* < \**prodavam* 'sell-1SG.PRES' (308) with *davat* 'give-3PL.PRES' (72, 254)).<sup>2</sup> However, the resulting vowel sequences appear to be preserved, including in homogeneous VV sequences and in heterogeneous VVV sequences (*seaet* 'sow-3PL.PRES' (129), *peaat* 'sing-3PL.PRES' (133)). The only environment in which even homogeneous VV sequences seem to be contracted is occasionally in the 3pl present of -a- stem verbs: compare, e.g., *davat* 'give-3PL.PRES' (254) (= standard Macedonian *davaat*) and *nemaat* 'not.have-3PL.PRES' (247). However, present tense conjugation classes in particular, along with verbal morphology more broadly, seems to be in a state of considerable fluctuation in the Tetraglosson, which suggests that morphological realignment may be more likely than vowel contraction in this case.

### 3 Albanian Parallels

#### 3.1 Synchrony

The Albanian dialects most relevant for the current question are those included in the northern Tosk group, as well as to some extent, the southernmost representatives of central Geg spoken in Macedonia. This means that certain widespread patterns of vowel contraction in more northern varieties of Geg (e.g., the tendency for /ue/ > [u:], /ie/ > [i:], /ye/ > [y:], etc.) are of no relevance for the Macedonian data discussed above. However, the treatment of /ua/ and /ie/ sequences in the Albanian dialects spoken around Lake Ohrid display certain parallels of potential relevance for the Struga data in particular.

Multiple isoglosses involving the treatment of /ua/ bisect the Ohrid-Struga region. The reflex /ua/ > [ua] is found in closed syllables to the south of (and remains [ua] to the north of) an isogloss that runs through the southeastern part of Lake Ohrid, i.e., to the south of Struga. A similar, but not completely identical, isogloss is found for the development of /ua/ > [ua] in internal open syllables. However, in final open syllables, /ua/ remains [ua] throughout the area (ADGjSh: 100-102). While these reflexes display considerable formal parallels to the development of /oa/ and /oe/ sequences in the Struga dialects of Macedonian, the fact remains that the key isoglosses run south of Struga proper. While it is the case that the diphthongization of /oa/ (but not generally /oe/) sequences is shared in the Peštani-Ljubaništa dialects spoken south of Ohrid, it is nonetheless the case that the geographic overlap is very slight (Vidoeski 1998: 255). An analogous change takes place more broadly regarding /ie/; in closed syllables, /ie/ > [ie] in the entire area around Lakes Ohrid and Prespa. However, the corresponding change in final open syllables occurs only around Lake Prespa (ADGjSh: 108-110).

<sup>2</sup>Forms from the Tetraglosson are cited according to line numbers in Kristophson 1974.

The hypothesis of areal influence between Albanian and Macedonian in this regard is attractive insofar as it would allow a motivated explanation for the fact that the Struga region displays some patterns of vowel contraction (e.g., the formation of falling diphthongs) that are basically unique for Macedonian while retaining some patterns of vowel contraction that are found elsewhere, e.g., in the Ohrid dialect (e.g., the contraction of /ae/). However, the lack of geographic overlap between the relevant dialects makes this unlikely. Worth noting in this regard is the fact that the Prespa dialects of Macedonian, which are spoken in the same area as the Albanian dialects discussed above, do shift /ea/ to [ja], but also display the change /oa/ > [o:], meaning that they do not share the widespread and productive formation of falling diphthongs so characteristic of the Struga dialects (Vidoeski 1998: 280).

### 3.2 Historical Patterns of VV Contraction in Albanian

Within the period of documented Albanian (i.e., since the mid-16th century), Albanian has undergone several changes that display distinct formal parallels to some vowel contraction rules in Macedonian.

Sequences of identical vowels may be contracted:  $e + e > e$ : *qĕ + e > qĕ* “be-3SG.AOR”;  $a + a > a$ : *ty s tĕ kĕnta* (< *ka ande*) “has still” in the writings of Budi (1566-1622); and  $i + i > i$ : *Zotĭnĕ* < *Zoti inĕ* “our Lord” in the writings of Matrĕnga (1567-1619). When this process of contraction affected inflectional morphemes, it has been preserved, but productive contraction across word boundaries is no longer productive in Albanian.

In the early period of attested Albanian, /ae/ and /oe/ sequences were contracted, with variable results across the dialects of Albanian. In Tosk and southern Geg, /ae/ and /oe/ both yield /e/; in northeastern Geg, /ae/ > /a/ and /oe/ > /o/; and in northwestern Geg, the tendency is for /ae/ > /æ/ and /oe/ > /ø/.

According to Topalli, this change was completed in Arbĕresh before the migration to Italy. Vowel contraction is consistently attested in the earliest Arbĕresh authors. The texts of the earliest northern author, Buzuku, contain uncontracted sequences, and the process of contraction is observable in the writings of early Geg authors. In the texts of Budi, for instance, a transitional state is observable in which /ae/ and /oe/ contract in sandhi position but not morpheme-internally (Topalli 2007: 214-217).

This suggests that the sound change in question spread from the south to north and was largely completed by the late 17th to 18th century. This therefore predates the corresponding sound changes in Macedonian, which take place in the 19th century. This point is further confirmed by the Tetraglosson, in which there is no evidence of preserved \*ae and \*oe sequences. Intervocalic loss of /h/, however, is frequent although not completely regular, e.g. *ushqĕet* < *ushqĕhet* “feed-MEDIOPASS.3SG” (186) versus (*tĕ*) *ndihish* “help-2SG.SUBJ” (221). This results in new [ae] and [oe] sequences: *haenĕ* < *hahenĕ* “eat-MEDIOPASS.3PL” (49) and *ftoet* < *ftoĕt* “cold-MEDIOPASS.3SG” (187). This suggests that the original sound change eliminating \*ae and \*oe sequences was completed well

before processes of intervocalic consonant loss led to the formation of new [æ] and [œ] sequences. If this chronology is correct, then Albanian influence in the development of /æ/ and /œ/ sequences in southwestern Macedonian must be ruled out.

## 4 Hiatus Resolution in Other Neighboring Languages

In addition to Albanian, the following neighboring languages display some parallels in their treatment of heterogenous VV sequences: Aromanian, Greek, and Turkish. However, chronological and structural considerations suggest that it is unlikely that these languages directly influenced developments in Macedonian.

The varieties of Aromanian spoken in SW Macedonia inherited the diphthongs /*ĕă*/ and /*ôă*/. During the 20th century, monophthongization has been an ongoing process. In Kruševo, the monophthongization of these diphthongs to [æ] and [ɔ] is possible, and in fact dominant among the younger generation (Gołąb 1984). In the Aromanian dialect of Ohrid, this process is complete, yielding /*e*/ and /*o*/ that are not subject to vowel reduction, unlike inherited /*e*/ and /*o*/ (Marković 2007: 27). The recent nature of these sound changes strongly suggests that if any areal influence is involved, the directionality is likely to have been from Macedonian to Aromanian.

Greek and Turkish are unlikely to have played any role in influencing the development of vowel contraction in Macedonian. Greek underwent a process of vowel contraction very similar structurally to many of the changes observable in the Struga dialect. However, the fact that this occurred in Greek much earlier (approximately in the 12th century) than in Macedonian makes any direct influence unlikely (Tucker 1969: 47). Standard Turkish displays a range of hiatus resolution strategies that include frequent vowel contraction; however, any direct influence on Macedonian is unlikely because (1) the specific vowel contractions are different<sup>3</sup> and (2) the West Rumelian dialect of Turkish spoken in Macedonia preserves the Ottoman \*/*g*/ before back vowels, the loss of which in standard Turkish was a major source of VV sequences subsequently targeted for elimination (Kakuk 1972: 240, Kabak 2007: 1381).

## 5 Conclusions

This paper has presented an outline of hiatus resolution strategies in the Ohrid-Struga dialects of Macedonian, with a particular focus on the contraction of heterogeneous VV sequences. It has been established that since the contraction of these sequences is predicated on the productive loss of intervocalic consonants, VV contraction cannot have begun before the late 18th century, and it has been shown that VV sequences are preserved as of the late 18th to early 19th

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<sup>3</sup>None of the three empirical generalizations about Turkish vowel contraction by Kabak 2007 hold for Macedonian.

century. Formal parallels from Albanian, Aromanian, Greek, and Turkish have been discussed, and it has been argued that despite observable formal parallels in neighboring languages, the evolution of diverse hiatus resolution strategies in Macedonian is best explained as an independent development.

This finding illustrates the methodological point that close historical work is necessary to determine which grammatical innovations in a heavily multilingual area are best explained as resulting through processes of language contact and interference. In particular, the documentation of formal parallels between languages must be supplemented with evidence of temporal and geographical overlap in order to persuasively argue for areal influence. These findings also have consequences for a synchronic analysis of hiatus resolution in Macedonian, because the diversity of hiatus resolution patterns therefore must be motivated internally. Since the cross-linguistic examination of hiatus resolution patterns is an area in which much work remains to be done, the Macedonian data may then serve as a case study illustrating some of the upper bounds of language-internal hiatus resolution patterns.

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