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IN ESTONIAN

BY

VALTER TAULI



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i kommission hos Ejnar Munksgaard

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## PREFACE

The present investigations were made during the years 1939—1943. The manuscript in its original form was finished at the end of 1943 and was written in Estonian. The war and its consequences have delayed the publication. In 1947 the manuscript was revised and in 1949 it was translated into English. Before printing in 1954 some minor alterations were made in the manuscript and later literature has been considered. Originally the work was longer. In the first place it contained a general part on the theory of phonetic change, presenting (1) a historical survey of the post-neogrammarian theories and (2) the viewpoint of the present writer. Then followed three chapters on basic Estonian phonological problems. In the meantime these chapters have been published as independent papers: (1) *On the Origin of the Estonian Stage Shift* (ASLES I, 1952), (2) *The Origin of the Quantitative System in Estonian* (JSFOu 57, 1954), (3) *On the Age of Vowel Harmony in Estonian* (Apophoreta Tartuensia, 1949). In fact, these papers and the present book form an inseparable whole. The systematic part of the work also included the Pre-Estonian phonetic changes. The dialectal material in the work has been taken, besides from the printed sources, mainly from the phonological, morphological and syntactic surveys and texts, and partly from the lexical records of *The Archives for the Estonian Language* at Tartu University. In order to reduce the costs of printing the work, generally no translation has been given of linguistic citations (examples); sometimes to a dialectal form the corresponding word in the literary language has been added in parenthesis.

I am highly indebted to all those who have given their assistance during the preparation of this work. I am most grateful to my teachers PROFESSOR ANDRUS SAARESTE and PROFESSOR JUULIUS

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Uppsala, July 1954.

V. T.

## TRANSCRIPTION NOTE

The aim has been that of transmitting the transcription of the sources. On typographic grounds, however, an extensive transliteration was inevitable. It should be kept in mind that the transcription in the original linguistic material, as is common practice in Finno-Ugric linguistics, is the ordinary Finno-Ugric transcription (see E. N. Setälä FUF 1 32–, F. Äimä Vir. 1932 377–, 1933 258–), which is phonetic, not phonemic. The Estonian linguistic citations are transcribed as follows in the present paper. The citations of the common (literary) language are given in the Standard Estonian spelling. The dialectal citations are transliterated according to the Standard Estonian orthography with the following modifications. (1) The third degree of length is marked with ' before the respective syllable (except the monosyllabic forms, which phonetically are always in the third degree), e. g. p. 'linna [l'inna],<sup>1</sup> cf. g. linna [liñnà], p. 'musta [mušta], cf. g. musta [muštà], p. 'kooli [kôli], cf. g. kooli [kôli], p. 'seina [seina], cf. g. seinä [seĩnâ].<sup>2</sup> The mark ' is omitted in the case of geminate stops, as the difference between the second and third degrees of length is here marked already in the Standard Estonian spelling, e. g. g. kuke [kučkè]:p. kukke [kučke], kapi [kappi]:kappi [kappi], rutu [ruùtu]:ruttu [ruùtu]. (2) Palatalization is marked with ['], e. g. kas's', kul'l'. (3) Coronalization is marked, if indicated in the original, with [.] under the consonant, e. g. šinna. (3) The primary and secondary stresses are marked, if necessary, with [ˈ], resp. [ː], after the respective vowel, e. g. pa`pi`slesd. (4) The exceptions of the Standard Estonian spelling rules are not valid in the transliterated dialectal forms, e. g. 'kärpsed, sull, maa (in a stressed position) are used instead of literary Estonian kärbsed, sul, ma 'I. It must be kept in mind that the phonetic value of the Standard Estonian letters is as follows: *g, d, b* = [G, D, B] (half-voiced lenes), except in Se and language enclaves (Lei, Lu!, Kra) where they are voiced [g, d, b]; intervocalic

<sup>1</sup> In the following the corresponding FU transcription is given in [ ].

<sup>2</sup> On details of the Estonian quantitative degrees, see Tauli JSFOU 57.

*k, p, t* = [*ḳḳ, ṭṭ, p̣p̣*] (short geminates), except in Khn and NEEC, where they also stand for [*k, t, p*], as in Finnish (see p. 28) and in PF reconstructions; in the word-final position *-k, -t, -p* mostly = [*-ḳ, -ṭ, -p̣*]; intervocalic and word-final *s* after a vowel = [*Z*] (half-voiced lenis); *n* before *g, k* stands for [*ŋ*] (velar); *õ* = [*ɛ̞*] (back *e*). Double letters stands for long sounds, e. g. *saan* [*sān*], *linn* [*liñ*]. Further the following transliterations have been made:

[*-ḥ, -ṣ̌, ṣ'*] (half-long) in word-final position in multisyllabic words  
 = *hh, ss, s's*, likewise other half-long continuants;  
 [*ĩ, ĩ*] = *ĩ* (back *i*), [*j*] = *j*, [*a<sub>o</sub>*] = *â*, [*ɛ̞*] (high variant of *õ*) = *ĩ*;  
 [*q̣, q̣̣*] = *q, ä*, [*y*] = *y* (front variants);  
 [*ɛ̞*] = *ɛ* (back variant); [*q̣̣*] (back variant of *ä*) = *â*;  
 [*o, ȯ*] = *o, ö*, [*e*] = *e*, [*ụ*] = *uu*, [*ụ̈*] = *ü*, [*i*] = *i* (high and close variants);  
 [*o*] = *o*, [*ȯ*] = *ö*, [*e*] = *ě*, [*y*] = *y*, [*ü*] = *y*, [*i*] = *i* (low and open variants);  
 the glottal stop is marked with [ʔ].

Some minor phonetic features have not always been marked, e. g. instead of [*r, HN*] is written *r, hn*, for [*u*], is generally written *u*. The half-length and over-shortness of vowels have generally been left unmarked, e. g. *linna* [*liñnà*], (Lei) *tomba* [*tòmBa*]; *'kuntrat* [*kunràt*].

Finnish, incl. Ingrian, citations are given in the Standard Finnish spelling. Hungarian citations are given in the Standard Hungarian spelling, except that *ó, ú* stand for (long) *ö, ü*. Regarding the other FU languages, the original transcription is maintained as far as possible, except (1) the same transliterations that are valid for Estonian dialectal forms, (2) that *ɛ* stands for [*ɛ̞*], (3) that [ʔ] under the consonantal component of a diphthong is omitted. In Livonian citations from Posti LL, *ɛ, ȯ, o* are used instead of [*ɛ̞, ȯ, o*].

# 1. Tendencies towards Assimilation, Articulatory Weakening and Loss.<sup>1</sup>

## 1.1. CONSONANT ASSIMILATES CONSONANT

In this chapter the assimilations through which one consonant has become either entirely or partly similar to another, are treated. This does not mean that in all these changes the assimilative influence has solely been that of the neighbouring consonant, as it might sometimes have been supported by the neighbouring vowel.

\* $n_t > nn$ , \* $l_t > ll$ , \* $r_t > rr$ , \* $m_p > mm$ .<sup>2</sup> E.g. *linnud* (: *lindu*), *mulla* (: *mulda*), *korras* (: *korda*), *sammas* (: *sambad*); *ilusama*. Cf. LH *Lembitus*; LCD *Andikewææ* 'Annikvere', *Compayas* 'Kumma', 1441 *Cumbas*; 1412, 1558 *Kummes*, LCD *Kõndos* 'Kõnnaste', *Kuldenkava* 'Kulenga', *Limbus* 'Limmu', *Sambas* 'Sammu', Hls(R) *ilusamba*; PR 19; SVp. *lindud*, *ambaz*, *hobedembad*; F *linnut*, *mullan*, *kerran*, *lammas*, *iloisammat*. K.B.Wiklund considered the assimilation of stops with nasals in these clusters as old, and regarded the identification of LH *Lembitus* with F *Lemmitty* as "gelehrte volksetymologie", as he did not want to draw any conclusions from the "barbaric spelling" of the LCD (MSFOu 67 416). Although we may ignore the LH *Lembitus*, there can be no doubt, judging from LCD, that there has been an *mb* or *mB* (cf. p. 36) in Estonian, which later on has given an *mm*. After the nasals the voiced lenes, (*ŋ*)*g*, (*n*)*d*,

<sup>1</sup> Although at least a number of the losses may be regarded as a special kind of assimilation, they are here treated apart from the assimilations. Only the loss of the weak-grade variants of the stops is treated together with the assimilation of the weak-grade variants by a vowel, since the two phenomena are historically connected, and it seems unwarranted to separate them.

<sup>2</sup> Regarding the graphemes *k*, *t*, *p*, see p. 28.

(*m*)*b*, has, in agreement with E. N. Setälä, been regarded as the weak-grade variants of the stops, whereas the spirants  $\gamma$ ,  $\delta$ ,  $\beta$  are assumed to have occurred in other positions. To suppose another sound to follow the nasals as elsewhere is phonetically warranted. An analogous phenomenon occurs in Gothic, where voiced stops following a vowel or a liquid have become spirants, whereas voiced stops following a nasal have survived. M. Grammont explains it by the fact that nasals form a closure like the stops, while *r*, *l* are spirants as  $\gamma$ ,  $\delta$  (TPh 171). In Cheremis *g*, *d*, *b* mostly correspond to the intervocalic  $\gamma$ ,  $\delta$ ,  $\beta$  after nasals. As to the assimilative influence of the nasals on a following *t*, *b*, cf. O.v. Essen, Vox 21 22. PA 54.

\* $\eta k > \eta\eta$  in the islands and NEEC. E. g. JämH *lōγγad* (*lōngad*), MuhL *māγγeti* (*māngiti*), Phl(A) *kiγγad*, VJg *lōγγad*, Jōh *kayyas*. Cf. F *keygät* 'shoes'.

*kt > tt* after the first syllable in SE. E. g. KrkA *kate* < \**kakten*; cf. Lp. *guōkte* (ÄH 200), Hell *nātās* < \**nāktāksen* (*nāhakse*), Puh *ōtak* (: *ōdagul*) (< \**ōkta-*), cf. LpS *ektu* (ÄH 198), PlvA *kōtt* (*kōht*). Cf. PF \**kastekta* > *kastetta* (> *kastet*); It. *fatto* < *factu* (TPh 203).

*mt > nt* spor. dial. E. g. Hls(U) *ontigi*, TMrKö *onte(gi)* (*ometi*).<sup>1</sup> Cf. PF \**lumta* > *lunta* (> E *lund*), LvS *rānt* ~ *rāmt* 'book' (LW 345), Hung. *ront* < *romt*.

*sn > ss*: Mih(Ste), PärP *üssa* (*üsna*), cf. PF in suff. \**-sna* > *-ssa* (> E *-s*).

*lj > ll* widely all over E, *sj > ss* widely, chiefly on the NE continent. E. g. KrjT *millunäärid*, Ann(M) *nal'lası*, VaiJ *kül'leli*, Pil *pal'la*, Kod(KV) *kül'läkille*, HelK, SanU *nel'lä*, HarK *nelläbä*, SeVa *väl'lä*, Lei(M) *al'l'ast*: *al'l'a* (: *al'ass* [*haljas*]); Hornung *fülleš* (VKVM 217); VMr *as'sad*: *as'su*, LutKi *kos's'uatē* (*kosja*). In some dialects assimilation has taken place only in the extra long degree of length, as in Juu, where we have *asja*: *as'sa*.<sup>2</sup> Cf. WLv. *pāl'aZ*: *pal'l'āD* (E *paljad*), IngR dial. *pal'l'ö*, Vt. *pal'l'aZ*, Vp. dial. *vel'l'ed*; Voty. *mīnil'am* < *-lj-* (Uotila KPS 389), Hung. *mošjon* > *mosson*. PA 5.

*rj > r'r'* is recorded in VaiKu, e. g. *mar'r'a* (see more Toomse ALSE 1937 93). Cf. Lv. *mōr'a* < *-r'r'* < *marja*.

<sup>1</sup> In cases of clearer pronunciation we find the form *om(m)ete(gi)*.

<sup>2</sup> As regards E quantitative degrees, see Tauli JSFOU 57.



*ks* > *ss* (> *s*) in SE and in certain morphemes in NE (*ks*-nouns in Muh, here and there in Lää and Pää; ViE, ViE, TaN; cond. in LääS, here and there in Pää, Vi; KuuN, Lüg, Kod). E. g. JMdH *kasvatasse*, Tõs *naessess* (*naiseks*), Hää(V) *seotasse*, HelV *usse* (*ukse*), SanN 'juussist (*juustest*), KamK 'süssi (*sööksin*), PlvPa *reejalassę*. EMA 1 8 'juuksed', 2 47 'tuuakse', PR 71, 72. Cf. Vt. *pahassi* 'tr. bad', *pesässē* 'impers. wash'; It. *tassone* < *taxone* (TPh 203). PA 9, 22, 41, 55.

*k, t, p, > G, D, B* after *ŋ, n, m, l, r*. E. g. *hing*, cf. F *henki*, SWF *heng*, SVp. *heŋg*, IngS *hangī* 'snow-drift'; *isand*, cf. F *isäntä*, SVp. *ižand*; *lamba*, cf. F *lampaan*, SVp. *lambhad*; *jälg*, cf. F *jälki*, SVp. *jäl'g*; *sild*, cf. F *silta*; *kõlbama*, cf. F *kelpaa*; *argi(päev)*, cf. F *arki*, SVp. *ar'g*; *mõrd*, cf. F *merta*, SVp. *merd*; *kõrb*, F *korpi*, SVp. *kor'b*; dial. also in part. and abl., e. g. Hlj *suurd* (~ *suurt*), EmmK *tüdarđ*, HelV *süänd*, Rää *nooreld* (~ *noorelt*); cf. F *suurta*, *nuorelta*. The following vowel as well has here, of course, favoured the assimilation of sonority. The same assimilation has taken place in compounds, e. g. Avi *kikerbil'lid* (*tikerberid*), HlsM *üälbuul*, 'on the right side'. Here and there the stop has remained voiceless in compounds, e. g. PstK *vikerkaar*, Kod(K) *kikerpillid*. A similar weakening of the stops has occurred after vowels (see p. 28).

*st* > *ss* chiefly here and there in NEE. E. g. JõeK *toussa* 'tõusta', AmbN *pessakse* ~ *pestakse*, SimV 'kässä < *kästa*, VaiM *juossa* : *juossasse*, Kod(KV) *üvässi* (*hästi*); Rossihnius *iŋŋuŋi* (*istus*) (97). Cf. F dial. *pessä* SMK 64; Cr. (*vašta*:) *vaššalla*, Ing. *kassek* (: *kastiin*) (SM III B 107-), Vt. *naissa* 'p. woman'. *st* > *ss* in Carelian, Ingrian, Votian and in the so-called Votian-like dialects of Estonian are genetically related, so this change is relatively old. Cf. also p. 180.

*ht* > *tt* after the non-initial syllable. E. g. *mäletama*, *kanatama*; cf. SePa *kannahta*. Cf. SWF *luiskatta*.

*ht* > *st* after the non-initial syllable. E. g. *unustama*, *minestama*; Rak *valestama*, AviP (*ei*) *mälesta* (*mäleta*), VaiKu *valestõ* (140); LTÕ *ᚾälleŋtap* (VKVM 3); cf. Vt. dial. *mälestän*; in SEE *ht* ≡; after the first syllable chiefly in Kod, e. g. Lüg *treſt* (*lehter*), KodL *vast* (: *vahu*); cf. Vt. dial. *kaustana* < *kauht*-.

*tk* > *kk* after the non-initial syllable; after the first syllable in SE and SNE, in the greater part of NE in the word *pikk*, cf.

Kod(K) *pitk*, F *pitkä*, and spor. in other words. E. g. *karaku*, cf. F *karatkoon*, dial. *karakkoon*, SMK 7; Kod(K) *muko* < *muutki* SeN *muku*, Lei(V) *sõkkutas*, EMA 2 62 'jätku leivale'. Cf. Lv. *reķ* (E *retk*). PA 117.

*t'k* > *k'k* in the words *katki*, *kätki* here and there in CNE. E. g. SimV *käk'ki*, KadL (among the younger generation) *käk'ki*; EMA 2 40 'kätki'; PA 43.

*G, B, D* > *k, p, t* before a voiceless consonant (sandhi). E. g. AmbN *umpsõl'm*, PltP *arktus*; Khk(T) *olet<sub>s</sub>a*, JaaHa *läint<sub>s</sub>koa*, Hi(A) *taa tōpp<sub>s</sub>'piim<sub>s</sub>* (*ta toob piima*), KrkK *tult<sub>s</sub>tare*, SeV *'mutku* < *muud kui*. A regressive assimilation of sonority is very common. As regards the FU languages it is to be found e. g. in Livonian, Carelian, Vepsian, Lydian, Votian, Votyak, Hungarian, Ostyak. E. g. SVp. *lint<sub>s</sub>kokib* (: *lind*), *kož<sub>s</sub>g<sub>s</sub>da* (: *košk*), Hung. *dob* : *doptám*, SOsty. *tāptem* < *tābetem*. In Mordvinian we meet, on the whole, a progressive sandhi, e. g. *mon dapan* < *tapan*, but inside a word in the case of syncope we have regressive as well as progressive assimilation of sonority (Paasonen ML 10, 20–). Both kinds of assimilation are also present in Permian languages (Uotila KPS 406–). Regarding other languages see TPh 189.

The assimilation of [ʔ] with the consonant beginning the next syllable. E. g. UrvVa *är<sup>s</sup>'süütnü'* (cf. *'kaod'i är'*), LutSJa *sa<sup>h</sup>hiidä'* (cf. *sa' oat*), RõuH *är<sup>l</sup>langitēdu'*, PlvE *hõiganu<sup>v</sup>'vasta*, Rāp *maka<sup>p</sup>'pääle*, SeSa *oæ<sup>h</sup>hüä* (*ole hea*).

*-l, -m, -n, -r, -v* > *-L, -M, -N, -R, -V* after a voiceless consonant. E. g. c. l. *maHL*, Krl (E 361) *vakL* (: *vagla*), Lei(M) *kapL* (: *kabla*); c. l. *leHM*, *käsN*, *kõHN*, Ote *kaHR* (: *kahru*); c. l. *rasV*, *lõtV*.

(*mp* > *'mB*) > *'mm* dial. E. g. TõsKa *'ümmer*, Tõs(V) *'tõm-mama*, Aud *'lamma* (~ *'lamba*), VänR *'ummes* (c. l. *umbes*), RapK *'tõmmasin*, Mär, RisA *'tõmman*, HMd *'tõmman*, KeiK *'ammad*, Juu *'tõmmand*, JMd(M) *'tõmman*, VJg, Jõh *'tõmmab*, Sim, Iis *'tõmman*, Kõp, KJnL *'kumma*, PltP *'tõmmama* LaiM *'tõmmas*, Pal *'lamma* (~ *'lamba*). The assimilation has, of course, been favoured by the *mm* appearing in the weak grade of the same words and the type *'mm* : *mm*, as p. *'amma* : g. *ämma*. It is also possible that this is only a case of morphological stem generalization and not a phonetic change, but this is less probable.

\**kn* > *nn* in SE. E. g. KrkK *tennü* (*teinud*), RápT *'lännö'* (*läinud*), VasVä *tennü'*. EMA 2 48 *'läinud'*. Cf. F *ynnä* < *\*üknä*. Cf. Setälä ÄH 149, Kettunen EKÄ 88. PA 80.

*Bl* > *Dl*: Rõu, Plv(W), Vas *'piidli*, SeHerk(Mg) *'piidl'i* (*piibel*) < *'piibli*; PöiL (*tural* [*turvas*]:) *'turdlad* < *'turblad*, cf. VII(W) (*turbas*:) *'turbla*.

*ps* > *ss* in SE in the stem *lüps-*. E. g. Puh *'nüsmä*, UrvM *'nüsnu'*, Lei(O) *'nüssä'*.

*nB* > *mB* dial. in some word combinations. E. g. Krj *õumbu*, JaaL *'õumbu* ~ *'õunbu*, Emm(W) *'ombu* ~ *'ounbuu*, Khn(AS), PJgE *'õmbu* (~ *õunpuu*); UrvV *otemba* < *oten-* *'Otepää'*; Lei *tomba* ~ *toomba* ~ *'tuumba* (*toona*), *iimbuł* (*eespool*) < *eenpool*, Kuu(S) Pärispä *sem\_baadi* (< *sen paadi*), Kuu(S) Viinistu *sem\_bääle*, Müller *ᚷempraft* (< *sen pärast*) (5): *ᚷempeele* (45). Cf. F and Vp. dial. *-n + p-* > *-m + p-*, e. g. F *tulempois*, SMK 124, Vp. *lindumpoig*.

*nm* > *mm*: Koe (*ramme*:) *'ramme* ([*ranne*:] *randme*), SimV, IisO (*ramme*:) *'rambed*, here the development has probably been as follows: (*ranne*:) *'randmed* > (*ranne*:) *'ranmed* > (*ranne*:) *'rammed*, which by way of stem generalization gave *ramme* : *'rammed*, finally conforming to the type *mm* : *'mb* (*lammas* : *'lamba*) : *ramme* : *'rambed*; San, Urv, Krl, Har *kimmäss* < *kinm-* < *kindm-* (Saareste EK 1938 201), cf. *kindel*, AP *findmä(ï)t*, PlvK *'kinmämpi*.

*lt* > *nt* dial. in a few words. E. g. Kõp, Kod(K), KrkK, KjnL, Puh *kun't* (*kull*), LVEM 59; PJgE *'taandrek* (*taldrek*), Wd. *tandrek*; Lih *'vän'tin* (*vältind*). Cf. Sicilian *antru*, *santu*. According to Grammont the change has originated in the way that the point of the tongue in articulating *l* has assumed the position for *t* too early, so that there was no other way to avoid complete amalgamation with *t* than lowering the velum (TPh 208).

*pt* > *pp*: ReiP *pa'pi'slesd* (*baptislased*), JuuK *pa'pislane*; Trv *'retseppe* (*retsepte*) – here the dissimilative influence of the preceding *t* has supported the assimilation.

*pt* > *tt*: Avi *'settember* – this assimilation has been supported by the dissimilative influence of the following *B* (and *m*). Cf. It. *sette* < *septe* (TPh 203).

*sk* > *st*: San *'niiste* (*nüiske*) – the change has been favoured by the fact that all the other consonants in the word are also

articulated in the front of the mouth; Krl(W) Käärikmäe 'niistumę (niiskuma); Kse(W) Peantse, Mih(Ste) 'pustlema (pusklema) – here the following *l* has also supported the replacing of *k* by *t*.

*hl* > *ll*, *hm* > *mm* in Lei. E. g. Lei (*võht*;) g. *võlta*, *pillapou* (*pihlapuu*) (~ *piilapou*), (*vihm*;) *vimma*, (*l'ehm* [*lehm*];) *l'emma* (~ *l'ema*). Cf. Greek dial. *hm* > *mm* (TPh 192).

*hj* > *ij* in Lei. E. g. Lei (*täht*;) g. *täije* ~ *tähje*, *aiju* (*ahju*), *vaijer* (*vaher*) (: *vahtrę*) (see also V. Niilus EK 1936 38–).

(*hv* > *HV* >) *Hf* > *ff* dial. in NE and here and there in the common language. E. g. MusT *ra<sup>h</sup>fas*, Phl(A) *kraHf* (: *krahvi*), TrmT *nas'te-<sup>l</sup>raHfa*, c. l. *rafas* : *raffa* (Ariste ACUT B 47 : 1 246). Cf. F dial. *affen*, *vaffa*.

## 1.2. CONSONANT ASSIMILATES VOWEL

### 1.2.1. Influence of Nasal on the Neighbouring Vowel.

#### 1.2.1.1. RISE OF THE VOWEL

The fact that a vowel is raised when followed by a nasal, is phonetically explained by the fact that the higher position of the point of the tongue necessary for articulating the nasal, is already anticipated while the preceding vowel is being articulated. This phonetic change occurs in many Indo-European languages (TPh 217). In Estonian this phenomenon, except the change *en* > *in*, occurs mostly in SEE.

*eɣ* > *iɣ*. E. g. *hing*, *ingel*; cf. Müller Šengešt (18), Saleman (1642) Šingešt (VKVM 63), SanLa *en'g*, F *henki*, HelV 'engel, G *engel*.

*en* > *in* in a few words of the common language, more regularly in SEE. E. g. *minna*, cf. PjgE *menna*, F *mennä*, Hung. *men-*, Sam. *min-* ~ *men-* (~ *män-*) (AFUF 12 24); *minestama*, cf. Ris *menenesin*, F *menehtyä*; *nina*, cf. F *nenä*; Puh *tinavu* < *tena-* (< *täna-*), EMA 2 52 'tänavu', cf. Hel (EMA) *tenavelt* ~ *tenavu*; PlvH, RápTo, SeSa *inne* (*enne*), LutSJ *hinnäst* (*ennast*), KraO *hinnast*; RõuK, Kan *inamb*, PlvH *inäp*, EMA 2 50 'enam'; RõuK, PlvAl, Ráp, SeSa *kinä* (*kena*); Urv, PlvAi *pinnär'*; RõuK, UrvVa, RápS(R) *pin'i*, LutK(V) *pin'i*, cf. F *peni*, Lv. *pi'n'*, Cher. *pi*

(LVEM 62); PlvAl *vinnütämmä*, Wd. *vinütäma* (*venitama*); Sim *pin'sik* (*pentsik*), VasO *'vin'läizi* (*venelasi*). Cf. MdE dial. *p'in'ada* ~ *p'en'*-. PA 31–34.

*on* > *un*, *oŋ* > *uŋ* chiefly in SEE. E. g. JuuK *'kuntur*, VMr *'kuntul'*, Mär *'kuntul* (*kontor*), Lüg *'kunturis*; RõuK, Plv, LutSJ *kunn* (*konn*); UrvP *unu*, Plv, SeRad *uno* (*onu*); PlvAl *kunds*, SeKü *kunds*; SeSa *junnide* (*jonnite*); PlvAl *kun't* (*kont*); SeSa *kunutat* (*konutad*); JuuK (*puu*) *krun't* (*ront*); Var *'kuntrull*, Sim *'kuntroll'* (~ *kontroll'*) ~ *'kuntrol'*; JämJ *kunder-pant*, Vas *'kuntsert*, San *'kuntraht*, PlvAl *'kuntraat'*, MusI *'kuntraht* ~ *'kunrat*, Vig(Ste) *'kuntrat*, RõuK, PlvAl *kunks* (*konks*). Cf. Latin *uncus* < *onc-* (TPh 219).

*ön* > *ün*. E. g. Röp *tunts* (*tönts*), SeHerK(Mg) *fündsak* (*töntsak*) 'slothful', cf. Plv(W) Rosma *töndsakus*.

*õŋ* > *ïŋ*, *õn* > *in*, *õn* in SEE. E. g. UrvM *sïnutellema*, Kan *mïn'i* (cf. *lõpetet*), RõuK *sïna* (*sõna*), RõuS *mïn'i*, PlvAl *'kõn'dma*, Röp *mõne*' (*mõned*), SeKü *ïnkItsama*.

*em* > *im*. E. g. UrvVa, RõuK, Plv, SeRad *imä* (*ema*), LVEM 120; SeKü *'kimplema* (*kemplema*); KrlKi, SeRa *timä* (*tema*), LutKi *timä*, *nimä*' (*nemad*), Krl *timp* (*temp*). For Latin and Gothic examples see TPh 219.

*om* > *um*. E. g. Krl *umanik*, Kan, PlvAl, Se *uma*, Krl(S) *umma*' < *ommat* '(they) are', LutKi *umale*, JuuK *ummeti*, Trm(T) *ummet'i* Kan *ummetegi*, Plv *ummehte*' ~ *ummet*, Röp *ummetegi*, SeSa *ummehte*, EMA 2 56 'ometi'; Jäm *umik* ~ *uumik* (~ *omik* ~ *oomik*), Juuk *umuku*, HarÄh *ummukult*, RõuH *hummuk*, PlvAl, Röp *hummok* ~ *hummog*; HMd *tumilgas*, KeiK *tumingas* (*toomingas*), JuuK *tumingas*; VaiJ *'umblija* ~ *'omblija* (*õmbleja*), Ran *ummelda*, SanN *'umbless* 'sews', KrlK *ummel* 'sewed', HarM *'umblëma*, Lei(V) *'umbless*; UrvO *lum'p*, PlvAl *lump*, Se *lum'bi*; PlvAl *kuma* (*koma*); KeiH *kumendan't*, SeSa *kummissar*, UrvO *kumet*, SeKu *kummet* (*komet*); JuuK *'kumpass*, MusI *'kumbas's'*; EMA 2 51 'homme'; cf. Lv. *u'm* 'own; is', *uñblq* 'to sew'; Latin *umbilicus*. Cf. TPh 218-. PA 37.

*öm* > *üm*. E. g. HarM, RõuK, PlvAl *tümp* (*tömp*).

### 1.2.1.2. LOWERING OF THE VOWEL

The phenomenon that nasals may influence the preceding vowel in two contrasting ways, either by raising or lowering it, is according to Grammont explained by the fact that nasals have two places of articulation, one oral and the other nasal. Thus the energy of articulation is divided between the two centres, on account of which articulation in the mouth is less firm and the vowel changes its timbre more easily (TPh 218). P. Ariste explains the lowering of the vowel before nasals by a nasalisation of the vowel: "When articulating a nasalized sound the uvula and the velum have sunk lower than the position they hold when the passage to the nasal cavity is closed. In order still to retain a normal distance between the back of the tongue and the velum, the tongue shows a tendency to sink a little" (ACUT B 47 : 1 17). This explanation seems probable only in the case of a rather strong nasalization, as in the Hiiu dialect. In ordinary circumstances it is not in accordance with the frequent raising of vowels before nasals. A nasal has generally a raising influence on the preceding vowel, as is evident in dialects as well as in Indo-European languages, where, e. g., all examples given by Grammont show a rising of the vowel on account of a following nasal, except the small part where the vowel has become nasalized, as in pr.  $f\tilde{e} < fin$ ,  $\tilde{a} < ün$ . Grammont explains these cases as follows: when the tongue rises a little too early for the *n*, the blade of the tongue is drawn backwards from the ordinary place of articulation for *i*, resp. *ü* (to the place of articulation for *e* or *ö*); the point of the tongue is a little higher in articulating  $\tilde{e}$  than *e* (TPh 221). To sum up the above we might say a nasal usually has a raising influence on the preceding vowel, but in the case of the vowel becoming nasalized it may be a lowering one. If a vowel preceding a nasal shows lowering tendencies without nasalization, as is the case in the following examples, other reasons must be found. In this case the influence of the following nasal chiefly consists in a general slackness of articulation.

*ain* > *aen* in a few words. E. g. *vaenlane*, *laen*, *kaenal*, cf. dial. *kainal* (in the islands, WE, JäS, Vln, TaN), PltK 'lainama, Müller *Wäinlaite* (200), PR 14, 15; F *laina*, *kainalo*. Here the

chief reason for the change  $i > e$  is the assimilating influence of the preceding  $a$ , cf. in dialects  $ai > ae$  even without a following  $n$  (and  $r, v$ ), the co-influence of  $n$  is chiefly due to the fact that the articulation of  $n$  has favoured a general instability of articulation. Cf. also PlvAl *vundamänt* – between two nasals.

### 1.2.1.3. NASALIZATION OF THE VOWELS

All over Estonia we find progressive or regressive nasalization of vowels due to the influence of neighbouring nasals. In but very few dialect investigations nasalization of vowels has been recorded, e.g. Emm *tunnũnd* (*tunnud*), OteN *mqterjãni*, PuhV *obõne*, Lei(M) *kããndž'*.

Ariste has published precise data about conditions and degree of nasalization as regards the common language, in EK 1938 139–, and as regards Rei in ACUT B 47 : 1 157–. As to Indo-European languages nasalization on account of neighbouring vowels is particularly strong in French, but it is evident also elsewhere (TPh 207, 217–). The usual phonetic explanation of this phenomenon is as follows: as regards progressive nasalization, the complete (as is the case of the French nasalized vowels) or partial (as in Estonian) retention of the sinking of the velum due to inertia also during the articulation of the vowel (TPh 218, Panconcelli-Calzia EPh 95); as regards regressive nasalization, the anticipation of the sinking of the velum.

### 1.2.2. Lowering of the Vowel Due to the Influence of a Following $r$ .

This phenomenon is explained by the fact that “in order to form the tremulous  $r$  the back of the tongue must sink a little as if forming a hollow, so that the point of the tongue may move more freely against the front part of the hard palate and withdraw again from that spot. The lower position of the back of the tongue is, however, already achieved when forming the preceding vowel” (Ariste ACUT B 47 : 1 15; see also *ib.* 80; cf. Grammont TPh 217).

*air* > *aer*, *oir* > *oer*. E. g. *aer*, *kaer* (cf. p. 39), *koer*; Phl(A) *âer* : *aêrud*; Khk(T), Pöim *koer* : *koira*; cf. SEE and CSE, e. g. San *koir*, Müller *ŕoir* (23); LVEM 61, 221. Besides *r* the change *i* > *e* here is due to the assimilative influence of the preceding low vowel (cf. p. 20– and 45). The occurrence of Pöim *oer* : *oir*, Phl(A) *âe* : *aê*, which is contrary to expectations, since we should expect a slacker articulation just in the shorter degree, may probably be explained by the fact that in these dialects in the extra long (third) degree even the first component of the diphthong is articulated much more intensively, so that it dominates the second component, while in the shorter (second) degree the first component is articulated less intensively, so that it does not possess any assimilative influence on the following *i*, and thus the lowering influence of *r* is not evident. Cf. F dial. *saeras*, *koer*, SMK 85, 158; Vp. dial. *koër*.

*ir* > *er* in a few words dial. E. g. Phl *hermus* (but *sirm*), Phl, KadT, SimV, ÄksV *kerp*; HMD, KadT *kerves*, KadT, SimV *kern*; JaaHi(J), KodT *kerk* (*kirik*), PlvAl *kerikohe* 'ill. church', EMA 2 29. Cf. *ir* > *er* in PF in Baltic loanwords, cf. *hernes*, F *herne*, and Lith. *žirnis*; Lv. *kēra* 'letter', WLv. *zeřmi* < Lett. *sirms*, SVp. *hernub*, Ing. *hernu-*; Swedish *herde* < *hirde* (A. Kock, Svensk ljuhdistoria I, Lund 1906, 44). PA 47–48.

*er* > *är* in NE. E. g. *ära*, cf. *eraldi*, Trm(T) Vaiatu *era* (~ *ära*), F *erä*; PilKa *äränd*, TrmT *äriti* (*eriti*), Sim *ärakond*, MusI *ära-boqletu*; *aratama*, cf. PlvAl *herätämmä*; *ärevil*, *pära*, cf. SimV *pera*; *päri*, cf. KJnP *perituult*; *pärima*, cf. KamR *perima*; *värav*, cf. Jõh *veravad*, EMA 2 44, F *veräjä*, Lv. *vā'rəD*, SVp. *vär'*– (see also Ojansuu Vir. 1922 90–); Ans, Jäm (E 529) *ärned*; PJg-Tor *vöör* *möldär* (*vöörmünder*); Phl(A) *söbär* (*söber*), Emm(A) *ümbär*; in Re(A) the reduction of *ä* before *r* in the non-initial syllable has reached *ɤ* or total loss, e. g. *ümbɤr* ~ *ümbrɤ*, *söbrɤ*; Vig(SteLl) *köhvär*, *vankär*, Hls(J) *insenär*, Jäm *tärmumeeter*. PA 110.

*ur* > *or*: Hi(A) *korät*, KJn Valma, Puh *korat*; RõuK, PlvAl, Röp, SeSa, KraO *moro* (*mur*) – here the dilative influence of the following *o* has also played a part (cf. p. 112–); SeSa *norm* (*nurm*), RöpT *sürmane*' (*surmani*), Se Truba *sürm*. Cf. Vp. *nor'm*.

A preventively assimilating and lowering influence of the *r* on the preceding vowel has been observed in SJnL as regards the *ü* where generally *ũ* > *üü* : *üü*, e. g. *küenal* : *küinla*, but before *r* *üü* ≡, e. g. *küür* : *küürak*.



### 1.2.3. Palatalizing Influence of *j* on the Following Vowel.

*ja* > *jä* widely in NE and partly also in SEE. E. g. *jätk*, cf. SE *jakk*, EMA 2 62 'jätku leivale'; Pöi (E 528) *jäl'g* : *jäläd* (*jalg*); Hi(A) *jänu*, Röp *jäno* (~ *jano*); Mär 'jämpsima, RapHK *jääm* (*jaam*); KadPa *jägu*, PR 7; Ote *vagä* << \**vakja* (*vai*) (: *vaja* : *vak'a*); Röp (*padi* : ) *padä* (*padja*) (: 'patja); SeSa *paä* (*paja*) 'smoke hole', *uä* (*oja*); SePa *azä* < *asja* (: 'asja), *mar'ä* < *marja*; RöpJ *vahťsejä*, Lei *vag'jä* (*vai*); Kas(A) *söbëjä*, *varäjä*. Cf. MdM *s'ijä* < *s'ija*. On a phonetic explanation see Ariste ACUT B 47 : 1 78. PA 38.

*jo* > *jö* : Hi(A) 'jönnemv, Mär, Jöh, Avi *jön'n'*, 'jön'nima.

*ju* > *jü* : *üttema*, Hi(A) 'jütläm, *jütt*, 'jülgöb (*julgeb*), *jügabu* (*jugapuu*), see also other examples ACUT B 47 : 1 130, Mär, PärP *jüst* (*just*), Mär *jüt'iline*; RõuK *kar'üse'* (*karjused*).

(*jo* >) *jö* > *je* : Har, SePa *egi* < \**jegi*, KraK *jegi* (: *jiu*), Krl (E 361) *jehviku* (*jõhvika*); Lei *iç'v* ~ *içv* < \**jihv* < \**jehv* (*jõhv*), LutSJa *jiuhh*. Cf. Vt. *je'tši* 'river', *jevi* (E *jõhv*).

*jä* > *je* : in the northwest part of Har (E 96) *eness* (*jänes*).

*je* > *ji* : HarM *ih'v* (*jõhv*), Lei *iç'v* < \**jehv-* (*jõhv*), LutSJa *jiuhh*.

### 1.2.4. Labialization Due to the Influence of a Neighbouring Labial Consonant.

#### 1.2.4.1. INFLUENCE OF *p* (or *B*)

*pi* > *pü*: chiefly in WE, especially in Sa and Hi. E. g. *püherdama*, cf. KeiH *piherdab* (~ *pü-*); *püsti*, cf. Hel, Puh, SeSa 'pisti, F *pysty-*, dial. *pistü*, SMK 145; SVp. *püštüt* (see Kettunen ACUT B 3 : 4 § 268), Vt. *pissüä*; Jäm(P), PhaV, Phl *püme*, PlvAl *pümme* (*pime*), Lei *pümeüs* (*pimedus*); Phl *püsigene*, LVEM 253, Jäm(P), VII, JaaHa, PöiVK *püsut* (*pisut*); Phl 'püldumä, MusI 'pülluma (*pilduma*); Khk(W) *pühuks* (*pihuks*); MarHa *püüs* (*peos*), Mär 'püoga (*peoga*), cf. *pihku*, F *pio*, *pivo*, *pijo*; Jäm(P) 'püuti (*pikuti*); Vas 'püstmä, PärP 'püsted (*pisted*). Cf. F *näpyttimet* (~ *näpittimet*) (Vir. 1938 200), SVp. *pühläm* 'Sorbus, rowan'.

*pa* > *po*: RapR *poel* (~ *pael*). Cf. F *potero* (~ *patero*) (Vir. 1938 200).

*pa* > *po* > *pu*: Jäm, Khk(W) *puger*, Muh(W) Lõe *poger* (*bager*).

*ip* (*iB*) > *üp* (*üB*): *kübemed*, cf. KeiH *kibemeke* (~ *kü-*), KadT *kibemed*.

#### 1.2.4.2. INFLUENCE OF *m*

*mi* > *mü* in Sa and Hi. E. g. Jäm(P) *müduks*, JaaHa *'mütma* (*mitme*); MusI *'müskid* (~ *'miskid*), Lei *mütu*, Hi(A) *münu*, Ris *müno* (among the older generation).

*me* > *mö*: JämH *'mqistrid* ~ *'meistrid*, MusI *'möister*, AnsM *'mqöister*. Cf. SVp. *mör* (= E *meri*), 1 p. pl. F dial. *-mmon*, *-mmön*, SMK 164, 166; Ol. *-mmo*, *-mmö*.

#### 1.2.4.3. INFLUENCE OF *v*

*ev* > *öv*: Rei(A) *lövad* < *lev-* (: *leib*), cf. F dial. *väkövä*, SMK 160; Hung. *hév*: *hő*.

### 1.2.5. Rise of Labial Vowel Due to the Influence of a Neighbouring Labial Consonant.

This phenomenon can be explained phonetically in the same way as the labialization of a vowel due to the influence of a neighbouring labial consonant, the higher labial vowels, as regards their place of articulation, being still closer to that of the labial consonants. The labial consonants, owing to the position of the lips and the tongue, together with the lowering of the larynx give the oral cavity the form of a *u* resonator and its dimensions (TPh 215-). As regards Estonian the following cases may be placed here.

*po* > *pu*: *puiklema* (~ *põiklema*), cf. VaiI *poikle* ~ *puikle*, F *poikkelehtia* ~ *pui-*; VaiI *pulema* (~ *polema* ~ *põletamma*), cf. Md. *pultan* ~ *palan* (Steinitz FUV 105); *pungerjas* (~ *põngerjas*).

(?) *oB* > *uB*: Hi(A) *kubâr* (*kobar*); Râp *hublik*, SeSa *hubaik* (*oblikas*).

*mo* > *mu* : *muulukad*, vrd. HMD *moolukad*, Ris *moolokad*; Var, Mär, Saa, SimE *`muskva*, KeiH *`musku*; Wd. *muskiitu* = *moskiit*; *mudel*, cf. *modell*; Plv(W) *muni* (*mõni*), SeRa *munghh* 'in some', cf. Lv. *mūnda* (E *mõnd*), F dial. *munta* (Posti LL 13). Cf. Vp. *mur'z'ai* ~ *mor'z'jā* (E *mõrsja*).

*ov* > *uw* : KeiH *nu'vember*, VaiI *kuvast* ~ *kovast* (*kõvasti*).

### 1.2.6. Lowering of the Vowel before *h*.

Phonetically we can explain this phenomenon by the fact that in articulating *h* the back of the tongue assumes a very low position, which is already anticipated when articulating the preceding vowel (Ariste ACUT B 47 : 1 88, Grammont TPh 214, see ib. also examples from other languages). This phonetic change occurs sporadically, mostly here and there in WE and SEE.

*ih* > *eh*. E. g. Phl(A) *`vehkõ* (*vihku*), PJgE *`mehkel*, KrlKä *`krehvli*, HarKä *vehma* (: *`vihma*) – here assimilation has taken place only in the shorter degree, in which articulation, on the whole, is slacker, Saaremaa MS *wēhema* (g. *vihma*) (VKVM 133 : 9).

*uh* > *oh* : HarM *kohja* (: *`kuhja*), HarKa *pohma* (: *`puhma*), *tohnik* (: *`tuhni*).

*üh* > *öh* : San *köhvel* (*kühvel*), HarKa (*nürhh*;) *nöhrü* (*nüri*), PlvAl *`löhtre*; JMd Oeti, AnnS *löhike*, Müller *lõhifene* (2) – it is possible that in the last word we have a stem generalization of the comparative form *löhem* (cf. p. 110–).

As regards the lowering of the vowel before *h* due to dilation, see p. 109–.

### 1.2.7. Lowering of the Vowel before *l*.

*ail* > *ael* : E. g. *kael*, cf. Müller *faüa*. See p. 39. Here the change *i* > *e* has been favoured by the assimilative influence of the preceding *a* (cf. *ain* > *aen*, *air* > *aer* p. 20–, 22).

*ul* > *ol* : RanK *kolmud*, Puh, KamR *kolmu*, TMrKõ *kolm* (*kulm*); Krl(W) *sola* (*sula*), *solame* (*sulama*), SanO, Krl(W) *solane* (*sulane*), RāpT *`sulla* (*sula*, ill.) – here the dilative influence of the following *a* has favoured the lowering of the vowel.

(?) *el* > *äl* in the word *selg*, e. g. Hel, KamR, HarM, PlvAl VasK(W) *sälg*, cf. Lv. *sälga*.

*il* > *el*: Hi(A) *nüid leheb* (~ *läheb*) *elmaks* 'now there will be a quarrel': *ilm*, gen. *ilma* (ACUT B 47 : 1 100).

In the phonetic changes given above it is the anticipation of the position of the articulation for *l* during the articulation of the preceding vowel that causes the lowering: the point of the tongue rising against the alveolar arch forces the part of the tongue behind the point to sink. Cf. Fr. *il* > *iel*, *ial* (TPh 216).

### 1.2.8. Raising Influence of *s* on the Neighbouring Vowel.

*as* > *es* occurs chiefly here and there in WE in the inessive and elative cases of the words *mets* and *ots*, in which the unstressed state of the vowel of the second syllable, due to the preceding *s* and to the extra length of the first syllable have favoured the rising of the vowel. E. g. Aud ' *metsest*, PJgE ' *otses*, VänR *metsest*, Mär(R) ' *metses*, Hmd ' *otses*, SJnP *otsest*, Pilm *metsest*, KJP *otses*, KsiJ ' *otsEs*. Here and there in WE we find *as* > *es* also in the inessive case of a few other words of extra long degree, e. g. Tor, RisVi, Mär, JuuT (more regularly). E. g. Khn(K), Aud, Vig(Ste) ' *linnes*, PJgE ' *latves*, Tor ' *kündmes*, ' *sildes*, ' *aeges*, Kul ' *rindäs*, ' *selgäs*, Mär ' *nurkes*, ' *kuimes*, RisVi ' *pulmes*, ' *laulmes*, Hmd ' *varnes*, NisV ' *mõises*, JuuT ' *peksmes*, ' *kaeles*; PR 30. The cases of *as* > *es* in the inessive case after a short first syllable and in the non-initial syllables, as in Tor *kuulames*, RisVi *kohes*, may also be analogical, since it is difficult to ascertain where the widening of a phonetic change ends and a morphological-analogical generalization begins.

Owing to the *s* the point of the tongue rises when articulating the preceding vowel. Cf. Semitic *aš* > *iš*, *āš* > *ēš* (TPh 215).

### 1.2.9. Semivowel Assimilates the Final Part of the Preceding Long Vowel.

Before *j* here and there in WE, CE, SE. E. g. Aud ' *keija* < ' *keija* < \**kēiak* (~ ' *kēda*), PJgE *kuije* 'g. six', MarH ' *keijä*, Lih

*kuijes* 'sixth', Vig(Ste) *keijä* (~ *kiijä*); Kõp `saija (*saada*), SJnP `keijes (*keedes*), KJnL `jäijä, HeL *jäijä*, HarM *jäijä* (*jääda*), KamR *saijen* (*saades*), Kan `saija', PlvH *jäijä*', VasLa *saija*', Lut(V) *saijai*' (< *saada ei*).

Here assimilation has taken place to avoid the unstable combination long vowel + *j* + vowel, which is as inconvenient as the combinations long vowel + *h* + vowel and long vowel + vowel, which mostly have all been subject to change (except long high vowel + low vowel), for the semivowel *j* offers too little support between two vowels, one of them, long, with near places of articulation. Other possibilities to avoid that combination is the shortening of the long vowel and its rising (see pp. 92 and 132).

Regarding cases before *v*, such as *tuuva*, see p. 127.

### 1.3. VOWEL ASSIMILATES CONSONANT

A consonant between two vowels is always in a worse position than the vowels, as the latter are two against one. If the consonant is voiceless, the vowels try to make it voiced: passing from the articulation of one vowel to that of the other the vocal chords try not to stop vibrating in between. If the consonant is already voiced, the vowels try to widen the opening of the consonant, which is always smaller than that of a vowel (TPH 200).

The assimilation of consonants by neighbouring vowels also appears in the consonantal alternation which now is mostly called *gradation* (Germ. *stufenwechsel*), i. e. in the development of the so-called weak-grade variants of the stops. The gradation goes back at least to (the dialects of) Proto-Finnic. To the intervocalic stops of the so-called strong grade after the first syllable corresponds a semivowel or zero in the weak grade in present day Estonian, e. g. *pada* [*paDa* < *pata*]: g. *paja* [< \**pa<sub>t</sub>an*], *halb* [< *halpa*]: *halva* [< \**hal<sub>p</sub>an*], *mägi* [< *mäki*]: *mäe* [< \**mä<sub>k</sub>en*]. In PF the strong grade occurred when the following syllable was open, the weak grade when the following syllable was closed. It may be assumed that the persisting, or weakening (assimilation by the neighbouring vowel) of the stops was due to a somewhat stronger, or weaker stress on the first

syllable: it may be assumed that the second syllable being closed had a somewhat stronger stress and, according to the principle of compensation, the stress on the first syllable accordingly was weaker, a condition which favoured the assimilation of the stops. The gradation also occurs after non-initial syllables. It is generally assumed that the weak grade originally there always occurred after the (weakly stressed) second syllable, and the strong grade after the third syllable (with a secondary stress). But this assumption has not been proved, and perhaps L. Kettunen is right in stating that the loss of the stop after the second syllable could be treated separately from the real gradation after the first syllable. Most linguists assume that the intervocalic weak-grade sounds in PF were  $\gamma$ ,  $\delta$ ,  $\beta$ , but they might also be  $g$ ,  $d$ ,  $b$ , or  $G$ ,  $D$ ,  $B$ . As we lack definite proof as to the phonetic character of the weak-grade variants, we mark, together with Kettunen, the PF weak-grade sounds as  $k$ ,  $t$ ,  $p$ . It is generally agreed that the PF weak-grade variants of the geminate stops after the first and the third syllable were  $\check{k}k$ ,  $\check{t}t$ ,  $\check{p}p$ . For the origin, character and extent of the gradation, see further Tauli, On the Origin of the Estonian Stage Shift, ASLES I (1952) 32– (cf. now also E. Moór ALH 2 12–, W. Steinitz AIHUH B 1 19, L. Posti FUF 31 74–).

### 1.3.1. Weakening of Stops and *s* in Original Syllable-Initial Position.

$k$ ,  $t$ ,  $p$ ,  $s > G$ ,  $D$ ,  $B$ ,  $Z$  after a vowel. E. g. *sadama*, *tegu*, *abi*, *saab*, *pesa*, *jalas* (on  $Z$  see further Ariste ACUT B 47 : 1 214–); cf. Khn(AS) *kʲipɛ* (*kibe*) (among the older generation), JõeI *sota* (*sõda*), F *sataa*, *teko*, *apu*, IngS *maGu*, *maDo*. Dial. also  $-D < *ta$  after an originally third syllable, e. g. JMd(M) *tuhanded*, TõsL *'laagrid* (cf. p. 157–); cf. SVp. *sogedad*, F *valkeata*, Vt. *vaakɛata*. In most cases the sounds beginning the second component of a word combination are also subject to this change, e. g. TõsE *pühäbä*, Mär, Trm(T) *'alla'boole*, TMrVKo *'sündümise-bäiv*, Mär *tahabidi*, *teisibidi*, San *pahubäidi*, Mär *sarabu*, SjnP *nas'ibu*, PuhV *seeni\_gui*, LaiM *aa\_gui* ( $< aga\ kui$ ), HlsH *mikeberäst* 'why', Mih(Ste) *õhõ\_gorra* (*ühekorra*), TrvVä *annadal* (*anna talle*), TMrV *mineva\_dalvel*, TMrVKo *vääga\_bik*; Hi(A) *jõõsus*

(*jõesuus*). But in some dialects *k*, *t*, *p* in compounds have partly survived, e. g. Pst(K) *käokenga*, Ote *toonekur'g*, *tikutuqs'*, Puh *sarapuu*, KrlKi *ütesekümmend*, Rõu *'tarbipuu*, RäpS(R) *tal'istepühi*. An analogous assimilation has also taken place after a voiced consonant (see p. 15).

### 1.3.2. Shortening of Geminate Consonants.

#### 1.3.2.1. SHORTENING OF GEMINATE STOPS

\**kk*, *tt*, *pp* (>*k*, *t*, *p*) > *G*, *D*, *B* after a long vowel or a diphthong of the first syllable before an originally closed syllable. E. g. *looga*, *viidan*, *kauba* (: *looka*, *viita*, *kaupa*), 2nd p. pl. *Saa saade* (*saate*), *viide* (*viite*); in the Finnish-like NEEC also after a short vowel, e. g. Kuu(S) *Tapurla hagatud* (: *hakkama*), VNgR *kodi* (: *kotti*), *vogi* (: *vokki*), *nubu* (: *nuppu*). Cf. F (*kukko*:) *kukon*, *viitata* (: *viittaa*), *lipun* (: *lippu*), IngS *saagin* (: *saakki*), SVp. *katan*, Vt. *autassa*, (*ep*) *kuku*; Lv. *kaļāB*, *lūoļāD* (E *loodad*). An analogous change has taken place after a voiced consonant, e. g. *tilgub*, *kardan*, *kõmbin*.

\**kk*, *tt* > *G*, *D* after the second syllable before an originally closed syllable here and there in Sa, Hi, Saa, NEEC, WSE, SEE, e. g. Khk(T) (*unnik*:) *unnigu*, JaaH *kaagas* (*kajakas*) (: *'kaakad*), Phl *hööledõ* (: *hööletõmõ*), Saa (*mus'tik*:) *mus'tigu*, Hlj Selja (*katak*:) *katagad*, VNgR (*nimetama*:) *nimedan*, KrlKä (*sitik*:) *sitigu*, SanLa, HarMõ (*õdak*:) *õdagu* 'evening', KrlKä (*purustama*:) *purude* (*purustan*), UrvO (*ööbik*:) *ööbigu*, UrvVa *seled'i* (*seletasin*), RõuS ('*ündruk*:) '*ündruguga*, Plv (*pal'mikot*:) *pal'migo*, Räp (*elänik*:) *elänigul*, Vas (*raamatut*:) *raamadu*, SeSa *unigu* (: *unikut*), KraK (*Puuzlik*:) *Puuzligule* (79). Cf. F (*harakka*:) *harakan*, (*kirjoittaa*:) *kirjoitan*, Vt. (*kuivatta*:) *kuivatan*, IngS *kiliqad* (: *kilikka*).

\**kk*, *tt* > *G*, *D* after the third syllable before an originally closed syllable in northern Hi, KuuN, SE. E. g. Phl *lagendigu* (: *lagendikku*), Trv *Ppõdsastigun* (: *põdsastikku*), *äbemädä*, Ote *aganigu* (: *aganikku*), KamK '*tü'rigu* (*tüdruku*), *ammastēda* ~ '*ambida*, PlvK *lepistigu* (: *lepistikku*), SeSa *aganigu* (: *aganikku*), Lei(W) *kanarigu* (: *-kku*), LutSJa (*uman'ik* [*omanik*] :) *uman'igu*, ([*j*] *ime-tämä*:) (*j*) *imeedä* (*imetan*); dial. only *tt* > *D*, whereas *kk* ≡,

e. g. Hls(K) *kirjutede* (*kirjutate*), San *'vankrede* (*vankrita*). Cf. F *huolimaton* (: -*ttomat*), Vt. *pettelikoD*, IngS *vanhemmigoin* (: -*kkoi*).

\**kk* > *ĳk* dial. after the third syllable before an open syllable (in this case there is no alternation at all). E. g. VaiJ g., p. *'põesastiku*, LaiM (*aganad 'ael'i*) *aganiku*, Hls p. *räbastiku*, PstK p. *põõsastiku* (~ *põõsastikku*).

### 1.3.2.2. SHORTENING OF GEMINATE CONTINUANTS

*ss* > *s* > *Z* after a long vowel or a diphthong in the first syllable before an originally closed second syllable, and after non-initial syllables. E. g. (*poissi* :) *poisi*; cf. in Cr. and Vt. also after a short syllable, e. g. Cr. (*mõssi* :) *mösin*, Vt. (*püssü* :) *püsü*; after the first syllable the change is analogous to that of the geminate stops and has also taken place after a voiced consonant, e. g. (*värssi* :) *värsi*; in. suff. -*s* < -*sa* < -*ssa* (< \*-*sna*), e. g. *külas*, cf. F dial. *küläsä*, *küläs*, SMK 104, Vt. *mettsäzä*, SVp. *verkos*; Tõs(V) *andase* < -*sse*- < -*kse*- (*antakse*), KrlKi *ütesekümmend*, Plv *saasi*' (*saaksid*), Räp *tahasi*, SeSa *eläze*' 'they live'; partly in the type *katuse* here and there in SEE, e. g. HarM *katuse*; EMA 1 8 'juuksed', 2 46 'kaheksa' (cf. *ks* > *ss* p. 15).

*nn* > *n*, *mm* > *m*, *ll* > *l*, *rr* > *r* after a long vowel or diphthong in the first syllable and after non-initial syllables; dial. and in a few words also after a short first syllable. E. g. *kääne* < *kääne* < \**kān̄e*-, *maani* < \**mānnik*, *mereni*, *hommikuni*, cf. IisU *ommikun'ni* (but *maani*, *surmani*), RäpP *sugüzen'ni?*; *kuni*, *seni*, cf. Mär *sen'ni*, RapR, PltU *kunni* ~ *kuni*; *karanud*; cf. F *kääne*, *karannut*, dial. *käänän*, *karanu(t)*, SVp. *hapanu*, *sin'i* (E *seni*), Ol. *sin'i*, Vt. *lšänän*, *kargannu*, *sinni* (E *seni*); *saame*, *parema*, *parandame*, cf. VNgK *olemma* (*oleme*), Lüg *parandamma* (*parandame*), F *saamme*, dial. *saame*, *isoma*, *parannamme*, SMK 164, 166; Lv. *s̄m̄* (LW p. LX), *āndam̄*, Vt. *annamma*; *keelan* < \**keellan* (< \**kēlan*), cf. F *kiellän*, dial. *kiellän*; *tööle*, *merele*, *pimedale*, cf. -*lle* after a syllable with secondary stress in CNE and NEE and widely in SEE, e. g. Juu *sulaselle*, VJg(S) *lõunelle*, Jõh *õhtalle*, (but *merele*), IisU *pime-*



*dalle*, Kod(KV) *ahjudelle*, cf. F *työlle*, *merelle*, *pimeälle*, dial. *papile*, SMK 131, Vt. *mäl̥ē* ~ *mäl̥a*, *jumäl̥äl̥ē*, *sūr̥äl̥ē*; *keeru* < \**keerro-* < \**kēr̥ion*, cf. *keerdu*, F *kierron*, dial. *kierän*, SMK 83; JuuK, SimE *mulikas*; MusI *talina linn* 'Tallinn', HMd, PJgE *talinas* (*Tallinnas*) (cf. Saareste Ekirj. 1934 164–); PJgE *talukas*; Röp *teling* (~ *telling*); PlvH *külat* (*küllalt*), *viländ* (*villand*), LutSJa *kal'iss* (: 'kalli); *amet*, cf. Rak *ammēt*, VaiJ *ammēt*, Pil *ammēt* (~ *amet*), TrvP 'ammal', Lei *a<sup>m</sup>mat'*, Müller *Ǟm̄et* < LG *ammēt* (Ariste ACUT B 46: 1 6); *komistama* < *kommis-* < \**kom̥is-*, cf. *kompima*, Wd. *kommistama*, F Agricola *combistuman* (Hakulinen Suomi 101 42), F *kompastua*; *komandant*, *komandeerima*, cf. MMgR *kommandan'dil*, G *kommand-*, F *komentaa*; *komisjon*, cf. SimE *kommisjon*, Var *kommisjuun'*, KrkK *kommisjooni*, G *kommission*, F *kommisioni*; *komissar*, cf. Mär *kommessar*, RapHK *kommissar*, Sim *kommissar*, PJgE *kommessar*, SeSa *kummissar*, G. *kommissar*, F *komisaari*; dial. *kumardama* (Hi, PäS, Vl, SE); Sim *umistama*; in the stem *üm̄mar-* widely over the whole E, e. g. Kōp *üm̄arikud*, Pil *üm̄arik* (~ *üm̄marik*), PltU *üm̄argune* (~ *üm̄margune*); Aud *lämatama* (but *tōmmata*); Var ('*ambad* :) *amas*, ('*lambad* :) *lamas*, *kaksküme*; HlsM *lämi*, Hls(U) *ramune*; SeSa *nelitōisküme*; JJnLä *sōn'ik*, Kōp *länikud*; Aud, Pil *tunistama*, PärP *tun'istama* (~ *tun'nistama*), SeLit *tun'Istamma*, Kōp *unik*, HMd *önistab* ~ *ō'nnistab*; SimV *korutab*, Hls *koruteb* ~ *kooruteb*, Kōp *murakud* ~ *murrakud*, PJgE *varukad*, KeiH *varukas* ~ *varrukas*, LVEM 175; Mär *äritas*, KeiH *äritama* ~ *ärritama*, cf. F *är̥ryttää*, *är̥tyä*; Rōu *narima*; in RapHK *rr* is articulated so weakly that it is approaching *r*: *keelemurre* ~ *keelemure*. PA 27.

### 1.3.3. Weakening and Loss of Weak Variants of Stops in Syllable-Initial Position.

\**k* > 0 after a vowel, after *l*, *r* in back-vowel words and after *s*, *h*. E. g. (*tegema* :) *teen*, cf. F *teen*, SVp. *tegādan*, WVt. *tēn*, Lv. *t'ēB*, Md. *l'ėje-*, Hung. *té-*, *te-*, *tev-*, LpS *takāu*, LpN *dāy-* (FUS 30); (*jōgi* :) *jōe*, cf. F *joen*, SVp. *joges* (E *jōes*), Vt. *jegęza*, Lv. (LW) *jogūD*, Hung. *jó*, *jou*, Osty. *joyàn* 'small river', Cher. *joy-*, LpN g. *jōyā* (FUS 31); *katted* < \**katteket*, cf. Ld.

*katteged* (Tunkelo VKA 23), Lv. *kaštùG* 'g. dew', F *kasteen*, Vp. *kastken* (Vir. 1925 66); MusI (*aga* : ) *aad* 'pl. cloud filament', PlvK (*higi* : ) *hii*, SePa *jaet* (*jagatud*), Khk(T) (*laga* : ) *laaks*, RõuH g. *lää* (*läga*), KrlK 'maati (*magati*), PltP (*naga* : ) *naa*, SanN *näi* (*nägi*), Lut(V) *paet* (*pagatud*), PlvK (*pigi* : ) *pii*, PlvAl (*peig* : ) *peju*, Hls(K) (*pugu* : ) *puu*, RäpT (*rägä* : ) *rää*, TrvP (*rügä* 'rye' : ) *rüä*, PltP (*vaga* : ) *vaa*, KuuT *ääs* (: *äkke*) (*äke*); *varas* (: *varga*), cf. F *varas*, SVp. *vargastada* (E *varastada*), Vt. *vargaZ*; (*jalga* : ) *jala*, et. Vt. *jalgaD*; (*põsk* : ) *põsed*, cf. F *posket*, IngR *poset*; (*nahk* : ) *naha*, cf. F *nahan* ~ *nahkan*, Vt. *nahgä*. SMK 37-, 52-.

\**u<sub>k</sub>*, \**u<sub>t</sub>* > *uw*. E. g. (*haud* : ) *haua*, cf. Lv. *ōdaD*; JõeRa (*aug* : ) *auwid*, cf. *havid* < \**awi*- < \**aui*- < \**au<sub>k</sub>it* (see p. 125). Cf. Grammont TPh 213.

\**i<sub>k</sub>*, \**i<sub>t</sub>* > *ij* E. g. (*peig* : ) *peiu* [*peiju*] < \**pei<sub>k</sub>o*-, (*neid* : ) *neiu* < \**nei<sub>t</sub>o*-, Trv(K) *maijega* < \**mai<sub>e</sub>-* (*maadega*), cf. F *maiden*, IngS *maijen*. Cf. Grammont TPh 213.

\**l<sub>k</sub>*, \**r<sub>k</sub>* > *lj*, *rj* after a front vowel. E. g. (*jälg* : ) *jälje*, cf. F *jäljen*, SVp. *jälges*, WVt. *jälleD* < *jälje*-; (*särg* : ) *särjed*, cf. F *särjet*, SMK 53-, SVp. *sär'gid*, WVt. *särjeD*. On the phonetic explanation of *γ'* > *j* see Setälä ÄH 27.

\**t* > 0 after a vowel and after *h*. E. g. (*vedama* : ) *vean*, cf. F *vedän*, dial. *veän*; (*kaduma* : ) *kaotab*, cf. F *kadottaa*, FT *kadonu*, SVp. *kadotan*; JõeI *ias* (*idas*), Aud (*kida* : ) *kea*, Jõh (*küdi* : ) *küüd*, SanN *maelnu* (*maadelnud*), PlvK (*mädä* : ) *mää*, Lüg *siiga* (*siidiga*); (*tahtma* : ) *tahan*, cf. F *tahdon*, dial. *tahdon*, *tahdon*, IngR (*ei*) *taho*; (*leht* : ) *lehe*, cf. F Porsanger *lehdet*, FT *puhdas*; according to Saareste *hd* > *h* has developed through *hj* (PR 1, EA II 428, 520); dial. *da*- inf. type 'pühki here and there in Muh, Phl, Khn; NEEC, SNE, SE, e. g. Khn(AS) 'pühki, cf. F *pyhkiä*; dial. inf. type *paranda* (here and there in WE and NEE; SE), e. g. MusI *paranda* < \**paranta<sub>t</sub>ak*, KuuT *kirjuta<sub>ess</sub>* (*kirjutades*), cf. F *parantaa*, *kirjo(i)tt<sub>a</sub>essa*, Vt. *parattä*; p. *kala* < \**kala<sub>t</sub>a*, cf. F *kalaa*, SVp. *kalad*, Vt. *kanä*; p. pl. *sõrmi*, cf. F *sormia*, SVp. *sor'mīd'*; *pime* (: *pimeda*), HelV *pimen* (*pimedas*), cf. Lv. *pi<sup>?</sup>md<sup>?</sup>*, F *pimeä*, Vt. *pimiä*, SVp. *tihed* (E *tihe*); *ruske*, cf. SVp. *rusked* : *rusk-tad*; g. pl., *jalge* < \**jalka<sub>t</sub>en*, Khn *kaussõ* (*kausside*), *üürnike*; *anda*, cf. Hlj' *andada*, F *antaa*; *joota*, cf. SVp. *jotta* < \**jõtta<sub>t</sub>ak*; *taban* < \**tapa<sub>t</sub>an*, cf. F *tapaan*, SVp. *tabadan*; *surnule* << \**surnu<sub>t</sub>ellen*, cf. F *kuolleelle*, SVp. *männuded* 'gone'. SMK 65-, 81, 98-.

$t > j$  after the first syllable between vowels, dial. after  $h$  (chiefly here and there in WE, especially in the islands) and after the second syllable (in NEC and in a few words in SE). E. g. (*pada* : ) *paja*, EMA 2 65, cf. Lv. *padàst*, F *padan*, dial. *pajan*, *padan*, *paðan*, *paan*, Vt. (*pata* : ) *pāD*; (*sōda* : ) *sōja*, EMA 2 66, cf. F dial. *sojassa*; (*kuduma* : ) *kujub*, EMA 2 61, cf. F dial. *kujon*; Vig(SteLl) (*mado* : ) *maçéo*; cf. F dial. *majot*; Jäm (*muda* : ) *muja*; MusI *ojaga* (*odaga*), Lih *ujos* (*udus*); Khn *suajasse* (*saadakse*); dial. inf. type *'saaja* (*saada*) (Sa, Muh, Khn, LāEd, Tōs), e. g. Tōs(KM) *'saaja*, cf. F dial. *saada*, *saaja*; MuhLōe *kohjad* (*kohad*), Var *kohjas* (but *luhas*); VigSte *koehad* ~ *kuehad* < *kohjad*, Lei (*tāht* : ) *tāije* < \**tāhje*, *vaijer* (: *'vahtrē*) (*vaher*) (cf. *aiju* [*ahju*]); dial. inf. *'tehja* (chiefly in SaE, Hi, here and there in Pā and CNE), e. g. Tōs(KM) *'tehja* (~ *teha*), SimE *'nāhjes*, PR 1; cf. F *tehdä*, dial. *tehjä*; KuuT *lageja* (*lageda*), *hobeja* (*hōbeda*), OtePi *kevāja* (*kevade*), VōnKV *labijas* (*labidas*), Kan *kevājäne* (see further M. Toomse ALSE 1936 260–); cf. F dial. *pimejä*, SMK 65–, 81, 187, 191–. PA 102.

It is probable that in Estonian the disappearance of weak variants of stops, at least in intervocalic position, has taken place through the spirants (cf. Tauli ASLES I 48). As to the time when  $\gamma$ ,  $\delta > 0$  started in E we do not find any certain data in written records, but at least in some dialects the change had set in already in the beginning of the 13th century. In the LCD we still find a spelling that seems to prove a spirantic or even stop articulation, e. g. *Eghontakæ* 'Jōetagusē', year 1412 *Yegintaken*, 1443 *Joentaken* (LCD 332); *Jukal* 'Joa', 1387 *Jugele*, 1491, 1529 *Juhal*, 1495 *Juhall*, 1501 *Juhal*, 1540 *Johall*, 1565 *Joall* (LCD 391); *Kiskeueræ* 'Kisuverē'; *Kurkeueræ* 'Kureverē'; *Laidusca* 'Laokūla'; *Orgiōl* 'Oru', 1325 *Orghile*, 1586 *Oryell*; *Orkæ* 'Oru', 1296 *Orghys*, 1306 *Orgis*, 1318 *Orges*, 1336 *Orghis*, 1475 *Orgall*, 1507, 1517 *Orgell* (LCD 520); *Rodickæ*, 1585 *Rodicka*, *Rådicka*, 1637 *Rodica*; 1583 *Royka* (LCD 577). On the other hand we find instances with loss, e. g. *Jeeleth* 'Jōelāhtme', *Meintacus* 'Mäetagusē'. It is possible that the LCD instances with the grapheme *k* are derived from the strong grade. It remains uncertain which pronunciation, lenis or spirant, is hidden behind such graphemes as Müller *feððel* (*käel*) (4), *wedðichþe* (*weise*) (13), *wedðe* (*vee*) (16) (cf. Saareste EKirj. 1920 295). A pronunciation  $\gamma$  (or  $j$ ?) is probably

echoed by such graphemes as Stahl Mēhje (*mäe*), wehje (*väe*) (VKVM 39), Kēhje (*käe*) (43), Gutsclaff wiḡgeš (*viies*) (VKVM 117), Rossihnius wiḡeš '5th' (15), kägel (11), Käghe (31), kähjel (244), kähgen (187), Lejille Lešjalle (37), wägešt (11), wäghešt (32), weḡhje (212), Brockmann (1637) Kēhje (*väe*) (VKVM 53), Saaremaa MS wehješt (*väest*) (VKVM 133). At the same time *käe* occurs in the South-Estonian AP (cf. also Saareste EK 1930 77). Cf. *gh* in the old F literary language, e. g. in the gospel fragment from Upsala näghe (Rapola SKH 113). But in the same authors we also already find loss, especially in back-vowel words, e. g. Müller Mæet (56), Kæel (72), peab (35), Wæe (43), toesti (41), Stahl Seelautat (VKVM 50), fehjt (51), nahat (45), Rossihnius waḡd (*vagad*) (49). In older written Finnish the pronunciations  $\delta$  and  $\gamma$  are surely recorded in the 15th and 16th century, at the same time as the disappearance of  $\gamma$  starts (Rapola SKH 85, 88, 112, 125).

In the following we shall touch upon the question from what sound Kod *D* is derived, which corresponds to the weak variant of the other dialects, after the first syllable, as in *padass*, *kädiss*, *sidotud*, *juada* 'to drink' (Kettunen KD 105-), and likewise *D* after the second syllable in the type *pimeda*, *ajada* in the common language. It is generally supposed that in both cases  $D < \delta$ . Kettunen alone rejects this point of view. He finds it possible, even probable, that in this case there has been no weak-grade variant at all in Kod (EKÄ 64). The problem from which sound Kod *D* (corresponding to the weak-grade variants in other dialects) is derived, still remains unsolved. We may assume (1) that the development of the weak-grade variant of *t* has stopped at the phase *D*, and so coincided with the strong-grade variant  $D (< t)$ , or (2) that there has been a change ( $*t > ? *D$  or  $*d > ? *D$ )  $*\delta > D$ .

A complicated problem is that of the weak-grade variant of *t* after the second syllable in NE, where at present there is zero in some cases, in others *D*. According to the general view we have here the changes  $\delta > 0$  and  $\delta > D$ . The phonetic changes are usually worded as follows: (1)  $\delta > D$ , when the first syllable is short and the third syllable is closed, or open, but in medial position, (2)  $\delta > 0$  when the first syllable is long, or short and the third syllable is open and word-final (cf. Kettunen EKÄ 77-). Why is it that after the second syllable there is a *D* in

some cases, in others loss? It is probable that the stress of the second syllable has been the decisive factor: when the first syllable was long, the second syllable had a weaker stress and thus favoured the assimilation and weakening of the following consonant; when the first syllable was short, the second syllable had a somewhat stronger stress as compared with the former alternative, and thus favoured the retention of the consonant. In this way it is possible to explain the forms g. *mageda* ~ *kõrge*, pl. g. *kalade* ~ (dial.) *jalge*, inf. *ajada* ~ (dial.) *pühki*.

The most problematic point is the occurrence of n. *pime* (< \**pime<sub>t</sub>a*) : g. *pimeda* (< \**pime<sub>t</sub>an*). Kettunen (Vir. 1951 224) and L. Posti (Vir. 1950 277) assume that in the nom. case, the third syllable, being open and word-final, had no (secondary) stress, and thus favoured the loss of the consonant; in other cases, i. e. when the vowel of the third syllable was followed by one or more phonemes (e. g. g. \**pime<sub>t</sub>an*, in. \**pime<sub>t</sub>assa*, p. \**pime<sub>t</sub>ata*), the third syllable had secondary stress and thus favoured the retention of the consonant (which according to Kettunen was the stop, and according to Posti was  $\delta$ ). The explanation is not convincing. In fact, it would mean assuming that in one case of gradation the stress of the following syllable favoured the weakening of the consonant (cf. p. 27–, ASLES I 38–, especially Kettunen, Vir. 1949 69), and in the other case the stress of the following syllable prevented the weakening of the consonant. Moreover, the measurements of modern Estonian indicate that the lenis after the second syllable is in a weaker position and more apt to assimilation by vowels if the word is longer; this appears in less quantity and greater and wavering sonority (cf. e. g. regarding *D* in *kokkade* : *kokkadega*, Ariste EK 1933 174, 176); this is in accordance with the general phonetic compensation principle. To sum up: it is difficult to assume that there were different sounds in the nominative and in other cases. As to the real character of that sound we still lack definitive proofs. Posti has tried to prove that it was  $\delta$  (Vir. 1950 270–), basing his argument on the grapheme *th* in LCD place names *Hoppæthæ* ‘Hõbeda’, *Horætha* ‘Hõreda’, *Lakethæ* ‘Lagedi’, *Mahetæ* (\**Maheda*). Although *th* can stand for  $\delta$  (besides *ht*, *h<sub>t</sub>*), the possibility that *th* represents a stop is not precluded, cf. *Kathis* [\**KaDja*(n) or \**Katja*] ‘Kadja’, *Ketheræ* [\**Ketra* or

\**KeDra(n)* 'Kehra', *Kithæ* [\**Kīta* or \**KīDa(n)*]<sup>1</sup> 'Kiiu', *Mathielæ* [\**Matila*] 'Madila', *Wætheueræ* [?\**VõiDevere*] 'Võivere'; *Uvætho* 'Väo' can represent nom. [\**Väto*]<sup>2</sup>, as LCD place-names are generally in the nominative case.

Judging by the spelling of the LCD place-names we may assume that in the beginning of the 13th century \**t* ~ *t̃* was represented by the following allophones: *t* – before an open syllable after a vowel, liquid, or unvoiced consonant, and before a voiced consonant, cf. *Metapæ* 'Mädapää', *Martækilæ* 'Maardu', *Octinus* 'Uhtna', *Koti* (\**Kotja*) 'Kodja'; *D* (? ~ *d*) – after *n* (before open and closed syllable); before a closed syllable before a voiced consonant, and perhaps after a liquid and after *h*, cf. *Kandalæ* 'Kandla', *Andikewæræ* 'Annikvere', *Podrijs* 'Põdruse'; for *δ* no definitive proof is to be found in LCD, it can only be assumed. After a liquid and after *h* before a closed syllable *D* (? *d*) or *δ* occurred, cf. *Kuldenkava* 'Kulenga', *Othaccaueræ* 'Ohakvere' (*th* also stands for *ht*, cf. *Jeeleth* 'Jöelähtme'). In LCD there are no instances of \**t̃* (before a closed syllable) after the vowel of the first syllable. It may be assumed that *δ* and/or loss occurred in this position, as *γ* ~ 0, cf. *Eghontakæ* 'Jöetaguse' ~ *Jeeleth* 'Jöelähtme'. Nor are there any instances of \**t* after a third syllable; *t* or *D* may be assumed. After the vowel of the second syllable, the first syllable being short, *D* or *δ* may be assumed; cf. *Hoppæthæ* (see above); no sure instances are to be found for a long first syllable, *δ* and/or loss may be assumed.

To sum up: regarding the occurrence of \**t̃* after the second syllable, the first syllable being short, two alternative assumptions are possible in all cases: (1) *D*, e. g. n. \**pimeDa* : g. \**pimeDan* (p. \**pimeData*, etc.); (2) *δ*, e. g. n. \**pimeða* : g. *pimeðan* (at present *pime* : *pimeDa*). How to explain the present occurrence in either case? The development may be assumed to be as follows.

(1) Starting from \**D*, the forms with *D* need no explanation. The possible development of n. *pime* has been indicated already by Kettunen (EKÄ 81): \**pimeDa* > \**pimeD*, as the result of the apocope (cf. p. 73). Later on \**pimeD* > *pime*, cf. Vp. *hobed* (: *hobedan*). The same thing may be assumed in the partitive type \**kalaDa* > \**kalaD* > *kala*. It is also possible that the loss

<sup>1</sup> I still prefer this interpretation to Posti's \**Kīðon*.

<sup>2</sup> Instead of gen. \**Väðon*.

of the dental here was generalized already earlier from the position after a long syllable, i. e. from the type *\*jalkada* >> *jalGa*. The absence of *\*D* in contracted verbs such as *maGama* < *\*makaia-*, may be explained by an early stem generalization from the imperfect and consonant-stem forms, cf. *maGasin*, *maGaDa* < | *\*ma<sub>k</sub>aĭtak*, *maGanuD* < | *\*ma<sub>k</sub>annut*, *maGaĭtakse* < | *\*ma<sub>k</sub>aĭta-*.

(2) Starting from *δ*, it may be assumed that after the disappearance of *δ* in the nominative the vowels of the second and third syllable formed a diphthong, but when the vowel of the third syllable was followed by one or more phonemes and on account of that had a stronger stress, then a hiatus developed. As a hiatus was alien to NE, it may be assumed that at the time when the phonetic change *δ* > 0 was still in statu nascendi, e. g. that the older generation still had *δ* and the younger one had dropped it, then *D* was used to fill the hiatus (cf. A. Raun, Vir. 1951 91). It may be assumed that in a voiced position *D* was the only allophone of the earlier *\*t ~ t̥*, after *δ* was lost, as at that time *t* > *D* was accomplished, and *δ* in other positions, thus after the first syllable, and after the second syllable, the first syllable being long had disappeared earlier. So the development may be assumed to have been as follows: *\*pimeδa* : *\*pimeδan* > *\*pimea* : *\*pime(an* > *\*pimea* (>> *pime*) : *pimeDan* (> *pimeDa*). The above assumption is supported by forms occurring in SEE, e. g. PlvA *sōkkē* (< *\*sōkē̄* < *sōkēa* < *\*sōkedā*) : *sōGē(ē)lē* (<<< *sōkēδallēn*), Vas *pūñme* (<<< *\*pimeä*) : p. *pūmehet* (<<< *\*pime(ätä)*) (cf. p. 128).

*\*p* > *v* after a vowel and after a liquid, E. g. (*haab* :) *haava*, cf. F *haavan*, SVp. *habišt'* 'aspen forest', IisI *avis* (*abis*), KuuT (*laba* :) *lavani*, Avi (*naba* :) *nava*, cf. Vt. *navā*; Rak *ovost* (*hobust*), cf. F (*hepo* :) *hevon*, Sim (*raba* :) *ravas*, cf. F *ravassa*, Lv. *rabàD*; KuuT (*riba* :) *rivad*, Trm(T) (*saba* :) *savad*, Lei(V) *tavat* (*tabatud*), cf. F *tavata*; Rak *ävitü* (*häbitü*), cf. F *hävytön*; (*halb* :) *halva*, cf. F *halvan*; *varvas* (: *varbad*), cf. F *varvas*, Lv. *vārbaZ*; 3rd p. pl. *kirjutavad*, cf. SVp. *ližadabad* (E *lisavad*); *tuttav*, cf. SVp. *tutpad* (E *tuttavad*). As regards the chronology of the change, cf. LCD *Urwas* 'Urvaste', on the other hand *Kipunkælæ* 'Keoküla', 1490 *Kewenkol*. The assimilation of intervocalic *p* by vowels also occurs in other FU languages. In Lapp we also find *v* in the weak grade. In other FU languages BF and Lapp *p* : *v* is

partly represented as follows: Hung. *v*, 0, Osty. *B*,  $\beta$ ,  $\dot{u}$ , Vog. *B*,  $\beta$ , Zyr. and Voty. 0, Cher.  $\beta$ , *j*, 0, Md. *v*, *v'* (FUS 33).

*uGu* > *uyu* in Hi: *suɣust*, *puɣus*, *luɣu* (see further Ariste ACUT B 47 : 1 184).

### 1.3.4. Weakening and Vocalization of Stops in Syllable-Final Position before Voiced Consonant.

According to E. N. Setälä in PF a paradigmatic qualitative alternation, *tr* :  $\delta r$ , *kj* :  $\gamma j$ , *pr* :  $\beta r$ , etc., occurred here. As a proof of this hypothesis the present qualitative paradigmatic occurrence such as *'kakla* : *kaala* to be found in Lei and here and there in SE was given. Kettunen was the first to oppose this hypothesis, and L. Hakulinen (SKR I 59) and Posti (LL 179) agreed. According to Kettunen all BF occurrences are derived from non-alternating stop. He explains the present forms with paradigmatic alternation in Lei and SE as being the results of the specific Estonian development: that of the general quantitative alternation, such as *'silma* : *silma* (MSFOu 67 200–, cf. Vir. 1938 377, 382). But, as has been indicated elsewhere (Tauli, The Origin of the Estonian Quantitative System, JSFOu 57), there is no fundamental difference between the origin of the weak-grade variants of the (simple and geminate) stops and the origin of the so-called second degree of length, i. e. the shorter variant of consonant clusters in E: both are connected with the closeness of the following syllable, and the assumed phonetic condition of the shortening and weakening of the consonant is somewhat weaker stress of the preceding syllable. It is obvious that stops at the end of a syllable were subject to the same assimilative influence of a preceding vowel as the intervocalic ones. Grammont believes that a consonant in syllable-final position is in as weak a position as the intervocalic one, or in a still weaker one than the latter, since the curve of the former is falling, that of the latter rising (TPh 203). As regards stops before a voiced consonant we may assume a quantitative alternation *\*kakla* : *\*kaĳlan*, *tetre* : *\*teĳren*, etc., as the starting point of the present occurrence, as we assume *'silma* : *siĳman*, cf. at present *'silma* : *siĳma*, and as, according to the general view there has been a PF *vakka* : *\*vaĳkan*, cf. E



*'vakka* : *vakka*. The vocalization of stops has probably occurred through *g*, *d* or *ɣ*, *δ*. In the following the graphemes *k*, *l*, *p* simply stand for somewhat weaker variants of the stops. As to the corresponding Finnish variants see SMK 12–.

\**kr* > *Gr*, \**kl* > *Gl*, \**tr* > *Dr*, \**tj* > *Dj*, \**tv* > *Dv*, \**pl* > *Bl*, \**pr* > *Br*, \**pj* > *Bj*. E. g. (*mäkra* :) *mäg*<sub>r</sub>*a*, (*vakla* :) *vag*<sub>r</sub>*la*, (*atra* :) *adr*<sub>r</sub>*a*, cf. Vt. *adra*, SVp. *adr*; (*lotja* :) *lod*<sub>r</sub>*ja*, (*latva* :) *lad*<sub>r</sub>*va*, cf. Vt. *ladva*; (*sõpra* :) *sõbr*<sub>r</sub>*a*, Vt. *sõbr*<sub>r</sub>*a*; (*liple* :) *libl*<sub>r</sub>*e*, Vt. *libl*<sub>r</sub>*o*; (*kapja* :) *kab*<sub>r</sub>*ja*, Vt. *kab*<sub>r</sub>*ja*; Puh (*sõgel* :) *sõgl*<sub>r</sub>*a* (*sõela*), cf. SVp. *se'g*<sub>r</sub>*a*; LutSJa (*tak*<sub>r</sub>*a* :) *tag*<sub>r</sub>*aa* (*taela*), cf. Vt. *tag*<sub>r</sub>*m*<sub>a</sub>, Lett. *dagla*, *daglis*; cf. also It. *agro* < *acru*, *padre* < *patre* (TPh 202).

\**kj* > *Gj* in SE: KrlKä *lag'a* < *lagja* (*lai*) (: *la(ea)*), Urv *lag'a* (: *lak'a*), HarM *laga* (: *laja*), Rõu *lag'a* (: *laja* : *lak'a*), Plv *lagja* (: *'lakjo*), KamR *lag'a* (: *laja* : *lak'ka*), Räp *lag'ä* (: *laja* : *lak'ä*), VasO *lag'a* (: *'lakk'a*), LutSJa *lag'ä* (*laä*), cf. Lv. *laigà* < *lagja* (E *lai*); Hls(K) (*'makjale* :) *magjas* (*maias*), TrvP *magjas*, LutSJa *mag'äss*; PlvK *ragusi* (*raiusin*) (: *rao* [*raiu*]), Lei(V) (*raku* :) *raguma* (: *rao*); TrvP (*vagi* : *'vakju* :) *vagja* (g. *vaia*), Urv *vag'a*, HarM *vaga* (: *vaja* : *vak'a*), SeSa *vag'ä* (*vai*) (: *vaja* : *vak'ä*).

\**kl* > *il*, \**kr* > *ir*, \**kj* > *ij*, \**kn* > *in*, \**tj* > *ij*. E. g. *kael* < *kail* < \**ka<sub>k</sub>la*, Khk(T) *kael* : *kaila*, cf. F *kaula*, dial. *kakla*; JämH *nai<sub>l</sub>aga*; *naerma* < *naira* < \**na<sub>k</sub>ra-*, cf. F dial. *nakra-*, Lelow ʒham-*ḥayra* (*vaimukaera*) (VKVM 2), Müller *ḥaila* (177), *naḥrab* (12), *naiḥuḥ* (109), ʒeyla (*sõela*) (146), Josua Möllenbeck (1639) *paḥlašt* < \**pa<sub>k</sub>la-* (VKVM 58); *laia* [*laija*] < \**la<sub>k</sub>ja-*, *maias* < \**ma<sub>k</sub>jas*, *teinud* < \**te<sub>k</sub>n-*, cf. *te<sub>g</sub>ema*, *näinud* < \**nä<sub>k</sub>n-*, cf. *nä<sub>g</sub>ema*; cf. F *kaura*, *kaula*, *laaja*; HlsM *'ruijun* (*rutjund*), PstH(K) *'ruiju* (*rutjuda*) : (*ma*) *ruiju*. PA 41.

\**kl*, \**kr*, \**kn* > vowel + *l*, vowel + *r*, vowel + *n*, chiefly in SE. E. g. Hi(A) *pää<sub>l</sub>* (*pael*), Hää(V) *naarab*, Ote *'kaala* : *kaalan* (but *nagel*), HarK *naaratu'* (*naerata*), Lei(O) (*'kakru* :) *kaara*, Lut(V) *naar* (*naerab*); *voon* < \**vo<sub>t</sub>na*, cf. F *vuona*, Lv. *üon'i*, Vt. *veḡdna*; HarM *liinan* (*linnas*), cf. Lv. *nīn* < \**li<sub>t</sub>na*, Vt. *lidna*. On the phonetic explanation of the change see Ariste ACUT B 47 : 1 59. PA 41.

\**kj* > *j* in SEE. E. g. Ote, KamR, HarM, Rõu, PlvK, Räp g. *laja* (*laia*), SeSa *laja*, KrlKä *la(ea)*, cf. F *laaja*; Plv *majäss* (*maias*), PuhU, Rõu, Ote, HarM, PlvK, Räp *vaja* (*vaia*), LutSJa (*lag'ä* :) *laä* < *laja* (cf. *'aama*) (cf. the strong grade of the same words

above). As regards the intermediate stages by way of which  $*_kj > j$  has taken place, we have no data. Kettunen here assumes  $gj$  (resp.  $Gj$ )  $> g' > j$  (EKÄ 88, cf. Setälä ÄH 153). In this case the intermediate stage  $\gamma'$  is probable, thus  $g' > \gamma' > j^1$ .

The intermediate phase of the present vocalic occurrence is reflected in LCD and other 13th century documents as stops or spirants, e. g. 1259 *Ugri* 'Uuri', 1290 *Ughrj*; 1547 *Uhry*, 1796 *Uri* (LCD 662); LCD *Wæghættæ* 'Vaiatu', 1306 *Vagithæ*, 1311 *Waggete*; 1306 *Wayguthe*, 1418 *Waygitte*, 1456 *Wegede* (?); 1409 *Waite* (LCD 636).

### 1.3.5. $s > h$ .

$s (> Z) > h$  dial. spor. E. g. AnsM *sohar*<sup>2</sup>, Jäm(K) ('*laskma* : ) *lahe*, Pal *lahen* ~ *lasen*, Trm *lahen*, *laheksin* (*laseksin*) (: '*laskma* : *las'sin*), Kod(K) ('*laskma* : ) *lahen*, *lahin*, KodS *töhel* (*teisel*) TrmT *ka<sup>h</sup>ma* (*kas ma*), *lahna(d)* (*las nad*), KrkA *mih<sub>ma</sub>* (*mis ma*) (9), TrvPi *kahma* (*kas ma*), TrvJ *kehneid* (*kes neid*), MuhLõ, KseO *ühna* (*üsna*); cf. F dial. *kirkah<sub>vesi</sub>*, SMK 106; in. suffix  $*_sna > -hna (> -hn > -h, -n)$  in SEE and linguistic enclaves, e. g. LutKi *ilmahn* (*ilmas*), cf. F dial. *pääsnäni*, *päähnäni*, SMK 104. Cf. PF  $*_kirveset > kirvehet (> E kirved)$ , E *kihl* << ON *gisl* (ÄH 243-); Fr. dial. *tehto* < *test-* (TPh 207).

### 1.3.6. $kt > Ht$ .

$kt > Ht$  after the first syllable. E. g. *kahte*, cf. *kaks*, Lp. *guökte*; *laht*, cf. Cr. *laksi*, LpN *luokta* (ÄH 197-); *trahter*, cf. Russian *трахтуп*. Cf. F *lyhty* from Swedish *lykta*; Osco-Umbrian  $kt > \chi t$  (TPh 203).

### 1.3.7. $h > j$ .

$h > j$  in non-initial syllables in a few words in the common language and more widely in NEE. E. g. (*paras* : ) *paraja* <

<sup>1</sup> Here also the interverson  $*_kj > ik$ : *la<sub>k</sub>ja*  $>$  *lai<sub>k</sub>a*  $>$  *laja* (cf.  $*_ai<sub>k</sub>a > aja$ ), cf. Lv. *laiğà* < *lagja* might be considered. Prof. Mägiste has drawn the author's attention to this possibility to explain the change.

<sup>2</sup> On this word cf. also Mägiste ACUT 12:2 20-, 30-.

*paraha-*; *varajane*, cf. F *varhainen*; LügR *pitämäije* < \*-mäje- < \*-mähen (*pidama*); Lüg (very seldom among the older generation) ill. *pataje*, *tupaje*, Jõh *küläje* (~ *külä*), *mereje* (~ *mere*), Vai Puhkova *sotaje*, *upaje*, Iis (E 229) *taluje*, *kalaje*, *mereje*, Kod(K) *taluje*, *emäje*, *valejed* < *valehet* (among the oldest persons), *puuje*, *luuje* (among a few older persons). Cf. A. Turunen MSFOu 89 255– and the literature mentioned ib.

### 1.3.8. Vocalization of *n* before Consonant.

Vowel + *ns* > long vowel + *s*. E. g. *maasikas*, cf. Lv. *māšikāZ*, Vt. *māzikaZ*, F *mansikka*, FSP *maņsikka*; in the ordinal numbers *kolmas*, *neltas*, etc., *ans* (> *ās*) > *as* probably already in PF, cf. g. *kolmanda*, F *kolmas*, dial. *kolmans*, *kolmaas*, SMK 118–, Ing. *kolmaas* ~ *kolmans* (SM II 196). Cf. the corresponding changes in the Romanic languages, e. g. Latin *lupōs* < \**lupons* (Gauthiot FM 144). On the phonetic explanation of the change see Ariste ACUT B 47 : 1 59.

### 1.3.9. *j* > *é* > *e*.

*j* > *é* > *e* between low and medium-high vowels. E. g. Lih *maçad*, Mär *saëab* ~ *saeab* (but *sajused*), Juu *oçeoma* (*ujuma*), AmbN *maçea*, Sim *oçuma*. *j* derived from \**t* has also taken part in the change, e. g. IisO *açea*, AmbN *koçea*. EMA 1 12 'aia', 21 54 'najal', 55 'mujal', 60 'koju'. See also Ariste *op. cit.* 228–. Dial. *j* > *e* has developed further into entire loss (see p. 56–).

### 1.3.10. *-v* > *-w*.

*-v* > *-w* in Lei, e. g. Lei(M) *verrew* (: *vereva*), Lei 'saizew (*seisev*). Cf. F *ottaa* < \**ottaw* < \**ottav* (<< \**otta<sub>pi</sub>*).

### 1.3.11. Palatalization and Coronalization.

In most E dialects we find palatalization of consonants, which has mainly taken place under the assimilative influence of a following *i* or *j*, e. g. c. l. *pal'ju*, KJnP *loot'sikas*, HelJ 'nuurbaar', UrvM *ol'li*; SeSa *pad'i*. In SE the palatalization is stronger

than in NE; it is also stronger in the east than in the west (Ariste ACUT B 50 : 2). There is no palatalization: partially in Sa, Läs, Läm, WSE; generally in Hi; in NEEC (e. g. Lüg *vann*). Palatalization consists in adding to the normal articulation of the consonant a place of articulation on the palate at about the spot where *i* or *j* is articulated or by broadening the place of articulation on the palate. For details regarding E palatalization see Kettunen EKÄ 118–, Ariste ACUT B 47 : 1 253– and 50 : 2. In the common language and in NE generally only the palatal-alveolar and dental consonants *t*, *D*, *s*, *Z*, *n*, *l*, *r* are palatalized, in SE also the palatals and labials. As to other BF languages we find palatalization in Livonian, in Finnish dialects, in Carelian, Vepsian and partly in Votian. Cf. Lv. *tu'l'* (E *tuli*), *mõr'a* < *marja*; F dial. *tul'*, *kol'tiin*, SMK 3; Vp. *käs'ki*. Palatalization is also to be found in all other FU languages to a greater or smaller extent. E. g. in Mordvinian palatalization occurs before all front vowels; there we also find progressive palatalization (Paasonen ML 48–); regarding Hungarian, see Horger MNY 102–. As to the Indo-European languages, we find palatalization particularly in Slavic, Romanic, and Baltic languages (cf. also about the E palatalization as compared with that of the other languages, Ariste ACUT B 50 : 2 34). Cf. also Tunkelo VKÄ 530–.

Coronalization is only recorded in the latest E dialect records, particularly in Sa, Hi, Muh. Coronalization occurs before front vowels, mainly before *i*, *e*, *ü*, but particularly before *i* and *ü*, and is due to the assimilative influence of those vowels: anticipating the articulation of the following front vowel the front part of the tongue rises already during the articulation of the preceding consonant against the pre-palate or against the alveoli in addition to the usual articulation of the consonant (Ariste ACUT B 47 : 1 256–). E. g. KhkT *kuŋtsɣp*, Phl *'kūnmɸ*, MarO *eli*, TrmT *šinna*, SeVõ *šis*, Lei *küz'ümin* (*küsimine*). On coronality in Hi see further *loc cit.*

### 1.3.12. *ksi*, *psi* > *tsi*.

*ksi*, *psi* > *tsi* ~ *tsi* in SE. E. g. KrlKä(M) *üt's'* (*üks*), VasV *lät's* (*läks*), SeU *üts*, LutM *kat's'* (*kaks*); Plv(W), Vas(W) *lat's* (*laps*).

## 1.4. VOWEL ASSIMILATES VOWEL

### 1.4.1. Assimilation of the Diphthong Components.

#### 1.4.1.1. THE FIRST COMPONENT ASSIMILATES THE SECOND COMPONENT IN THE WEAK GRADE

This change is widespread in E dialects and here the following assimilations occur.

*aũ* > *aõ*. E. g. Mär *laϕlud*, Vig(Ste) (*auk* :) *aõgud*, Tõs(KM) *aõgutama*, Juu (*laul* :) *laolu*, KJnL (*kaup* :) *kaoba*, RanK *laõda* (: *laut*), Puh (*pauk* :) *paogu*. Cf. F dial. (*laulu* :) *laolaa*, SMK 158.

*aũ* > *ā*. Mär, Vig(Ste) (*saun* :) *saanad*, PJgE (*aun* :) *aanad*, Hää *laalab*, KeiK *laalatuse*, AmbN, VMr, JJnK, *saana*, VJg(K) *laadas* (*laudas*), SimE (*kaun* :) *kaanad*, PHP *laalatis*, Pil, Ptk *laada*, KJnL *saana*, KsiL (*paun* :) *paanad*, MMgK *aagust* (*august*), Kod(KV) (*pauk* :) *paaguga*, TrmT *kaaba* (*kauba*), Puh *laalu*, RāpS(R) *kaaba*. Cf. Vp. dial. *lālab*. PA 105.

*aĩ* > *aē*. E. g. Krj (*aita* :) *aedad*, Mih(Ste) *paegad*, Aud (*maik* :) *maegu*, Khn *laenõtõga*, Hää, Tor *laesa*, PJgE (*vaip* :) *vaeba*, Mär (*laisk* :) *laesa*, JuuK *laesa*, HmD (*aitama* :) *aēdand*, KeiH (*naisi* :) *naesed*, JJnK *vaeba*, SJnP *aesad*, KJnL *maegu*, Lai *laesad*, KsiL *paese* (: *paised*), Kod(KV) *aeso*, Trm(T) (*vaik* :) *vaegu*, Hel *naene*. Cf. F dial. (*laihtuu* :) *laeha*, SMK 158.

*aĩ* > *ā*. E. g. MarK *laanetab* (*lainetab*), MMgk *raa'asad*, VõnA (*aita* :) *aada*, Plv (*hain* :) *haan'a*, RāpT (*laisk* :) *laas'a'*, Lei (*pàik* :) *'paaga* (but *ait* : *aida*), Lut(V) (*saizma* :) *saez'a*. Cf. ELv. (*lāiska* :) *lāš'ka*.

*eĩ* > *ē*. E. g. Mih(Ste) *reede* (*reite*), Khn(TS) *teene* (: *teist*), Aud *tee'bas* ~ *tee'vas* (: *teivad*), Saa *ee'dän*, Tor, PJgE, Mär (*ein* :) *eena*, RapN *eede*, JuuK *seenol* (*seinul*), KeiH *seena*, JMd(M) *leeva*, AmbN *een'ama* (*heinamaa*), Koe *leeva*, VJg(K) *seen'a*, SJnP *eenad*, KJnP *meele* ~ *'meele* (*meile*), Lai *teevas*, Avi *leeva* (~ *leiva*), TrmT *eeena* (*heina*), MMgK *tee'sega*, Kod(KV) *eenäd*, KamU *veēdi* (*veidi*), VõnV (*leev'äst*. Cf. Lv. *leibā* :) *lēba*, F dial. (*leipā* :) *leevät*. SMK 158, Vp. dial. *lēban*. PA 67, 116.

*äĩ* > *äē*. E. g. Khn (*räim* :) *räeme*, Hää(V) (*käi* :) *käeme*, Kul *käevad*, Mär RapHK *räeme*, SJnP *käevad*, PJgE *päevad* (: *päibi*).

*äĩ* > *äē* > *ā*. E. g. PJgE *lääla* (~ *läila*), VilV (*päe* :) *päävä*,

Kod(KV) (*'räimi* :) *rääme*, Plv (*päiv* :) *pääväh*, Lut (*'väitsi* : *vä<sup>h</sup>ts* :) *vääd'ze*. Cf. F dial. (*päiviä* :) *päävä*, SMK 158.

*oi* > *oē*. E. g. Aud (*poiss* :) *poesi*, Mär *oenas*, KJnL *poeste*, Kod(KV) *poesid*, KsiJõ *poēs'i*, ÄksV (*koit* :) *koeDu*. Cf. F dial. (*toinen* :) *toeset*, SMK 158.

*oi* > *ō*. E. g. KodSa *poos'i*, LutSJa (*poiss* :) *pooz'i*, VõnK, RöpS(R) *oon'as* (: *'oina*). Cf. Vp. dial. *jõn'* < *join*.

*öi* > *öē*. E. g. Mär, Trm(T) *köedab*, Tõr(V) (*kõi* :) *ma kõęsi* (*käisin*).

*öi* > *õ*. E. g. Kod(KV) (*'löidmä* :) *löödän* (*leian*). Cf. Vp. *lõn'* < *löin*.

*õi* > *õē*. E. g. Kul *kõęęę*, Hää (*sõi* :) *sõeme*, Vig(Ste) *mõęsa* (: *'mõisa*), Mär *sõedab*, KeiKl *mõęsa* (: *'mõisas*, KJnL (*võim* :) *võęmu*, AviM *tõęęę*, Ksil *mõęstan* (: *ei mõę'ta*), ÄksV, Kod(KV) (*sõim* :) *sõeme*, Trv *mõęsta*, PuhV *õęęęti*, TMrKo *tõęęę*, KrlK *rõęęę* (: *'rõiva*).

*õi* > *õõ*. E. g. HarM *rõõvass* : *'rõiva*, Plv (*kõiv* :) *kõõvę*, Röp *rõõvva*, Lei *'tõõņę* (: *tõist*).

*õü* > *õõ* > *õõ*. E. g. Juu (*õun* :) *õona*, Koe *lõõna* (: *'lõunele*), SimE, PltP, KJnL (*õun* :) *õõnad*, Trm(T) *lõõna*, Kod(KV) *jõõduga* (*jõuga*), Puh *lõõna* ~ *lõona*, (*'tõukma* :) *tõogata*, VõnV, RõuS *lõõnat*, VasO *lõõnahh*, Lut *lõõna'*. Cf. Lv. (*lęųęą* :) *lęęę*. PA 69.

*oē* > *ō*: Var (*kuer* :) *koortęęę* (*koertęęę*), HarKa (*kuiv* :) *koovakęęę* < *koeva-* < *kuęęę*- (cf. p. 191).

*oü* > *ō*: Var *looritse* (*pää*) < *louritsa* (*lauritsa*); cf. F dial. (*pouta* :) *pooralla*, SMK 158, Lv. (*şouņę* :) *sõna*, Vp. dial. *lõnatada*.

*oä* > *ō*, *ěa* > *ē* in Trm Tuulavere, e. g. *soobas* (: *'soapad*) (*saabas*), *seered* (: *sear*) (*sääred*).

*õe* > *õõ*. E. g. Hel (*nõęęi* :) *nõõ*, Krl. (*jõęęi* :) *jõõ*, but (*nõęęi* :) *nõęę*, Plv(U) *jõõ*.

#### 1.4.1.2. THE FIRST COMPONENT ASSIMILATES THE SECOND COMPONENT

*äe* > *ä*, *öe* > *õ* in the secondary diphthongs in the islands, Lä, Ha, Jä, Vi, VINE, TaN. E. g. JaaT, KadPa *kääst*, MärKe, MärP *'säät*, cf. MärL *'säeti*, F *säädetty*; JMd(M) *äästata*; JaaT *'kõõh*, MärH *'õõti* (*õeldi*); PltR *'kõõt'i* (*kõeti*), PR 16; TõsE *päę*,

VJg(K) *päiv*, AmbN *pää* : *pääva*, PR 77. Cf. F dial. *kääs*, Vp. dial. *pāf*. PA 62, 99.

*aiv* > *aev*, *äiv* > *äev*, *oiv* > *oev*. E. g. *kaev*, *kaevama*, *laev*, Phl(A) *taevas* : 'tāevv, Rei(A) *taevas* : 'tāevv, cf. dial. *laiv*, *kaiva* (Jaa, Aud, NEE, Kõp, SE), e. g. JaaH (*ma*) 'kaiva (: *kaevetud*), Plv *laiv*, Khk(T) *taivas* (: 'taeva), Müller Тарвајет (18); *päev*, cf. RõuK *päiv*; TrvP *koev* : *koeva* (*koib*), cf. *laisk* : *laesa*. PA 1, 99.

The assimilation here has been favoured by the following *v* because *v* itself has no "tongue articulation worth mentioning" (Ariste ACUT B 47 : 1 15). How *v* favours the assimilation of diphthongal components is shown by the occurrence in SJnP where we generally find *ai* > *ae* only in the weak grade as in (*ais* :) *aesad*, but before *v* assimilation has taken place in both grades: *laev* : *laeva*. Cf. F *laiva*, dial. *laeva*, *päivä*, dial. *päevä*, SMK 158, Vp. dial. *kae(tš)en* ~ *kai(tš)en*. Cf. also *ain* > *aen* p. 20— and *air* > *aer* p. 22.

*eü* > *ei*. E. g. *leidma*, cf. HarMõn 'leüdmä, Saaremaa MS leüdma (VKVM 131); *leil*, cf. Vt. *leülü*; dial. (Khk, LNg, Tor, Vän, CSE) *kei(s)* (*köis*), e. g. Khk Kalmu *keis*, LaiM 'keita (*köita*), Hel, RanK *keids*, cf. F *köysi*; Trm(T) (*ratta*) *peid* (*pöid*), cf. F *pöytä*; Khn *peijäl* (*pöial*), Saa(L) 'peidläd, Kõp *peijal*, cf. F *peukalo*, dial. *peikalo*, Lv. *pēgal* < *pei-* (Posti LL 35). See also Mägiste EK 1931 161—.

#### 1.4.1.3. THE SECOND COMPONENT ASSIMILATES THE FIRST COMPONENT

The secondary diphthong *ua* > *oa*. E. g. (*tuba* :) *toa*, Käi(A) *tõäs*, LaiM *tuas*, TõsKa *rehedõa*, cf. dial. widely in NE and SE *ua*, e. g. Lüg *uad*, UrvO (*suga* :) *sua*, PlvAl (*uba* :) *ua*, PR 8.

*ia* > *ea*. E. g. (*sigä* :) *sea*, EmmVi 2nd p. imper. *pēa*, SimE *vēa*, Kõp *rēad* (: *rida*), cf. dial. *ia*, e. g. TrvP *sia*, UrvO *tsia* (*sea*), PR 9. Cf. F *siat*.

*ue* > *oe*. E. g. (*lugema* :) *loen*, (*tugi* :) *toe*, Kas(A) *lõε*, KeiK *loen*, cf. dial. (chiefly Lā, HaE, central Pā; Jā, Vi, Avi, Trm) *lueb*, PJgE *tue*, PR 8, cf. F *tuen*; Mär ('kuima :) *kuevavad*, JuuK (*kuiv* :) *koeva* < *kueva*, Kod(K) (*luisk* :) *loesod*, cf. p. 191.

*io* > *eo*. E. g. (*liguma* :) *leon* < \*li<sub>k</sub>on, (*kibu* :) *keo*, SimE 'seovad, cf. dial. *iü*, e. g. Mär 'kiuga, PR 9. Cf. F *liota*.

*iä* > *öa*, *üä* > *öä*. E. g. (*süda* :) *söandama*, Hls(K), Hel (*rügä* :) *röä* 'rye'; cf. Ote *rüä*.

*üe* > *öe*. E. g. (*süsi* :) *söed*, *öelda*, Tor *söe*, (*lüsi* :) *lüe*, TMrKõ *süed*; cf. Kod(K) 'üeldä; JuuK (*müür'* :) *möeri* < *müeri*. PA 20.

*au* > *ou* chiefly here and there in Sa, Hi, Lä. E. g. JämH *loulu* (*laulu*), Ans *kouwa* (*kaua*), Emm(A) *lout* (*laut*), *ougun* (*augun*), Rei(A) Rootsiküla *roud* (*raud*), Jäm *oud* (*haud*), Kse *kõunis* (*kaunis*), VarH *kouda* (*kaudu*), Var *looritse* < *louritsepää* (*lauritsapääv*), *soun* (*saun*), (cf. Ariste ACUT B 47 : 1 38–). Cf. Lv. *louļ* (E *laulda*), *ouļ* (E *auk*), Vp. dial. *houdub* (E *haudub*). The same change occurs in the Lettish dialects near Estonian and Livonian (J. Endzelin LGr 84–). PA 105.

*iu* > *ū* in Krl, Har and Lei. E. g. Krl 'lugu (*liugu*) (EK 1939 86), HarKa 'luud (*liud*): 'luwa, 'luuhka 'aslant', s'uug (*siug*), Lei 'logu (*liugu*) < \*'lu-. See more Niilus EK 1939 85–. Cf. Lp. dial. *iu* > *ū* Wiklund UL 303– and Vp. dial. Tunkelo VKÄ 614.

*öi* > *ei*: *teine*, cf. dial. *töine*, e. g. HlsM *töise*, KrkAi *töine*, cf. F *toinen*.

*öi* > *ii* chiefly in the word *kõik* in SEE, e. g. Kan *kük'* (cf. *mõisa*), RõuH *kük'*, PlvA *kük'*, cf. *kõad*, *rõivass*, SeP 'kiki (cf. 'rõivet), Vask 'liiga (*lõõga*); Lut(V) 'mütma (: *mõeda*).

*äi* > *ei*: *eit*, cf. LutSJa *ääd'e* < *äi*-, F *äiti*; in the word *väike* in CNE and NEE, e. g. SJnLa *veikse*, PilM 'veikse, Trm(T) *veikese*, PR 59. Cf. Lv. *teì*, Vp. dial. 'ei ~ 'äi.

*äe* > *ē*: VilV *nee* (~ *näe*), *kee* (*käe*), LutSJa (*mägi* :) *mee* < *mäe*, (*käz'i* :) *kee*.

*öi* > *ei* here and there in Vi, TaN, SE in imperf. E. g. VaiI *lein* ~ *löin*, PstHo *leive* (*lõid*, 3rd p. pl.), KrlK, PalK, RöpTo, LutJ(V) *sei*, cf. Hlj(S) *söivad*. Cf. Lv. *seì*, Vt. *sein*, Vp. dial. *sei*.

\**eü* > *öü*: *köis* < \**köü*- < \**keü*-; *köü*-, *löü*- in NEEC and SE, e. g. RõuS *köül'* (*köüts*), SePa *löüzi* (*leidis*); *pöid*, cf. Trm *peid*, Var *löil* < \**löül* < *leül*-; here and there in WE *lõidma*, e. g. Mih(Ste) 'lõitsin, Rossihnius lõidma (43). Cf. Vt. *leütä*, F *löytää*, *köysi*, *pöytä*, Vp. dial. 'öuta; Hung. dial. *höünap* < *heü*- (<< *holnap*). Cf. Mägiste EK 1931 161–. It is possible that the change started in the stem \**peü*-, where assimilation was also favoured by the labial consonant *p*, from where *eü* > *öü* later spread to other words. PA 63.



äü > öü: MuhLõe *köis* (*käis*, 3rd p.), Var *'köimä* < \**köü-* < \**käü-* < \**kävü-*, cf. F *käydä*, Tõs(KM) *'köingi*, AudE *köèsid* (*käisid*), Vig(Ste) *'köimä*, MärKa *'köima*. Cf. F dial. *töüs* < *täysi*.

### 1.4.2. The Word-Final Vowel Assimilates the Initial Vowel of the Negation Particle.

This occurs in SEE and Lut. E. g. Plv *ma as ti?* (< *ma es*) 'I did not know', *lüü üs* (~ *es lüü*) 'did not beat', VasO *taha ai?* (*ei taha*), *usu-ui?* (*ei usu*), cf. *läpe-ei?* (*ei läbe*), VasS *tijä-ai* (*ei tea*), SePa *kiroda-as* ~ *es kiroda* 'did not write', *käu-ui* (*ei käi*), Se(T) *tohiis* < *tohi es* 'was not allowed', *olęei* (*ei ole*), *tahaai* (*ei taha*), *olęes* 'was not', Se(M) *Küllatuva süüs* 'did not eat', SeSa *opi i* (*ei õpi*), *tohi-i* (*ei tohi*), *jovvaai* (*ei jõua*), SeMi *saanuus* 'did not get', Se *tii-äi*, Lut(V) *küi-äss* 'did not boil', *lää-äi?* (*ei lähe*), *müü-üss* 'did not sell'.

### 1.4.3. The Final Vowel of the Pronoun Assimilates the Initial Vowel of the Following Verb *olema*.

This occurs in Lei. E. g. Lei(V) *ma-allęw* ~ *mallew* (*ma olevat*), *sa-allęw* ~ *sallew* (*sa olevat*), *ta-allęw* ~ *tallew* (*ta olevat*).

## 1.5. LOSSES

### 1.5.1. Consonants.

#### 1.5.1.1. IN CONSONANT CLUSTERS

Disappearance of sounds can be regarded as a special kind of assimilation: the disappearing sound is assimilated by the neighbouring sounds without leaving any sign. If in a cluster consisting of three consonants the intermediate consonant disappears, this must be regarded as a result of assimilation by the two adjacent consonants. The assimilation is especially to be expected when the consonants are homorganic, and therefore we find loss of consonants in clusters chiefly adjacent to homorganic consonants.

### 1.5.1.1.1. Clusters of Three Consonants.

#### 1.5.1.1.1.1. Adjacent to Homorganic Consonant.

##### 1.5.1.1.1.1.1. Stop before *s* in the Weak Grade.

This loss occurs widely in dialects in the following clusters.

$\eta ks > \eta s$ . E. g. VJg (*lonks* :) *lojsu* (~ *longsu*).

$nts > ns$ . E. g. KeiH (*tön'ts* :) *tön'sem*, Juu *vun'sid*, VMr *kan'si*, SimV *konsud*, VJg (*kun'ts* :) *kunsid*, Kod(K) (*konts* :) *konsa*.

$lts > ls$ . E. g. SimV (*malts* :) *malsad*, VJg *kalsud*, Kõp (*sel'ts* :) *sel'sem*, SeSa *malza*, Lut *malza*.

$rts > rs$ . E. g. Tõs(KM) *karsas* (: `kartsa), Mär (*mõrtsuk* :) *mõrsukale*, Keik, JuuK *kõrsu*, AmbN *lörsi*, KadL, VMr *virsa*, Koe *narsud*, Sim, VNg *mõrsukas*, Hls(K) *kõrsi*.

$m ps > ms$ . E. g. KeiH, JMd (*kmps* :) *komsu*.

##### 1.5.1.1.1.1.2. Stop between Voiced Consonants.

$nDl > nl$ . E. g. *koonla*, *küünla*, cf. RapHK `*koondla*, AmbN `*kuõndlad* (~ `*kuõnlad*), Lüg `*kuondla*, F *kuontalo*, Wd. *küündla*, F *kynttilä*; Aud `*kinlaste*. Cf. on the other hand  $nl > nDl$  p. 118.

$nDr > nr$ . E. g. *peenra*; cf. VJg `*piendrad*, Lüg *piendrasi*, F *pientare*; VaiJ *jänrikkud*.

$nDm > nm$ . E. g. Khk(T) `*künma* (~ `*kündma*), Mih Nõmme `*anma*, Aud `*ranmed* (~ `*randmed*), MärKa `*sun'ma*, HMd *ranmes* ~ *ranme*, Rak `*anma*, Sim, IisO `*tunma*, VaiJ, PltK `*ranmed*, PilKa `*süü'mene* (*sündimine*), Lai(Ka) `*künma*, Trm(T), SePa `*kanma*, Röp `*tunma*; PlvK `*kin'mämpi*; cf. Rossihnius fündmest (218) (cf. p. 17).

$\eta Gm > \eta m$ . E. g. Khn(AS) *laḡma* (*langema*), *mäḡma* (*män-gima*).

$nDn > nn$ . E. g. KamK `*tunnu* (*tundnud*); for more examples see Toomse, *ta-*, *tä-*, 238. PA 29.

$lDn > ln$ ,  $rDn > rn$ ,  $rDm > rm$ . E. g. PõiLa *ühe'korne*, Mär `*kulne* (*kuldne*), *sada'korne*, HagK *murnd* ~ *murd*, cf. Emm *murnd*; see also Toomse, *ta-*, *tä-*, 236 A<sub>1</sub>.

$mBn > mn$ . E. g. PJgE, Mär, JJnLä, SimV, VJg, MMgR `*umne*.

$mBl > ml$ ,  $mBr > mr$ . E. g. Krj, Tõs(V) `*õmlen*, VMr, VaiJ

'õmleja, PilKa `vemlaga, LaiKa `õmlen; JuuK `ümrus. Cf. Lv. *iõmõr* < \*üõmõr (E *üंबर*), *teõmlõ* (E *tõmble*).

On *lDr* > *Dr* and *DnD* > *nD* see p. 178–.

### 1.5.1.1.1.3. Stop between Voiceless and Voiced Consonant.

*stn* > *sn*. E. g. KseÕ *põsn* (*pistnud*), Mär *pisnd*, PJg, Tor *tõsnd*, PilKa *osnd*; cf. KJnP *paistõd*, *tõstõd*; Tõs(KM) *kosnas*, NisK `kosna (*korstna*).

*stl* > *sl*. E. g. Kse(Z) `pasli (*pastla*), KeiKrj `paslel, Kõp `pasla ~ `pastla, KJnP `pasla (~ `pastla), JuuK *pa`pislane*, ReiP *pa`pi-slesd* (*baptistlased*).

*Htn(D)* > *HN(D)*. E. g. PõiLa *tahtõd*, Khn(AS) *tahn*, Mih Nõmme *tahnd* (*tahtnud*), AudE *tohn* (*tohtind*), Iis *tahnd* (~ *tahnud* ~ *taht*).

*ktr* > *kr*. E. g. HMd *e`lekri*, KosN `ek`leekre (*elektri*).

### 1.5.1.1.1.4. Stop between Voiceless Consonants.

*stk* > *sk*. E. g. Mär, KeiH `jusku, Jõh `jüsku (*just kui*), HlsM *seitsme`tõiskumõ* 'g. 17', KriKä(J) *ütes`tõisku* '11', SeSa *neli`tõisküme*, LutK(V) *katõne`tõiskümmeni* 'until 12'. Cf. Hung. *ragasz-kodik* < *ragaszt-kodik*.

*sts* > *ss*. Khn(AS) `tõs'si (*tõstsin*), `os'si (*ostsin*), HMd `os'sin ~ `os'tsin.

### 1.5.1.1.1.5. Stop at the End of a Cluster after Nasal.

*lnD* > *ln*, *snD* > *sn*, *tnD* > *tn*, *pnD* > *pn* in the *nud*-participle. E. g. Krj `võtn (*võtnud*), ReiL *kuuln*, PhlK *oln* (*olnud*), MuhL *küpsn*, Var *tuln*, *maksn*, Tõs(V) *lõpn*, Aud *tõstn*; cf. PõiLa *maksõd*, KJnP *tõstõd*, Mär(R) *võtnõd*. See also Toomse, *ta-*, *tä-*, 251 : 4; cf. *ib. olnd*, *tulnd*, *surnd* in dialects.

### 1.5.1.1.1.6. Other Consonants.

*n* before *D* in the *nud*-participle.

*tnD* > *t*. E. g. KhkT *saat* (*saatnud*), Tor *võtt* (~ *võtnõd*), KeiK *võit*, Rap *muut*, JuuK *keet*, JMd *pett*, AmbN *ost*, KadT *süet* (*sõõtnud*), VMr, Rak *katt*, VJg(K) *kart*, SimV *paist*, Iis *taht*, (~ *tahnd* ~ *tahnud*), cf. Kul *tahtnd*, PltP *võt* (~ *võtnõd*), KeiJõ *sõit*, TMr *taht*, SeU *jüüt'* (*jootnud*).

*snD* > *st*. E. g. HagK *pest* (~ *pesnd*), AmbL *seist* (*seisnud*), KadP *kist* (~ *kisnud*), SimV *makst*, Jöh, PltP *pest*.

*lnD* > *lD*, *rnD* > *rD* chiefly in Ha, Jä, Vi. E. g. HagK *tuld* (~ *tulnd*), KosK, KoeR *old*, JMd(M), VJgRü *kuuld*, Iis *üeld*, PltP *laud*, LaiM *pöld* (*polnud*), HagK *murd* (~ *murnd*), Iis *naerd* (~ *naernud*), SimV, PltP *naerd*; see also Toomse, *ta-*, *tä-*, 249 : 3; cf. Emm *murndnd*. It is possible, however, that *old* < *ollut*, as Toomse believes (*op. cit.* 256). Areas with mixed occurrence, cf. e. g. HagK *tuld* ~ *tulnd* and *op. cit.* 257, are probably to be explained in the way that the occurrence of *tuld* is there the later one, not vice versa, as Toomse believes.

*pnD* < *p(D)*. E. g. Sim *tapd* ~ SimV *tap*.

*DnD* > *D*. E. g. KadP *jöud* (*jöudnud*); see Toomse, *ta-*, *tä-*, 222 B<sub>1</sub> and 228.

Other losses.

*lnD* > *nD*: MusI *ond* (*olnud*); cf. Lv. *voñD*; Rei *tund* (*tulnud*); cf. Lv. *tuñD*; Vig(SteLl) Sääla *kuund* (*kuulnud*), Tõs(KM), Tor *ütend*, Trm *ütend*, PalK *öenD* (*öelnud*).

*tst* > *tt*: Hls(U) *kait\_tükki* (: *kaits* 'two'), *üit\_tõistel*, KrkAi *üit* 'teisku '11'.

#### 1.5.1.1.1.2. Stop Between Hetero-organic Consonants.

*skp* > *sp*, *sks* > *ss*, *skm* > *sm*, *skn* > *sn*. E. g. PJgE *'kisma* < *'kiskma* (*kiskuma*), PJg-Tor *'kespaik*, Mär *'kesmene*, *'käsivad* (*käsivad*), JuuV *'kes'paikas*, JJnLä *'kesbaik*, VMr *'kespaik*, *'kesnädal*; SJnL *'kitsma* < *'kitskma* (*kitkuma*); PJgE *'kissid* < *'kisksid*, *'lassin* < *'lasksin*, Lih *'käs'si* (*käskisin*), Mär, VilV *'käs'sin* < *'käksin*, KJnL *'kis'sin* (*kiskusin*), Tõs(V) *'kässi* (*käskisin*), Khn(AS) *k'isn* (*kiskund*), Tõs(V) *'käsma*, Mär *lasnd*, KadP *käsnud* (~ *käst*), VaiJ *lasnud*, Iis *last* ~ *lasnud*, KJnL *usnud*, *kisnud* (~ *'uskma*, *'kiskma*), TMrKõ *käsnu*; cf. SJnL *käsknd*; for examples of *nud*-participle see Toomse EK 1938 122; *skn* > *sn* in the type *lasnud* probably took place already in PF, perhaps also in the type *'lasnud* (see Toomse *op. cit.* 128-).

It is possible that in the verbs in the case of *skm* > *sm* and *sks* > *ss*, we have, at least partly, in fact a case of stem generalization. Cf. PF *\*lasktak* > *lastak* (> *lasta*).

### 1.5.1.1.2. Clusters of Two Consonants.

#### 1.5.1.1.2.1. Loss of the First Consonant.

##### 1.5.1.1.2.1.1. Nasal before Homorganic Stop.

$\eta k > G$  after the second syllable chiefly in WE and SEE, in the word *kuningas* in VNg, here and there in Lă, Pă, WSE, Se. E. g. Hi(A) *kunik* (*kuningas*), PJgE *penigel* (*pöönigul*), Hls(W) *Abja kunigas*, *pöönik* : *pööniku*, PstK *toomik*, KrlK *kunigas*, Krl(W) *toomik* : *toomige*, Ote *kunigas*, *pöönigu*, VasO *pöönikel*, SePa *kun'igas*, *pöönigu*, Lut *kun'üigas*, Müller *monifat* 'möningad' (46). In variants such as *pöönik* : *pööniku* we most probably find a later transition to the series of geminate stops. It is, however, possible that in WSE we have a change  $\eta k > kk$ . Cf. Vt. *kunikas*, SVp. *kun'igaz*, Ung. dial. *Domokos* < -nk- 'Dominicus', Osty. Synja (*jijka* :) *jik* (CLSE 31 26), Voty. *vug* (E *öng*), LpL *konökiša* < ON \**konungaz* (Wiklund LFL 159).

$nt > D$  after the second syllable in WSE and SEE. E. g. Hls(J) *emät* < *emäd* (*emand*), Ote *pörmad* (~ *pörmmand*), KamE *pörmat* < *pörmad*, UrvVa, PlvK *kolmada*, RõuS *pörmadu*, HarM *pörmad*, VasLa *kolmadat* (: *kolmandahę*), SePa *kolmada*, *neläda* 'g. fourth', Lei(M) *k<sup>u</sup>olmada*, Lei *pörmad*, LutSJ *koamada*; cf. in Votian consistently  $nt > t$ , e. g. *peřmata*, *paratad* (E *parandad*); Cr. -*nut* > -*t*, e. g. *voit* (E *vöind*); Voty. *ud-* (E *anda*), Hung. *ad* < \**ando-*, Osty. Synja (*ũnta* :) *ũt* (CLSE 31 26). Cf. also  $lD > D$  ( $lnt > tt$ ): KäiL 'öõdi (*öeldi*), EmmK 'öõdud (*öeldud*), Var 'üütud (*öeldud*), 'üüdi, MarH 'öõti (*öeldi*). Cf.  $ntt > tt$  in PF, e. g. *tuttav* < \**tuntta-* (ÄH 386-, Posti FUF 31 56).

(?)  $mp > B$  after the second and the third syllable in WSE and SEE. E. g. Hls(K) *parep* : *parepe* (~ *paramp* : *parempe*), KrlK *vanęb* : p. *vanębeř*, *madalep* : *madaleęba* : p. *madalepa*, San *parep* (~ *paremp* : *paremba*), *ilosap* (~ *ilosamp* : *ilosambat*), Rõu *ilusap* (~ RõuH *vanęmba*), UrvO *ilusep* : *iluseębe* : *iluseępe* (~ *al-veębale*), Răp *văgeväp*, Vas Luhamaa *ilosap* : *ilosaba*, SePa *vanęba*, 'vöörap (~ *vähämbä*), Lei *pareb*, Lut *madalap* : *madalaba* (~ *mustęmb* : *mustęmba*). See also p. 160. Cf. Vt. *sürepi*, *iozapı*, Hung. *eb* < \**emb*, Osty. Synja (*ämpem* :) *ăp* (CLSE 31 26), LpN *buöreb* (E *parem*) (Wiklund LFL 157). PA 51–54.

1.5.1.1.2.1.2. *Stop before Voiced Consonant after Long Syllable.*

$Gm > m$ ,  $Gn > n$  here and there, chiefly in WE. E. g. MusI 'vaanad, Khn ('uagõ [vaagen]:) g. 'uana, ReiP 'vaanaga, AudE 'peime (peigmehe), PärP 'peimes, Mih Nõmme 'peimis (peigmees). HMd tainas : 'taina, JuuK peimes; for more examples see Toomse, *ta-*, *tä-*, 232.

$Dl > l$  after a long first syllable: MusVõ 'iilased (hiidlased), MusI 'põila, Mär 'põilad. Cf. Lv. rīl'ǝB ~ rīd'l'ǝB (E riidleb).

1.5.1.1.2.1.3. *Other Losses.*

$-hn > -n$  in in. in WSE and NSE. E. g. Puh süamen (südames), Hls(U) 'uuriisen (vööruses).

$vr > r$ ,  $vl > l$  in connexion with a labial vowel: JaaL ('toover :) 'tooriga < 'toovri-, Phl(A), Rei(A) tǝr : 'tǝri, Kas(A) tōori, Vig(Ste) 'toori, VilV 'tuuri (toobri), Rõu 'hūuli (hööвли). The loss has been favoured by the preceding homorganic vowel and by the following homorganic consonant. Cf. p. 53 and 54.

1.5.1.1.2.2. *Loss of the Second Consonant.*

1.5.1.1.2.2.1. *Consonant in Word-Final Position.*

$-nD > -n$  dial. (in the islands and on the WE coast) occurs chiefly in the *nud*-participle. E. g. Krj 'riipan (rüüband), PhlP pann (pannud), Khn(AS) pann, kakskümmen, KseO 'uurin, Var magan (magand), Mih Nõmme akkan, Aud 'vihkan, RisA söön, pann, EMA 2 48 'läinud', Toomse, *ta-*, *tä-*, 250; see also ib. 236. Cf. Lv. kušǝn (E kutsund). Tunkelo believes that the *nud*-participle ending in  $-n$  in Vepsian dialects such as *kazvan*, *jon* (E joond), also the corresponding Estonian and Livonian forms, has been derived from the essive case of the *nud*-part. ending on  $-nna \sim -nnä$  (VKÄ 403-). Leaving the question of the Vepsian variants open, there is no reason, as regards E conditions, to assume anything but  $-nD > -n$ , considering the occurrence of  $nD$  in neighbouring dialects as well as the acoustic weakness of the  $D$  after  $n$ . Cf. also regarding Vepsian and Livonian occurrence, Kettunen ACUT B 2 : 2 47, LW p. LXIX, Posti LL 274, Vir. 1947 302.

$-hn (> -HN) > -h$  in in. in SEE. E. g. PlvPa mõtsah (metsas), SeU kotuhh (kodus); cf. RõuH unǝhn.

1.5.1.1.2.2.2. *h after Nasal or Liquid.*

*nh* > *n*, *lh* > *l*, *rh* > *r*. E. g. *vana*, *tara*, *võlu*; cf. F *vanha*, *tarha*, *velho*, Lv. *vanà*, *tarà*, *velùD*, Vt. *vana*, *tara*.

1.5.1.1.2.2.3. *v after Consonant.*

*v* > *0* in connexion with a labial vowel. E. g. *aru*, cf. Kod(K) *'arvo*, F *arvo*; *uluma*, cf. Kod(K) *ulvob*, F *ulvoa*; JaaL *jahub* (*jahvatab*); KrlK *kasuss* (~ *kasvass*) 'grows', LügR, IisI (*kasu* : *kasu*), Lei(V) *kazuma* (: *kazvass*), Sim *kasud* ~ *kasvud*; Khk Kalmu *kõrutl* 'kõrvuti', KeiK *kõru* (*kõrvu*, instr.), VMr (*värb* : *väru*). Cf. p. 54. Cf. Lv. *ulùB*, SWF *alus* < *alvus*.

*rvi*, *lvi* > *ri*, *li* here and there in the islands and WE, in the words *põlv*, *talv* widely over the whole NE. E. g. KhkKo *tarist* (*tarvis*), MusI *põliti* (*põlviti*), *pilitab* (*pilvitab*), *küli* (*külvi*), *teritasid* (*tervitasid*), KrjT *pili* (*pilv*), JaaH *tali* (: *talve*), Emm *iridad* (*hirvitad*); see also ACUT B 47 : 1 243), Khn(TS) *tali*, Tõs(KM) *järi* (: *järve*), Var *sari* (*sarv*), Saa *kori* (*korv*), Mär (*ęa*) *põl'i* '(good) life' (but *põl'v* 'knee'), Hls(U) *sali* (*salv*), *pari* (*parv*), Kse(M) Hõbeda *kori* (*korv*), TrvP (*ää*) *põli*. PA 114.

"The cause of the loss has been the way in which the *i* is articulated. In articulating *i* the lips are drawn far backwards and are far from the teeth ridge, leaving between them a long slit. The jump from the point for articulating the *v* to that of the *i* is rather long" (Ariste ACUT B 47 : 1 243).

1.5.1.1.2.2.4. *j after Consonant.*

*ji* > *i*. E. g. *kosima* < \**kosji-*, cf. *kosjad*, *veli* < \**velji*, cf. *velje*, *seliti*, cf. *selja*, SeVa *härile* 'pl. abl. ox'. Cf. F *veli*, *kosinta*.

*hj* > *h* in the weak grade here and there in Sa, Muh, HaW, Lä, Pä, VINW, SEE. E. g. JaaL *ahud* (*ahjud*), PöiVK *laha* ~ *lahja*, Var *kahu* (*kahju*), MarK *põha*, Lih *aho* (*ahju*), RapHK *tõhad* (: *tühi*), PJgE *lah'a*, Vig(Ste) *tühäd*, Mär *ahõ*, Juu *ohad* (: *ohjasid*), Plv *ahost* (: *'ahjo*), San *põh'a*, KrlKä *ahu*, HarM *ahu* (: *'ahju*), *tühäp* (*tühjad*), Urv *uh'a*' (~ *uhja'*) (*ohjad*), SeVõ *uh'a* (*ohja*), Lut *vähä* (*vähja*) (: *'vähjä*); Rossihnius *řahju* (*kahju*) (7). PA 25.

*sja* > *sa*, *sjä* > *sä* in the weak grade in SEE. E. g. San, PlvK *as'a* (: *'asja*), Röp *kos'äh* (*kosjas*), SeSa *oz'äp* (*osjad*); SeVe also *'mõr's'a*. Cf. Lv. *až'ä* 'thing'.

$rj > r$ ,  $lj > l$  in the weak grade chiefly in SEE. E. g. San *mar'a* (g. *marja*), UrvO *var'u* (*vari*); in HarM only before *u*, e. g. *kol'u* (*kolju*), *kar'uss* (*karjus*) (but: *orja*, *kurja*); RõuK *mar'ä?* (*marjad*), Kan *kir'ä* (g. *kirja*), PlvK *var'u* (: *'varju*), Räp *väl'äh* (*väljas*), *kar'äh* (*karjas*), VasLa *kar'a* (: *'kar'ja*), SePa *or'ä* (: *'orja*), Lei(M) *al'ass* (*haljas*) (*al'la* : *al'last*), LutSJa *nel'ä* (*nelja*), *kirotad'i*, KraO *kar'ah* (: *'kar'ja*).

$Dj > D$ ,  $Gj > G$  in SEE. E. g. HelL *raGume*  $\ll$  \**rakju-* (*raiuma*), Ote *vag'ä* (: *vaja* : *vak'a*) (*vai*), UrvO *vag'a*, Kan *pad'a* (*padja*), Räp *lod'ä* (: *'lotja*), SeSa *lag'ä* (*lai*); cf. p. 39.

$hje > he$ . E. g. *kahetsema*, cf. *kahjatsema*, *ohelik*, cf. *ohjad*, MarH *lah'emaks*, Vig(Ste) *tühendämä*, Kod(K) *tühendän*; *vahel*, cf. Gutschlaff *waßjel* (VKVM 103).

## 1.5.1.2. SINGLE CONSONANT

### 1.5.1.2.1. In Word-Initial Position.

$h- > 0$  in the common language and in most dialects. E. g. *obune* (*hobune*), *ärg*; cf.  $h \equiv$  in SEE and Phl, e. g. Phl(A) *hupid*, PlvH *heeringet*, Räp *hiusse?* (*juuksed*); EMA 1 8 "juuksed", 2 32 'haug'; see also Ariste EKH 57-. As regards the old literary language, see Saareste EK 1939 178, PR 3. Cf. Vt. *open* (E *hobune*), *araga* (E *harakas*), Lv. *alĠG*, *umäl*.  $h- > 0$  occurs in several, especially Rōmanic languages. On the phonetic causes of the change see Panconcelli-Calzia EPh 46-. PA 41.

$v- > 0$  before *o*, *ö*, *u*, *ü*, chiefly in Sa, Muh, Khn, LāW, Pä, Vl. E. g. Krj *'öösi* (*vöösid*), JaaH *ööt* (*vööt*), PöiP *öö* (*vöö*), MuhL *'u*aatide (*vaatide*), Khn *'uagō* (*vaagen*), Var *üö* (*vöö*), Lih Alaküla *okk* (*vokk*), Vig(Ste) *or'st* (*vorst*), Mär *'oolmed*, *oolistab*, SimE *urriluu*, *'oablane* (*vaablane*), *ohumõegad* (*võhumõõgad*), Kõp *'uuder* (*vooder*), Hls(U) *'uürüsen* (*vööüruses*), *'uuri* (*voori*, *p.*), Trv(P) *'uudi* (*voodi*). Cf. F *ottaa* (E *võtma*), dial. *üä* (c. l. *vyö*). According to Ariste the phonetic explanation of  $v > 0$  in connexion with the labial vowels is that in articulating the labial vowels the lips are drawn forward and rounded, which is not the case when *v* is articulated. Here "a too long jump in the action of the lips has been avoided, and little by little the articulation of *v* has become more and more labial until, probably



by way of *w*, every difference in the movement of the lips has disappeared" (ACUT B 47 : 1 244). PA 123.

*j* > 0 before a front vowel: *üttelema* < *jüttele* < *juttele* -; cf. *jutlus*, Müller *iüttelduth* (5), Wd. *jüttelema* 'predigen', *jütillus* 'die predigt', F *jutella*; *iva*, cf. LutsJa *jüvä*, F *jyvä*, SVp. dial. *üvä*; *ehmatama* < \**jehma* - < *jähma* - < *jahma* -, cf. *jahmatama*, Se *jehmada*, Vas *jähmätämä*, LVEM 271 -; F *jähmettyä*; JaaHa 'eesus (*Jesus*), Saa *eesus*; VJgRü *üsku* (*just kui*); Har (E 96) in the North-Western part *eness* (*jänes*), HarMö *egi* (*jõgi*), SePa *egi* (*jõgi*) : *ii* ~ *eę*; Lei *ič'v* < \**jihv* - (*jõhv*), LutsJA (*jiuhh* :) *ihve*. Cf. Md. regularly *je* - > *e* -, *ji* > *i* - (Paasonen ML 66), Zyr. *ji* - > *i* -. (Uotila KPS 78 -), SOsty. *īndep* < *jīndep*, *ēdēmdājem* < *jē* -.

### 1.5.1.2.2. Inside the Word.

#### 1.5.1.2.2.1. *h*.

*h* > 0 after the non-initial syllable. E. g. *võõrad*, cf. Cr. *vierahat*, F *vieraat*, dial. *lampahat*, SVp. *kindhad* (E *kindad*), Vt. *rattād*, Lv. *aṁbḃD*; ill. *kiriku*, *kätte* < \**kätehen*; cf. in SEE *h* ≡ after the third syllable, e. g. Plv ill. *anomahe*, Rāp(R) *kerikuhę*, SeP *kambrehe*, EMA 2 1 'rahvas läheb kiriku'; SVp. *kādhe* 'ill. hand', Lv. *kā'ddḃ*. SMK 107-. In the same position is *h* in the stem *mehe*, if it forms the second part of a compound word and therefore *h* > 0 is very common in this case. E. g. AudE *as'jamed* (*asjamehed*), AudK *kellamel* (*kellamehel*), MärON *peremele*, KeiH *külamed*, JürS *peremel*, JuuK *saanamega*, Lüg *metsäme* (*metsamehe*), Jõh *väime*, VaiJ *põllumed*, LaiKa *jahimed*, HarÄh 'peigme. Other words: AmbN *tulegai* (*tulekahi*), *metsavai* (*koht*). The loss is, of course, favoured by the unstressed state of the word, e. g. JInLä *mis sest vanamest* 'karta, but *miss sa sest vanamehest tahad*, *ei temal põle* (*pole*) *süid kedagi*. As to the explanation of the change see Ariste ACUT B 47 : 1 175.

*h* > 0 after the first syllable occurs sporadically in several dialects. E. g. MustT *mel* (*mehel*), Phl(A) *tēā* (*teha*), (see further *op. cit.* 174). Aud 'siuke (~ *sihuke*), PJgE 'neuke (~ *nehuke*), KeiS 'üele (*ühele*), KeiH *ma<sup>h</sup>a* ~ *maa*, HagA *üksvae*, JuuK *vaet* (*vahet*), VJgRü *kuu* (*kuhu*), Lüg *kaeksandel* 'all. 8', EMA 2 46 'kaheksa'; *h* > 0 is especially frequent in Vai, e. g. VaiI *paa* (*paha*), *kuu*

(kuhu), vain (vahin), koas, puastamma, tuat (tuhat), püade, VaiM kaekkeisi (kahekesi), VaiJ koe (kohe), VaiKu ühëksäni (see further Toomse ALSE 1937 89); Kõp sijs ~ siqs ~ si<sup>h</sup>is ~ sihis, LaiM nel'ipüin'i (nelipühini), KrlK ütesekümmend<sup>d</sup>üsse '99', UrvO koess<sub>a</sub> läht 'where do you go', Kan vaest (vahest), SeTr koeza < kohe sa (kuhu sa); in Lei the loss is consistent (see further Niilus EK 1936 37-), e. g. Lei viu (vihu), väi (vähi), (nahk :) na<sub>a</sub>, Lei(V) d'autless (jahutleb); LutSJ mee (mehe). *h* > 0 occurs especially in everyday words lähe- and taha-, e. g. Mih(Ste) ma lään, PJg-Tor lääb ~ lä<sup>h</sup>äb, JMdOrg isa läb aita, Sim lään, PuhV ei lää, Vas, SeM läät (lähed), SeMa lää<sup>ä</sup>i (ei lähe), SeSa koeza 'lääde'. SeMi läävä (lähavad); MarO tap<sub>peenelt</sub> 'rääkida, JuuK mine, kus taad, HagA ta tab ikka paremat; here, too, there is, of course, loss particularly in unstressed positions and in careless and rapid speech, e. g. PärP ei<sub>ta</sub> 'tulla, AmbN kussa lääd 'where are you going?, missa taad 'suada (mis sa tahad saada). Cf. Ing. kuilas < kuhilas, Vt. dial. län, roippu < rohipü; in Lv. the intervocalic *h* has generally disappeared in all positions, e. g. WLv. rā<sup>?</sup>, rā<sup>?</sup> (E raha); Hung. dial. tēt < tēhet.

*jh* > *v*, *üh* > *v* in ViC and TaN coastal dialects. E. g. Hlj, IisO javatama < \*jauha- (jahvatama), cf. F jauhattaa; VaiM jõvikkat < \*jouhi- (jõhvikad), Kod(KV) javu (jahu), Trm(T) jõvi 'Jõhvi', LCD Gevi 'Jõhvi', Müller Rtauø (rahu) (64). Cf. Vt. javan, jevikaZ.

### 1.5.1.2.2.2. j.

*j* > 0 between back vowels.

In dialects we mostly find *j* > 0 between two *a*'s. *j* < \**t* has taken part in the change.

*aja* > *ā* widely over the whole E. E. g. aasta < \*ajastaika, Krl (E 361) p. aest'aiga (aasta), UrvM p. aast'aiga, HarK aast'aiga, Lei(O) aastagut, LutJ 'aastakka, cf. PlvA g. ajasta (aasta), VasS g. ajastaga, Rossihnius ajaštaiča (103), Gutsclaff ašjaštaič (VKVM 118 : 26), Verginius ųštajad (VKVM 202 : 14), Agricola Aijastaica (Hakulinen Suomi 101 21), FUS aastaika (Virtaranta LYSÄH I 335), IngR aastajan; Vll aad (ajad and aiad), JaaH kaagas : 'kaakad (kajakas), JaaHa maal (mujal), PöiL aa (aja), MuhL aab, Hi(A) maa (maja), Kse(Z) koolitad

(*koolitajad*), Var *kaakas*, Saa *saa* (~ *saea*) (*saja*), Hls(K) *saa* (*saja*), HagS *aal* (*ajal*), Juu *'vaaka* ~ *vaeaka*, JMd *'naale* (*najale*), AmbN *aal* (*ajal*), JInLä (*rada* :) *raad*, KadP *paad* (*pajad*), VMr *raa*, Jõh *paas* (~ *pajas*), Sim, Rak *'aama*, VJgRü *aasid*, PilK (*sadama* :) *saab*, SJnL *saad* (~ *sa(ead)*), KJnP *paa* (~ *pa(ea)*), HelK *'aame* (*ajama*), LaiKa *raal* (~ *ra(eal)*), Trm(T), TrvV *aanu*, SanO *'aama*, Plv *saa*, Lei(V) *'paatama* (*pajatama*), (*sada* :) *sa(a)*, (*pada* :) *pa(a)*, LutSJa *aa* ~ *ua* (*ajan*); EMA 1 12 *'aiä*', 2 54 *'najal*', 55 *'mujal*', 65 *'paja*'; PR 57. Cf. F dial. *ka(t)taa* < *kataja*, SMK 96. PA 103, 104.

*j* > O between other back vowels. E. g. MusI *aul* (*ajul*), *vaub* (*vajub*), Vll(G) *too* (*tuju*), *ooma* (*ujuma*), JaaH (*pea*) *ao* (*aju*), *pao* (*paju*), PöiL *too* (*tuju*), PöiJ *'mõoma* (*mõjuma*), Juu *'vaoma* (*vajuma*), AnnN *vennapuale* (*-pojale*), JMd *sõa* (~ *sõja*), VaiM *sõas* (~ *sõjas*), KrlK *sõa* (: *sõ(eal)*), OteN *mõoss* (*mõjub*), KamReo *mual* (*mujal*), Röp *mõoma*, VasO *vaoss* (*vajub*), SeSa *poa'* (~ *po(ea)*), Stahl *alla* *waofut* (VKVM 35); EMA 2 55 *'mujal*', 66 *'sõja*'; PR 23, 57. Cf. also IngS *puottaa* < *pujo-*.

*j* > 0 before front vowels.

*je* > *e*. E. g. *aelema*, cf. F *ajelehtia*, dial. *aele-*; *aetud*, cf. *ajama*, F dial. *aettu*; *kaema*, cf. Rossihnius *ŕajefet* (196); *soendama*, cf. *soojendama*; *vahel*, cf. Lei(O) *vahjeae*; JuuK *soem* (*soojem*), PöiA *'sootab*, SimA *'suetab* (*soendab*), Jäm *'aema* < *\*ajema* < *ajama*; cf. PF *õ* < *\*üje* 'night' (E. Itkonen FUF 30 39).

*ji* > *i*: Kuu *pime(ije)* < *\*pimeji-* (*pimedate*); cf. *pimejät*, p. pl. *jäme(i)*; cf. *jämejät* (Toomse ALSE 1936 272), Kõp *tegi(id)* (~ *tegi-jid*). Cf. F dial. *asu(ü)* < *asujilla*.

*jä* > *ä*: KJnP *elätega* (: *eläjäs*), KJn(A) *elätele*, SeSa *pää* (*paja*) 'smoke-hole', *uä* (*oja*). Cf. F dial. *verrää* < *veräjä*, SMK 133–; *j* > 0 in Vp. dial. in place-names, ending on *-järvi* and *-oja*, Tunkelo VKÄ 468–.

### 1.5.1.2.2.3. Stop after Original First Syllable in Unstressed Sentence Position.

*D*, *G* disappears in a few words, E. g.

*D* > 0 Kõp *põle säl äm 'keägi tehä* (*pole seal enam kedagi teha*), *mis\_sä 'seäsi jahed* (*jahid*) ~ *sedasi* (17), KrkA *vananijs es\_õol tii\_bääl ke\_äk* (~ *kedagi*) *tundæn* 'the old man had felt nothing on

the way', KhkT *täl pole sellest paramõd määd* (< *midad*), KseÕ 'säasi (*sedasi*). Cf. Tunkelo VKÄ 67–.

$G > 0$ : Phl *nösune* (*niisugune*), *sösune* (*seesugune*), Tõs(KM) *jaop* 'Jaagup', PJgE 'jaopi, UrvM *ea<sup>s</sup>sīs ole<sub>ess</sub>* (< *ega siis ole ess*) 'then there is no . . .', RõuH *eass no sīs ol<sub>es</sub>*, HarM(S) *niu<sup>2</sup> ennegi* (*nii kui ennegi*).

#### 1.5.1.2.2.4. Nasal and Liquid.

$n > 0$  spor. dial. E. g. in the words *mina*, *sina*: VänU *sia*, *mia* (among the older generation), HagA *mia*, VaiJ *mie* ~ *minä*, *sie* ~ *sinä*, *miu* (*minu*), 'siuga (*sinuga*), Kõp *mēa* ~ *mina*, *siul*, KrkKa *mea*, KrkK *miu*, Hel *mia*, *miu*, *miut*, 'p. me', Trv *miu*, PuhV *mia*, *miu*, cf. F dial. *mie*, *sie*, *miun*, *siun*, Cr.-Ol. *mie*, *sie*, *miun*, *siun*, Vt. *miä*, *siä*; in the word *enese*: MusI 'eestele ~ enestele, MarH *et tää pidi kallid asjad 'saama 'osta 'eesele*, Vig(Ste) *eese* ~ 'eese, Mär 'eesale ~ 'eesele; in the word *enam*: MarH *põle sii péal ääm ühteai'nokestki* (*pole siin peal enam ühteainukestki*), Hls(U) *ämp* (~ *enämb*), KrkK *ei<sub>jole</sub> ääp 'meastegi* 'there is nothing more' SanM *es tohi ämp*, RõuH *ea<sup>n</sup>n'ät<sub>t</sub>tuut 'pul'lig<sub>v</sub>jätä ess<sub>ämp</sub>* 'nor did they leave the bull', PärP *ääm*; in the words *minema*, *panema*: SimE *paab obuse ette*, Avi *paen*, *paed*, *paeb* etc., Kod(K) *paan*, KamR *paa* (*pane*) *pada tulele*, *mie iist* (*mine eest*); UrvM *ess pat<sub>t</sub>tähelegi* 'did not notice', UrvVa *mee* (*mine*) *no inne kodu*, PlvK *paa puuhhu* (*pane põue*), PlvH *mee<sup>p</sup>paa<sup>s</sup>sa* (*mine pane sa*), Lei(O) *sēs ol'l'e me'ek' kui esän'd' kul's'* (*siis oli minek kui isand kutsus*); cf. Vt. *pāB* (~ *panēB*), *mēn* (~ *menen*), F dial. *meen* (c. l. *menen*), *paan* (c. l. *panen*), Vp. *m'ä* ~ *m'äne*, *pab* ~ *pāb*; in the word *vana*: KadT *tema vaa mies* (*vana mees*), Kõp *va pauri jaan'*. SMK 112–. In Vulgar Castilian  $n > 0$  between vowels is consistent (TPh 201).

$m > 0$  spor. dial. E. g. in the words *tema*, *nemad*: Kõp (in rapid speech) *tä(ä* ~ *tä*, SJnL *tea* ~ *tema*, *nead* ~ *nemad*, KrlÄ, SanLa *tiä*, San *neä*, UrvO *niä?* ~ *nimä?*, Kan *tiä*, PlvA *tiä*, *niä*; in the word *niisamuti*: VilV *na 'sal'te*, Kod(K) *na 'saate*, SanM *nisatle*, PlvM *niisattē*.

$l > 0$  spor., dial. E. g. *vaatama*, cf. KuuK *valattamas*, KodTo *valata*, Müller ʒalata (5); in the word *oleks* in unstressed position: Lih *ma ooks näin* (*ma oleks näind*), SJnP *oks ma seda tīand*,

KrkK *siss oss* 'valla jäll 'päsnu (*siis oleks valla jälle pääsnud*), TrvVä *jus<sup>(t)</sup> ku ants oss ollu kunaki* (*oleks olnud kunagi*), HelP *oss miul ka üits' veli ollu* (*oleks mul ka üks veli olnud*), SanM *ett oless iks nii 'pestü noid ett oss koolu är'* (*et oleks ikka nii pekstud neid, et oleks koolnud ära*). Cf. Lv. *ùod* (< \**olēt*), F dial. *ei tuu* (*tule*), *ei oo* (*ole*), SMK 128–, Ing. *oon, oot, tüen ~ tüiin* (E *tulen*), Cr. dial. *eu* < *ei ole*, Vt. *ġmma ~ eġemma* (E *oleme*), *tuġB ~ tuġB* (on BF *n, l* > 0 in verbs, see further F. Oinas UAJb 24 : 1 23–, O. Ikola Vir. 1952 282–); other cases: Ris (rapid speech) *as* (*alles*) *ta oli siin*, KodSa 'aate (*alati*).

*r* > 0 spor. dial. E. g. in the word *ärä* > *ää*, in unstressed position, e. g. JaaHa, AudE, Saa, MärON, Ris, HMd, KeiK, KoeR, SimA, VJg(K) (for sentence illustrations see V. Raud EKK 1941 140–); in the words *millepärist, sellepärist*: MarO *sellebst ma nii kauwa elan*, KrkK *mikebest, sellebest*, Kõp (in unstressed position in rapid speech) *päst ~ pärist*; in the words *määrane, säärane*: KrlÄ *määness*, RõuS *säänä*, UrvO *määne* (~ *määre*), Kan, SeVõ *sääne*, VasLa, LutSJ *määne*, KraO *mäne* (cf. Ojansuu AUA B 1 : 3 47–); other cases: Kõp 'aamese (*ajamise*) *jүүs ~ juures*. Cf. Vulgar Castilian, where *r* > 0 between vowels is consistent (TPh 201).

#### 1.5.1.2.2.5. *v*.

*v* > 0 in connexion with *o, u, ü*. E. g. *au, tōotama*; cf. Müller *toivutut* (3), *auvo* (4), Stahl *auvuŕtafut, tootafut* (VKVM 36); *hea* << *hüva*; cf. Trm(T) *üva*, Lut *hüä* : p. *hüvä*, Wanradt-Köll *hõē* (*höä*), F *hypvä*, FT *hüä*, Cr. dial. *hüa* ~ *hüvä*; *käima* < \**kävü-*; cf. F *käydä* ~ *kävellä*, Cr. dial. *käü-*, Ol. *kävü-*, SVp. *käuda* ~ *kävuda*; *toa* < \**tuvan*, cf. F *tuvan*, dial. *tuas*; *väi* << *vävü*, cf. Kod(K) *vävi* < *vävü*, F *vävy*, SWF *väü*, Cr. dial. *väü* ~ *vävü*; dial. in the weak grade of the words (*kaev* : ) *kaevu, (kõiv* : ) *kõivu*, e. g. VlkK *kaju*, EmmVi g. *kaju* (ill. 'kaevo), MuhLõ *kaolt*, Tor (*kaev* : ) *kaeu*, TõsE g. *kaõ*, Mär *kao*, PltP Puiatu (*kaev* : ) *kao*, Rõu, HärKa, VasO (*kaiv* : ) *kao*, UrvO, SeSa (*kõiv* : ) *kõo*; Phl(A) *õä* ~ *üä* (*iva*), Avim *tänade* [< \**tänavõtena*] (*tänavu*). PA 1.

*vi* > *i* spor.: *aitama*, cf. *avitama, veski* < *vesikivi* (see p. 78), Mär 'päileseks (*päiviliseks*), (*pikil*) *päil* (*päivil*) (rare), AudE *sedas'i* (*sedaviisi*), HagA 'niis'i (*niiviisi*), KadT *nõnnasi* ~ *nõnnavisi*, LaiM *nõnnas'i* (*nõndaviisi*).

*wi* > *ui*: *sui*, *tui* (WE and CE); Juv *krupulk* (*krupipulk*); PR 6. Cf. Cr. dial. *šuin'e*. Here the preceding *u* as well as the following *i* have had an assimilative influence on the *v*. PA 113.

*v* > *O* in connexion with other vowels: in the 3rd p. pl. and in the modus relativus here and there in the islands and WE, e. g. KhkKo *tulad* (*tulevad*), Jäm *nägad* (*näevad*), MusI *mina<sub>ad</sub>* (*minevat*), *tega<sub>ad</sub>* (*tegevat*), *lähta<sub>ad</sub>*, PhaV *tulad*, *olad* ~ *tulavad* (*tulevad*), *olavad*, JaaH *nägad*, *panad* (*panevad*) (but *surevad*), EmmVi *tölad* (*tulevad*), EmmT *panad*, Khn *tulad* ~ *tulöad*, Mih(Ste) *'kaapad* (*kaapavad*), *'tahtad* (*tahavad*), *'rääkad* (*räägivad*), *'kuulad* (*kuulevad*), *'naerad*, *'seisad*; other spor. cases: RapN *lehate pühi*, MMgR *liha<sub>õte</sub>* (*lihavõtte*); VilV *min'ü aasta* (*mineva*), JämH *sukare* ~ *sukavarre*. See also Wiedemann EGr 116-. Cf. F dial. *tänäpäänä* (Airila JKT II 70), Vt. *tuhkepän(ä)* 'ess. Monday'; regular *v* > *O* occurs in the Permic languages (Uotila KPS 252-), widely also in Hung. dial. (Horger MNy 93-).

### 1.5.1.2.3. In Word-Final Position.

*-k* > *O*. E. g. *kaste* < *\*kastek*, *tulla* < *\*tul<sub>t</sub>ak*, *anna* < *\*an<sub>t</sub>ak*. *-k* > *O* occurs also in Lv., Cr.-Ol., IngR, Vp. and WVt. In most cases *-k* has also disappeared in Lule-Lapp (LFL 173-). In MdM, too, we find the tendency *-k* > *O* (Paasonen ML 67). In most Finnish dialects *-k* has been assimilated with the following consonant, and before vowels we find complete loss in several dialects, e. g. FAS *ei saat<sub>t</sub>tulla* [< *\*säk tul<sub>t</sub>ak*]. It is possible that *k* also in NE has disappeared by way of this intermediate stage (cf. the occurrence of [ʔ] in SEE p. 16). In the Savo dialects *-k* has sometimes survived in absolutely final position, and partly before a vowel, e. g. *elä valehtelek* (see further SMK 28-). In EVt. *-k* > *-G*, e. g. *kaseG* 'kaste', *annaG*: in SEE *-k* > ' (see p. 191). Cf. the survival of *-k* in Hungarian, e. g. *képek* 'pictures', *látok* 'I see'. That the disappearance of *-k* in FU languages began before the loss of *-t*, is explained by Grammont by the fact that the *k* is less localized, less distinct as to its articulation and less closed than *t* (TPh 165).

*-t* > *O* in SE. E. g. Puh(S) *na* 'ütli<sub>va</sub> 'they said', KamK 'tunnu (*tundnud*), SanM *katusse* (*katused*), VasM 'naksi *na* 'they began', SeMi 'naksiva *ka kel'lä kōik* 'all clocks also began'; EMA

1 2 'virmalised vehklevad', see also ib. 5, 6, 8 and 2 30, 37, 38, 42, 43, and 48 'läinud'. The loss of *-t* in these dialects has probably taken place through *-D*. Cf. F *kansat*, *laulavat*, *maksanut*, SWF pl. *kana muniva*, Md. *tolgat* (E *suled*), Vog. *lüt* 'pl. horse', Osty. *lauat* (FUS 51). PA 6, 9, 21.

*-h* > 0, e. g. *pere*, *ime*, cf. PlvK *imeh*, Röp *murçh*, SePa *pereh*. Cf. F *perhe*, dial. *pereh*, Cr.-Ol. *veneh*, SVp. dial. *ven'eh*, but generally *-h* disappears in SVp., too (see Kettunen ACUT B 2 : 2 87), WVt. *pere*, EVt. *pereh*.

*-n* > 0. E. g. *süda*, *kollane*, *õnnetu*, *selle maa*, cf. F *sydän*, *keltainen*, *onneton*, *sen maan*; *-n* has survived in most of the NE dialects and in the common language only at the end of the first person, e. g. *olen*, *tuleksin*, *tulin*; on the islands, in Läs, Päs, and SE *-n* has disappeared here, too, e. g. JaaH *ma leva* (*leian*), ReiL *sesta küll ole kuln* (*olen kuulnud*), EmmT *siis läksi välj*, MuhL *ma lähe*, Kse(Z) *ma elasi*, AudE *sügise ol'i* (*olin*), VII *maa anna*, VasM *või küllh* (*võin küll*), EMA 1 14 'leian', 18 'lasksin'; *-n* has survived also at the end of a monosyllabic word with a short vowel: *on*, KuuVi *senn* 'g. this' (see Mark ALCE 1932 24, 41). The loss of *-n* can be observed in the oldest written records, except in the gen. case and in the first person. In the latter case we find *-n* partly as late as in texts from the beginning of 16th and 17th centuries. E. g. Lelow *teme apuo poian meddten hjande* (VKVM 1), Müller *Mina olle* (= *ollen*) *sen Mehe sen hbanda echf Jehoua janut* (9), *Mind taha mina nüith* (109), *Mina olle sen hbanda janut* (3). It is most probable that *-n* survived longest before a vowel; at the end of the first person in verbs in most NE dialects the change *-n* > 0 was not wholly accomplished and *-n* was restituted even in those cases in which it had disappeared before (Kettunen EKÄ 106-). Rudiments of the gen. ending *-n* are at present to be found in a few compounds, e. g. *maantee*, cf. Lei *maatii* ~ *maati*, Hi *suundäis* (ALSE 1932 41), Khn(EK) *kahengest*, Wd. *papin-päev*; particularly in place-names, e. g. *Soinlepa*; see also Ariste ACUT B 47 : 1 209-. Cf. Lv. *siemnàiga* (E *söömaeg*). PA 84.

In some dialects (in the islands, here and there in Läs and Päs) even the *-n* that, as a result of apocope, occurred at the end of the word, has disappeared, e. g. Hi *vaage* (*vaagen*), Khn *akõ*, Var, Lih, HääN *ake* (*aken*), Trm(T) *ahve* (*ahven*); PöiA *obu*

(: *obused*), Khn *obo*. In Lei even *'portsęła* (*portselan*). *-n > 0* also occurs in such temporal locatives as: *homme, tänavu*, cf. Vp. *tänävođen ~ tänävon* (MSFOu 86 245); JämH *kevadę läksid sügise tulid ära*, RisKi *issa-meije loen 'õhta ja ummiku* '(I) read the Lord's Prayer in the evening and in the morning', AnnS *'talve käevad*, Trv *igä suve*; cf. PltP *'ommen ~ 'omme*, F *huomenna*; dial. also in the word *siin*, e. g. ReiL *kuidas sii undid ära kadusid*; dial. also in the word *on*, particularly in an unstressed position, e. g. MusI *kas täda änam onn (on)*, se<sub>o</sub> *'teedmata*, MuhLõ *kas rukid<sub>o</sub> õsut*, Mih(Ste) *miso (mis su) nimi oo*, AudE *sõol oo naa suured porgan'did*, Pjg-Tor *täl<sub>o</sub> ette paelu tööd* 'he has especially much work' (*~ kas onn*), Vig(Ste) *uu ~ oo ~ oo*, KeiK *oo ~ õ ~ onn* (the variant without *-n* may occur also in stressed position), HagL *mehed o 'pulmas* See also Ariste *op. cit.* 209–.

In Finnish dialects we find the loss of *-n* with the intermediate stages; e. g. in the dialects of the Carelian isthmus complete loss is consistent in the cases in which *-n* has no semantic function, as in the *nen*-nouns and in the acc. case (Hakulinen, Vir. 1925 123); in some dialects we find complete loss of *-n* in absolutely final position, whereas before a consonant it has mostly been assimilated with the latter and has been retained before a vowel; in some dialects *-n* has become a nasal vowel; cf. e. g. dial. *punaine, punain, punai, minä näim poja*, SMK 120–. As regards the other BF languages, cf. Lv. g. *rānda, ma j<sup>u</sup>oì* (E *jõin*), Cr.-Ol. *lehmān, em<sub>o</sub>mie < en mie, šin'in'e, tähä* (KAÄ 67–), SVp. *andan, papin, toin'e*, ill. *keskhe, nimetõ, jumam<sub>o</sub>borask* (ACUT B 2 : 2 92–; cf. also Kettunen *ib.* 98), Vt. *pehjatõ, g. kaā, mahā, nain* (E *naine*), EVt. *tuāē* (E *tulen*), WVt. *tuāen, eljāhe < en lähe* (VKÄ 96–). In IngR we find complete loss in some of the morphemes, in others assimilation with the initial consonant of the next word, while in the first person of verbs it has survived, as is the case in NE; cf. also IngS *-n ~ 0* Sovijärvi SIM 74–. The loss of the *-n* also occurs in Lapp (LFL 176, J. Beronka LK 87–). It is possible that the loss of *-n* in Estonian as well took place by way of some intermediate stage, where *-n* had been assimilated by the initial consonant of the following word; cf. p. 17 and Kuu(S) Pärispä *ma tuletam<sub>o</sub>miele, olem<sub>o</sub>mina*, SWF *mere ja maam Bääł*, South-Savo *meijä lehmä ~ meijäl<sub>o</sub>lehmä*. According to Ariste the development *-n > 0* has taken place "in the way that



in oral articulation the closure has become slacker and slacker, i. e. the oral articulation has retreated in favour of the nasal chief place of articulation until only the latter articulation of the formation of the *-n* survived. Later on even the nasality has disappeared" (ACUT B 47 : 1 212, cf. MusT *oo* (*on*). In Indo-European languages we find loss of *-n* in the Scandinavian languages and *-n* is disappearing in Dutch (Ariste *op. cit.* 211).

*-l > 0* dial. in the word *millal*, e. g. Hag, KoeR *milla*, MMgK *milla<sub>sa</sub>*.

*-v > 0* here and there in the islands and NWE, in a few words also in Se, e. g. Khk(T) *kui* (: *kuiva*), MusI *tii* (*tiib*), *lii* (*liiv*), *vae* (*vaev*), PöiP *pala* (: *palavad*), EmmV *lae* (*laev*), (for Hi examples see *op. cit.* 245), Khn *'kirja* (: *'kirjava*), Var *sügä*, *lae*, Vig(Ste) *pala*, RapN, JuuJu *vära*, SeSa *kui* ~ *kuiv*. *-v > 0* is widespread in the word *päev*, e. g. TösE *päe*, Vig(Ste) *päe*, Mär *pää* (: *pääbad*), VilV *päe* ~ *pee*; particularly in compounds, e. g. JämH *nääripä*, JaaH *pühabeti* (*-päiviti*), MarH *'mihklibäed* (in the two last cases the nom. stem with the loss of *-v* has been generalized in the oblique cases, too), KJnP *tõõsibä*, *nel'läbä*, Kod(KV) *'iispä* 'Monday', PstK *tõisibe*, HELP *pühäbe* (9), PuhV *pühäbä*, PlvPa *jüribä*; Vigæus *ῶαυπε* (~ *ῶῃα* *ῶαιῖ*) (VKVM 76); EMA 1 28 'esmaspäev', 2 44 'värav'.

## 1.5.2. Loss and Reduction of Vowels.

### 1.5.2.1. SYNCOPE

#### 1.5.2.1.1. In Open Syllable.

##### 1.5.2.1.1.1. In the Second Syllable.

When the first syllable is long. E. g. *andma*, *laulma*, cf. MusI *'lüpsama*, *'andamine*, *'laulaga* (in MusI the *a*-verbs lack the syncope), Lüg *andama*, JõeI *laulama*, F *laulamaan*; *tütre*, cf. VNgK *tüttare*. Cf. LCD *Ardala* 'Aarla', *Kandalä* 'Kandla', *Kangelä* 'Kangla', *Kuckarus* 'Kukruse'. There is no syncope to be found in NEEC; see EMA 1 13 'leidma', 16 'laskma'.

Dial. (here and there in Sa; Muh, Khn, Lä; here and there in Ha, Jä; Pä, VI, SE) syncope occurs even in cases in which there is no syncope in the common language.

In *i*-, *u*- verbs. E. g. JämH 'o<sup>o</sup>rvad ~ 'o<sup>o</sup>r<sup>u</sup>vad (hõõrvad), KhkT o<sup>o</sup>rti (hõõruti), Khn(AS) k<sup>j</sup>isn (kiskund), Kse(Z) 'nokvad (nokivad), MarH 'lapsid (lappisid), Var karima (karjuma), Lih Tuudi 'rääkma, Tõs(V) 'juhtsi (juhtusin) (but 'juhtuma), Aud 'kiskma ~ 'kiskuma, Saa 'õpvad, 'uskma (but tuku<sup>u</sup>vad), Tor 'kisksid, KoeR 'ot'sma, Vig(Ste) 'usksid (uskusid), Mär mulitud (muljutud), PilKa 'sün'mene (sündimine), KJnL 'kutske (kutsuge), PltK 'vanma (vanduma), MMgR 'kuk'sid, Kod(KV) 'nõidma, PstHo 'tük'ma (tükkima), KrkK 'vor'mme (vormima), TrvP 'su<sup>u</sup>v'ma (soovima), Puh 'audma (hauduma), Ote 'kõn'jat (kõndijat), SanN 'lahkme (lahkuma), TMrKõ 'pühkma, Krl (E361) 'õikma (hõikuma), HarM 'kraat'sma (kratsima), UrvO 'rõhkma, PlvAl 'vaakma (vaakuma), VasLa 'võl'sma, SeKos 'haukva (hauguvad), Lei(V) 'kaatma (kaaluma), Lut(V) 'surbma (suruma), Lelow jundma (VKVM 2), Rossihnius erraridma (7); PR 36. PA 110.

In *e*-verbs here and there in Sa, Lä, Pä, SNE, SE. E. g. JämH 'suitsma, PõiLa 'küpsma, Tõs(V) 'lõpma, Aud, Hää(V) 'käskma (:käseb), SanN 'lõpme (lõppema), SePa 'lõpma, Lut(V) 'lõpma, PR 38.

In *a*-verbs. In the type *keelma* in the islands, here and there in Pä, VI; Kod, Se. E. g. Tõs(V) 'põõrma, Juu 'kēanma, SanN 'põõrdme (põõrama), SePa 'pu<sup>u</sup>urdmä, Lei(V) 'k'üldma (keelama), Lut(V) 'niildma (neelama), PR 37; dial. in contracted and other verbs, e. g. AnsM 'vaatma, MarH 'kuima (kuivama), KJnL 'kaevgu (kaevaku), Avi 'kasma (kasvama), Trm 'kasku ~ 'kasvagu, MMgR 'kuinud (kuivand), Kod(KV) 'kasva < kasvava-, Puh 'vihkma, 'tõukma, SePa 'u<sup>u</sup>tma (ootama); – dial. in the imperfect of the verba contracta e. g. JämH 'karksid, SanN 'nakse '(I) began', UrvO 'tõmpsi ~ tõmmassi (tõmbasin), RõuS 'korssi (korjasin), PlvAl 'naksi '(I) began', VasLa 'tõmpsi (:tõmbama), SePa 'visksiva', Lut(V) 'kiussi (kiusasin).

In 3rd p. pl. E. g. Tõs(KM) 'andvad [< \*anta-], Kse(Z) 'paistvad, Lih 'kartvad, MarH 'keetvad, Mär 'laulvad, Hlj 'liadvad, KamR 'anva (annavad).

In *ne*-adjectives. E. g. Krj 'vilne, Khn 'amsest (ammusest), Aud 'koltсед (:kollane), VarH 'taksed (takused), Saa 'kolne : 'koltсед, Avi 'mulne (mullune).

When the first syllable is short, sporadic cases of syncope occur, e. g. KseN *lähvad* (*lähevad*), Kõp *tahvad* ~ *tahavad*, SJnP *lähme*, *tahte* (*tahate*), PltP *lähvad*; Rõu *parhilla* < \**parahilla-*, EMA 1 23 'praegu'; AnsM *aima* (~ *ajama*), KhkT *ma ajsi* (*ajasin*), EmmV 'aeda (*ajada*); PuhV *värjä* < *värjää* 'gate', EMA 2 44 'värav', cf. F *veräjä*; MMgR 'varmalt (*varemalt*), VasO 'vin'läisi (*venelasi*), SePa 'vindläine. PA 6.

### 1.5.2.1.1.2. Farther on in the Word.

*kes* > *ks* dial. in the suffixes *-kese* and *-kesi*. E. g. MuhL 'sõuksed 'pl. such', Khn *pis'sigse* (*pisikese*), Var *peeniksed*, Tõs(KM) *pääuksed*, Aud *õhuksed*, PJg-Tor *tallekse*, PJgE *ulgeksi* (*hulgakesi*), Saa *peen'iksed*, Mär *natukse*, Juu *peasuksed*, SJnP *tal-  
lekse*, KJnL *kooriksed*, PilM 'veikse (*väikse*), PltK *lühiksed*, Hel 'lambakse, SanT 'väikse, Ote *peenIkEse* ~ *peenIkse*, *lühikse*, *väikEse*, UrvO 'lõokEse ~ 'lõokse (~ 'lõokese), Lei(O) *nõglakse* ~ *nõglakese* (*nõelakese*); KhkT *kaheşş* (*kahekesi*), PJgE *kolmeksi*, Mär, KeiH, SJnP *kaheksi*, VilV *kaheksi* (~ *kahekesi*), PärP 'kaeksi, Hel *kol-  
meksi*; EMA 1 15 'kahekesi'.

*tis*, *tus* > *ts* dial. E. g. KrjT *pihlatu\_se* (*Pilaatuse*), PJgE *kuulutsed*, Saa *laulatse*, Mär *piiritse* (*piirituse*), JuuK *moonolse*, SJnP *kuulutse*, Hls(K) *rabatse* ~ *rabaduse*, Help 'õhtse (*õhtuse*) (7).

*tas* > *ts* dial. in imperf. E. g. Hi(A) *kirjutsitõ* (*kirjutasite*), PJgE *lõpetsime*, Kõp *jahval'sime*, *istut'sin*.

Sporadic cases: Tõs(V) 'ütsi, 'ütsime (*ütlesime*) (: 'ütlemä), Lih *ma 'mõtsi* (*mõtlesin*), MMgR 'õm'ja (*õmbleja*), RidT *luteriusul-  
sel* (*-usulisel*); Ris *rehalne* (*rehealune*), KeiK *rêhalse* (*rehealuse*).

### 1.5.2.1.1.3. In the First Syllable.

In the first syllable syncope has taken place only in sporadic cases: in the word *praegu* < *para-* and its SE variants, e. g. Help *prilla*, SanU *prõlla*; cf. Vig(Ste) *para'gõ*, F *paraikaa*, Râp *parahalla* ~ *parhalla*', EMA 1 23; such compounds as Vig(SteLl) *o'ëabre* 'Ojapere', Ote 'suuguru ~ 'suugru (*sookuru*) are in fact cases of non-initial syllables.

### 1.5.2.1.2. In Closed Syllable.

In a closed syllable the high vowels *i*, *u* and *e* tend to disappear most, and chiefly when adjacent to voiceless consonants, particularly *t*, *D*, *s*, *k*. In the closed syllable there are in dialects particularly frequently voiceless or reduced vowels, parallel to loss or survival of the vowel. The loss and reduction in the closed syllable occur particularly in WE and SE, especially in SEE, partly also in SNE.

#### 1.5.2.1.2.1. *i*.

In the derivational morpheme *-ik* loss and reduction occur mostly before *s*.

*sik* > *sk*. E. g. KseÕ `vas'kade (*vasikate*), HelP *vas'k* : *vasIka*, TrvV `vas'ka, Puh *vas'k*, KamK *vas'k*, SeNu *vasIk*, Plv *vas'Ik* ~ *vas'k*, VasLa `vas'kət ~ *vasiket*; MuhL `pissed (*pisikesed*), KseÕ `pis'ke, Lih `pissed, Aude `piske; MMGR `pois'kene, SanM `poiske, UrvVa `poiskene, SeVõ *moonə'pois'kəşə*; HelJ *lus'k* (: *lusikat*), KseÕ `lus'kas, Kod(KV) *muas'kille* (< *maasik-*), Vas *maasIkas*, LutSJa *maas'kass*, SeSa *maas'k* (*maasik*), Lüg `miske (~ *misike*), `niske ~ `neske (~ `niisike) 'such', Kod(KV) *rus'kad* ~ *rus'ikad*, TrvVä `rus'kaga, Puh `rus'kat; Kod(KV) *tjjskun* (: *tjjsik*), KseÕ `tiiskus; PöiVK *leisk* (*leisik*), Kod(KV) `kaksked (*kaksikud*), SanM `kuus'kun (*kuusikus*). Cf. F dial. *vaska*, *luska*, SMK 173.

*tsik* > *tsk*. E. g. Kod(KV) *rjitsked* (*ritsikad*), SanU *kusi'rautsku*, Puh `kut'ska (*kutsika*), Ote `kutsIk, KamR *kon'tsk* (*kontsik*), SeKu *näits'k*, LutSJa `näät's'k ~ *nääd'z'ik* ~ (*näitsik*).

*tik* (*Dik*) > *tk*. E. g. Kod(KV) *süät'ked* ~ *süäd'iked*, Ote *latIk*, PlvPa *sitIke*, LutSJa *lat'kass* (*latikas*), `mar'l'kas (*mardikas*). Cf. Cr. dial. *lut'kan* (~ *lut'ikka*).

*ik* > *k*. E. g. VllK *vabanıku*., VigS *viis 'kopku* (*kopikat*), KJnP `kopkused (*kopikased*), Kod(KV) (*kan'nik* :) *kan'ka*, (*kual'ik* : *kual'ke* (*kaalika*), Puh `kop'kut, OteN `lap'kuss (*lapikuks*), *var'Ik*, PlvAl *masuurIk*, `undrIk, Röp *kerIk*, *linIk*, *pal'mIk*, Vas *unIk* : *unigu*, SeSa *k'erk* (*kirik*), *unIk* (: *unigu*), SeNu *kepIkene*.

*siD* > *st* in imperf. E. g. JämH `tahtsıd, KhkT *iritpsıd* (*hırvıtasıd*), VllK *elasıt*, KäiL *elast* (*elasıd*), käist (*käısıd*), MarH `tantsıst, TösK *tantsıst*, Aude *sõimas't*, Saa *iiläs't* (*hiilgasıd*),

*kirjutas't*, Mär *vemmeldasd*, in Kõp more consistently, e. g. *aas't* (*ajasid*), *vaadas't*. Cf. F dial. *lukist* (c. l. *lukisit*), IngS *saist* < *saisit*.

*it*, *iD* > *t*, *D* in imperf. in SEE. E. g. PlvPa *pannIt*, VasV *mis sa nii kovva ol't* (*kaua olid*), SeRa *an't* ~ *ann'ID* (~ *an''*) '(thou) gave', SeKo *ollIt*.

*is* > *s* in imperf. E. g. PalK *tahts'* (*tahtis*), AnsM *'jõõskʲs* (~ *'jõõskəs*) 'ran', HlsPo *sõits* (*sõitis*), *nõõms* (*noomis*), KrkAi *jäl's'*, RöpJ *'laskʲs* (~ *'laskis*), SeLit *tah'ts*; cf. F dial. *oits* ~ *oitIs* < *oitis*.

(*sīs* >) *sis* > *s* in unstressed word *siis*. E. g. Mih(Ste) *ega tämass 'kuula* (< *täma siis*), KamK *ss* (*siis*) *nu kaara äki 'l'liiva 'ilmligu suure minu sil'mist* 'then those oats were very big in my eyes', Ote *siss kääneti vits, ss läits nü 'lüngä saevaste vahele* 'then the rod was bent, then (it) went so slantingly between the stakes', UrvM *kusa<sup>k</sup> kotun oleja olt ss'tijät sa es'iki?* (*kui sa kodus olijs oled, siis sa tead isegi*), HarÄh *'tʉuge<sup>ss</sup> (siis) mängiti, õga<sup>ss</sup> no säärtse tandsu<sup>ss</sup> olē nigu nu* 'then those were not such dances as now'.

Other cases of *i* > 0 before *t*, *s*. E. g. in Muh and Khn in the word *mitte*, e. g. Muh *taas tule kua mte* 'he did not come either' (EK 1937 226); VaiI (in unstressed position and in rapid speech) *'este* (*esiti*), *tars* (*tarvis*) (the usual syncope is absent in the dialect); PJgE *'teisti* (*teisiti*), Kõp p. pl. *sihuks't* ~ *sihuksid*, *til'luks't* ~ *til'luksid*, KJnP *'es'ti* (*esiti*), Lai(AT) *'este*, Avi *es'test*, MMgR *'kül'te* (*küliti*), Kod(KV) *'kiptäb* (*kipitab*), *kätssed* ~ *kädissed*, *käs'tse* ~ *käsitse*, *'ristämä* (*ristitama*), *tal'tas* (*talitas*), HlsVK *vahelti* (*vaheliti*), KrkK *'äk'selt* (*äkitselt*), SanU *ristütär* (*ristitütär*) Ote *kar'Istama* ~ *kar'stama*, UrvM *tal'ltust*, RõuH *tän'Itämise*, PlvAl *ma tän'Iti, eh'ltüss, vir'Istämmä*, Plv *tal'Issit-pühhi* (*talviseid pühi*), Röp *'tal'tama* (~ *tallitamma* ~ *talitamma*), *vahtsejä, pees'ltämmä*, Vas *lep'Istikun, av'ltama*, VasL *tunn'Ist* (*tunnistas*), VasO *kah'Itsess*, SeRa *tal'ltama*, SeSa *hul'ts* (*uulits*), *reh'Itses, pal'Istamma, av'Idage*, SeLit *tun'Istamma*, SeTr *pid'sIt'*, SeKü *ink'Itsama, näp'Is'tämä, 'kin't'ämä*, SeLi *kinn'ltuze*, SePa *av'tanu* (*avitanud*), *kar'stamma*, SeVa *'pit'stäs, pid'sIt'* : *pi(t'sidi*, LutSJa *tän't'ämä* (*tänitama*); cf. also F *suostua* < *suosistua*, *tylstyä* < *tylsistyä*.

*i* > *P* in SEE. E. g. VasH *nikannP* 'as long as', VasO *'vöönP*, VasO *eZP* 'oneself' VasH *pannP* (*panid*), Se(M) *Küllatuva an'P*

'(they) gave', *ol'P*, SeKü *saan'P* (*saanid*), SeSa *senPmaan'*, SeVõ *kin'nP*, LutK(V) *'kutsP* '(they) called'.

Cases of  $i > 0$  adjacent to other consonants: in the name of 'Tallinn', e. g. Kod(KV), TMrKõ *'tal'na*, see Saareste EKirj. 1934 124–, 168; SeLi *põlvIllt*, SeVa *kab'ih* (*kapis*). Cf. Cr.-Ol.  $i > 0$ , Mägiste EK 1934 5.

### 1.5.2.1.2.2. *u*.

*nuD > nD* in the participle suffix widely in NE. E. g. PöiLa *tah<sup>t</sup>nd*, Khn *nut<sup>n</sup>*, Vig(Ste) *upund*, Mär *pisnd* (*pistnud*), JInK *oind ~ oidnud*, KoeR *mädand*, Pil *'tõmband*, KJnLe *olnd*, HlsM *pand*. EMA 2 48 'läinud', PR 18. See also Ariste ACUT B 47 : 1 161–3, Toomse, *ta-*, *tä-*, 249–. Cf. Lv. *sõnD* (E *saand*), *pañD*, *kuļs<sup>n</sup>*, IngR *hapant*, F dial. *saant*, SMK 32, Vp. dial. *nägend*. As regards the phonetic explanation of the change see Tunkelo VKÄ 754. PA 59.

$u > 0$  adjacent to *k*, *t*, *D*, *s* spor. chiefly in SE. E. g. KrjT *puhastu<sub>d</sub>*, PJgE *akats* (*hakatus*), Kõp *laalatst* (*laulatust*), KJn (E 45) Valma *laulats*, Hls(J) *rehken'ts*, Kod(KV) *kaskad ~ kasukad*, TrvV *'kasku*, Puh *'kaska*, San(P) *'kaskal*, UrvVa *'kaska-keşę*, Rõu *kask*, VasLa *kask : 'kaska*, SeSa *kask* (: *kazuga*); Vail *'kirtas* (rapid speech) (*kirjutas*), Kõp *raamats* (*raamatus*), Kod(KV) *kustas ~ kussutas* (*kustutas*), *vantite ~ vannutite* (*vannutati*), *natkene ~ natukene*, *vallavad ~ valutavad*, KrkA *suik's* (*suikus*), Ote *valUtama ~ 'vallama*, PlvAl *kasUtamma*, *vastUtama*, SeKo *usUss* (*usub*), Ote *kotUss*, *kopUtama*, *kohUt*, Röp *'vastUs*, SeSa *kotUs ~ kots* 'place', SeSe *koptass* (*koputab*), SeVõ *'kuultusę* (*kuulutuse*), *lõõtsUtass*, SePa *koh'ss ~ kohUss*, SeH *sõrms* (*sõrmus*), SeKü *'vantama*, *halUtass* 'aches', *kirotętUss* 'kirjutatuks', *rinUss*, LutK(V) *'koptass ~ koputass*.

$u > U$  adjacent to other voiceless consonants: SeKü *laulUh*, *toonU'*, SeTr *lipU'*.

### 1.5.2.1.2.3. *e*.

*seD > st* in the n. pl. ending. E. g. Jäm *inimest* (*inimesed*), Khk Kalmu *peenışed* (*peenikesed*), ReiP *pa'pi-slesd* (*baptistid*), EmmT *'iidlEst*, KäiL *kosilEst*, Phl(A) *veist* (*veised*); see also ACUT B 47 : 1 150; MarH *neokst* 'pl. such', TõsKa *pulmalist*,

Aud *sulast* ~ *sulased*, in AudE consistently n. pl. *-st*, e. g. *virmaList*, PärP *obust* (*hobused*), Saa *soolantst* (*soolased*), *teist*, Vig(SteLl) *sugulasd*, Mär *venelasd*, Ris *obosəd*, *muholast*, KeiKrj *triibulesət*, RapK *kahe\_vakast kot'id*, JuuK *kiholasd*, SJnP *test* ~ *teesed* (*teised*), *rebast*, *inimesEt*, KJnL *'tjilest* (*teelised*), *'saarlast*, Kod(KV) *Halliku inimest*; cf. Lv. *ku̇ldist* (E *kuldsed*), *i'bbist* (E *hobused*), F dial. *toest* ~ *toesEt*, SMK 174 (see also Rapola Suomi IV: 17 201), IngS *naist* (E *naised*).

*e* > 0 before the 2nd p. ending *-D* chiefly after *l*. E. g. Saa(L) *old* '*oled*', HelK *tulət*, SanO *olt*, UrvVa *olt*, *tult* (*tuled*), VasS *midäs sä nii pahanu olt*, SeH *olt*, Lut(V) *o!t*; UrvVa *last* (*lased*), *läht* (*lähed*).

*es* > *s* in in. and el. E. g. JaaHa *teiss ma:'i'lm̄ps* (*teises maailmas*), Aud *metst* ~ *'metsest* (~ *metsast*), Var, NisK, Risk *ots* < *'otse* (*otsas*), KseÕ *mets* (*metsas*), Kul *'rindəs*, *'kaeləs*, Kõp *otst* ~ *'otsest*. Cf. p. 26.

Other cases of *e* > 0 adjacent to *t*, *s*: JämH *'umptigi* (*ometigi*), Khn *'õptus* ~ *õpetus*, Mih(Ste) *noort* (*noor-eit*), Aud *siukst* ~ *sihukest*, Hää(S) *võ anu kaa juba mere äärist kodu tulnu* (EK 1931 15), Saa p. *in'imst*, *koorikstki*, *tuigerts* ~ *tuigerdes* (*tuigerdades*), *tuuluts* (*tuulutades*), *kaheksti* (*kahekesi*), Avi *'õptust* (*õpetust*), MMgR, KodAs *'õptaja*, Kod(KV) *pu̇uspa* (*puusepa*), *ets* ~ *edess* < *edest* (*eest*), HlsPo *murets* (*muretses*), *iks* < *ikes* '*wept*', Hls(U) *'ontigi* (*ometigi*), KrkK *ottigi*, RöpJ *'ütsökümmend*, SeVõ *päitsEtega*'.

*ek* > *k*, *e'* > *'* in SEE. E. g. VasH *'jälkina*' '*again*', RöpV *jäll'*, LutKi *jäx'*.

#### 1.5.2.1.2.4. a.

*tas* (*Das*) > *ts* in the passive form in several places in NE and WSE, particularly in SWE, e. g. MusI *'riidletse* (*riieldakse*), *såågidåkse* : *saedåkse*, MuhL *akatse* (*hakatakse*), *'võetse*, Khn *tõmmatse*, Mih Nõm *'aetse*, Tõs(V) *palutse*, Aud *kisutse* ~ *kisutasse*, Saa *'lauldse*, *'tehtse* (*tehakse*), *'müüDse*, PJgE *puhastatse*, HagA *tahetse*, Kõp *kaalutse*, VilV *tõmmatse*, Avi *'saetse*, KrkK *tapets* (*tapetakse*), AviP *'võetse*, TrmT *'veetse* (*veetakse*), Kod(KV) *avitatse*, Alatskivi *lastsse*, PstK *istutse*, KrkK *üteltse*. PA 11.

Other cases of *a* > 0 adjacent to *t*, *D*, *s*: Hi(A) *kallté* '*viina* (*kallati*), MuhLõe *'niitm̄ps*, Khn(EK) *'tõusəd* (*tõusevad*) (123),

RisVi *mitu aast* (*aastat*), Kul *'nurkvs*, Kõp transl. *puhts* (~ *'puhtasse*), SanN *rõivste* (: *rõõvastege*), HelK *takst* (< *tagast*), SanN *'põrste* (*põrsaste*), KrlK, SeSa, Lut *põrss* (*põrsas*); KJnLa *nas'teras* : *nas'terastel* (*naisterahvas*), KrlÄ *naisteras*, RõuH *naisteraass*; SanM *tii miss taht* (*tee mis tahad*), UrvVa *vai taht ma\_lää kutsu imä siijä'* (*või tahad ma lähen kutsun ema siia*); Lüg *ants* ~ *'andas* (*andis*), *tõmps* (*tõmbas*), *künts* (*kündis*), HlsPo *ehits* (*ehitas*), *kasvats* (*kasvatas*).

### 1.5.2.1.2.5. ä, ü, o.

*ä* > ' in the particle *ärä* in SEE. E. g. UrvM *ma<sup>m</sup>\_mõs'i pää är'*, RõuH *'päs'si är'* (*pääses ära*), Kan *'kän'ja lännü' är'* (*kõndija läinud ära*), PlvA *siss kedrāti är'* (~ *siss praad'eva' ärä'*), RāpS(R) *lagosi är'* 'fell to pieces' (~ *võrol oləvat ärä' rohitedu*).

*ü* > 0 dial. occurs chiefly in the unstressed word *nüüd*. E. g. Mih(Ste) *olend õhõ\_gorra vaka koa* (*ole nüüd ühekorra vakka ka*), PJg-Tor *mis\_sa nd puked*, Sim *mis\_sand* (*mis sa nüüd*) 'jändad', *ää\_nd 'ulla* (*ära nüüd hulla*); other cases: SeSa *nüs'k* (: *nüssügü*) 'milk-pail', SeM *veer't' ~ veer'Üt'* (*veeretas*) (4).

*ü* > *Ü*: OteN *jämêdÜss*, SeKü *häl'Üt'ämä* 'to swing', *sälÜs'sit*, *län'Ü'* (*läinud*), *ten'Ü'* (*teinud*), SeVo *küsÜs* (*küsib*); in SeSa *Ü* occurs quite often before voiceless consonants, e. g. *sünnÜss* (*sünnis*).

*o* > O before voiceless consonants occurs in SeSa, e. g. *kohOss* (*kohus*), *kohOt*.

### 1.5.2.1.3. On Syncope in Cognate Languages.

In at least the majority of all cases the intermediate stage leading to syncope has been a reduced or voiceless vowel. This fact is proved especially by those examples in which, in the same dialect, the same form occurs both with a reduced or voiceless vowel and without a vowel. This phenomenon is evident also in Livonian (cf. e. g. Posti LL 86 as regards *a* > *ə*, 0). Syncope also occurs in most other BF languages. In the Finnish south-western dialects syncope has taken place in the second open syllable before *l*, *m*, *n*, *r*, *v* when the first syllable was



long, e. g. *suamlaine*, *päälmäine* (Ojansuu LMÄV 115–), outside the south-western dialects we find in Finnish mainly the loss of *i*, *u*, *ü*, particularly when adjacent to voiceless consonants, especially *s* (Penttilä AUA B 3 : 2 62, Rapola Vir. 1927 30–). In Cr.-Ol. dial., too, we find *i*, *u*, *ü* > 0, especially before *t's'*, *š*, e. g. Ol. *peält's'* < *peälit't's'i* (KAÄ 127–); thus also in Cr. *u*, *ü* > 0 in the participle ending *-nut* ~ *-nüt*, e. g. *löüdät* << *löüdanüt*. Extensive syncope occurs in Vepsian and Livonian. In Vepsian the vowel of the second open syllable has disappeared when the first syllable was long, e. g. SVp. (*sur'im* :) *sur'mad*. In SVp. the vowel of the fourth syllable has disappeared before *t* under certain conditions and in all positions before *h*, furthermore in certain circumstances *i*, *e*, *u* > 0, e. g. *kudomn'e* 'weaving', *andand* 'given' (ACUT B 3 : 4 § 345–). See detailed report on syncope in Vp. dialects in Tunkelo, VKÄ 718–. In the Lydian Kuujärvi dialect conditions are in general the same as in Vepsian, while syncope is rare in other dialects (see further Turunen MSFOu 99 129–). In Livonian syncope has taken place also after short first syllables, e. g. *k<sup>u</sup>o'nnā* << *\*kotona*, and widely also in closed syllables, e. g. *ku<sup>d</sup>ttāB* < *\*kuDotta-* (Posti LL 76–).

In Livonian, too, syncope in closed syllables under certain conditions has just taken place in connection with *s* and *t*. Posti, it is true, assumes that besides the proximity of *s*, the sonorous consonants *l*, *m*, *n*, *r* are one of the factors conditioning syncope (LL 83), without explaining the physiological background of this condition (see ib. 85); but the examples given (p. 84) contain all after the lost vowel *a* *-D* < *-t*, and before it the dentals *l*, *n*, *r*, as there are only nom. pl. and *nud*-participles; in the latter case according to Posti himself the vowel has disappeared on account of other circumstances, too (p. 84). In examples we miss the neighbourhood of *m*. Thus it seems clear that here, too, *D* has been the main condition of the loss. The examples given by Rapola as to Finnish dialects, as Posti points out, do not show the proximity of *m* or any other sonorous consonant as a special condition, on the other hand they show that besides in the proximity of voiceless consonants there is syncope also when a vowel stands between two *n*'s, two *l*'s or between two labial consonants. Here the important thing is that the vowel occurs between two similar consonants, which has caused the complete

assimilation of the vowel by the surrounding consonants, in order to avoid movement of the vocal organs in between (cf. also Tunkelo VKÄ 754). In addition we find there cases of syncope in connection with voiced dental consonants, but in these cases the dentality may be essential.

In IngR syncope occurs sporadically in the second open syllable, when the first syllable is long, chiefly when the vowel is adjacent to *s*. Cf. also in the Greek Catholic dialect of IngR, e. g. *arvotuksæt*, *katsəli* ~ *katsali*. In Votian there is no syncope, except sporadic cases. In South-Lapp syncope, according to I. Halász, especially occurs before *s*, *n*, *t*, e. g. *ailëks* = lpL *ailekes*, *kuékt<sup>l</sup>ln* ~ *kuéktln* = lpL *kuektelen*, *kihč<sup>l</sup>temie* ~ *kihč<sup>e</sup>temie* (NyK 22 231).

As regards the other FU languages, syncope is to be found e. g. in Hungarian, e. g. (*szologa* > *szolga*, in Mordvin (Paasonen ML 103), in Ostyak (Patkanow-Fuchs LFSO 14, 36–, Steinitz CLSE 31 15–, 185, GOV). In Ostyak, too, syncope has taken place through reduced vowels (see, e. g. Steinitz CLSE 31 7–, 184). Reduced vowels also occur in Md. and in Cher. (see, e. g. E. Itkonen FUF 29 246–). The loss of unstressed vowels is a phenomenon well-known also in other languages. In English we can clearly follow the loss of the vowel by the intermediate stage of the reduced vowel, but the same phenomenon is to be met with in French and German as well. Voiceless vowels occur e. g. in French, Italian, Portuguese and Japanese (Jespersen LPh 90– and L 246). According to Jespersen *i*, *u*, *ü* are mostly voiceless in French, which can be explained by the fact that it is easier to articulate a vowel voicelessly when the air passes through a narrower opening, i. e. when the mouth is more closed (LPh 90). In Japanese, too, according to Jespersen, we often find a voiceless *i* and *u* and that just between voiceless consonants; the loss of these vowels in these positions is quite frequent (L 246 note). For a phonetic description of voiceless vowels see Ariste ACUT B 47 : 1 151, Jespersen LPh 89. That voiceless vowels occur just adjacent to voiceless consonants is easy to understand, since the vocal chords are opened in articulating voiceless consonants (cf. Ariste *op. cit.* 151, Jespersen LPh 90). It is also easy to understand that vowels have a tendency

to disappear particularly before voiceless consonant, since vowels there are on the whole shorter than before a voiced consonant (cf. p. 94).

### 1.5.2.2. APHESIS

The word-initial vowel disappears chiefly in case the pronoun in an unstressed position is agglutinated with the following verb *olema*. This is chiefly to be found in SEE. E. g. Hel *onu<sub>J</sub>' krõpe meş* (*onu oli krõbe mees*), SanM *aga male (ma olen) esi kahh korjanu*, UrvVa *ku mull vai surM kamm (ka on) suu veeren, toll (too oli) ka sääł, tamm (< ta omm) timä säng* 'this is his bed', *maļ (< ma ole) üt'sindä inemine* 'I am a lonely man', *mal'li (< ma ol'li) es'i<sup>r</sup> rasęęł' ka vjil* 'besides I myself was pregnant', *manna (< ma anna) sullę 'tütre 'liiku*, KanK *maļ (< ma ole) kük' eloaię siin eläniü* (cf. *ma ol'li tann män'i aię 'haige*), HarÄh *kui<sup>s</sup> ta no<sub>mm</sub> (< omm) lännü*, HarMõn *siss maļess (< ma oļess)*, RõuH *'mal'li (< ma 'ül'li) 'I said*, *numma<sup>k</sup> kurad'i inemise'* (< *nu omma* 'they are'), PlvK *na<sub>mma</sub>' häste kinni katęttu*, VasVä *ma<sub>ļe</sub> (< ole) ess pinoh ollu'* 'I have not been in the summer kitchen', Lei(V) *maļess (ma oleks), saļess (sa oleks)*; substantive + imperf. of the verb *olema*: RävV *'pin'ke<sub>J</sub> tarę pal'lo (pinke oli tares palju)*. Other cases of agglutination: Phl(A) *muu 'meęle tule<sub>g</sub>gäänd < kää end* (ACUT B 47:1 152; see also other cases of agglutination ib.), UrvM *ega mull<sub>ol'l</sub> vel'i kur'i kaks (< ka iks)*. Cf. also on the loss of whole syllables, p. 89.

### 1.5.2.3. APOCOPE

#### 1.5.2.3.1. Early Apocope.

The vowel in word-final position has disappeared in disyllabic words when the first syllable is long, and in polysyllabic words. E. g. *mets*, cf. VN<sub>GM</sub> *Toila metsa ~ mets*, *F metsä*, dial. *leht*, *laps*; *nädal*, cf. VaiM (among older persons) *nätala*; *vaest*, cf. folkl. *vaesta*, ingS *naist*; *hommikul*; cf. folkl. *hommikulla*; *kargas*, cf. Lv. *kārgiZ*, F *karkasi*, dial. *makas*, SMK 176; *õpetaks < -ksi*, cf. Lv. *õpätaks*; *jalaks*, cf. Lv. *jālgaks*, F *jalaksi*, Cr.-Ol. *pahaks*,

SVP. *meheks*; Puh *lahi* < *lahja*, SeKü *kaih'h* < *kaiho* (*kahju*); cf. F *kaiho*, San *elläi* < *eläjä* (~ *eläjes*) (*elajas*), *mini*<sup>t</sup> < *minija* (*minia*); Khn(AS) *teht* (< *-tu*) (*tehtud*), HlsAb *müürit*, SanT *parandēt*. Apocope most probably took place in the beginning of the 13th century and ended in the 15th century at the latest. Cf. LH *pappi*, *maleva*, LCD *Vsikylæ*, *Huxnum* 'Uksnurme', Lelow *leibp* (*leib*), *kurjast* (*kurjast*) (VKVM 2). In Livonian apocope probably began at the same time (Posti LL 98). Here and there in the Finnish-like dialects of Alutaguse there is no apocope. There is, e. g., no apocope in VNgR; in the villages of Kutsala and Iila one finds mixed occurrence; in VNgK *nimella* ~ *nimel*, *nimelda* ~ *nimeld*, *nimesta* ~ *nimest*; one dialect informant said that he remembered forms (which he did not use himself any more) such as *sodadesta*, *sojasta*, *sojalla*, *sojalda*, *sojassa*. In VaiM apocope has mostly taken place; only in the speech of old people do we find forms without apocope, e. g. *kõhna*, *põtra*, *putru*, *nätala* ~ *õnn*, *nõel*, *küün*, *akken*, *aur*; VaiA *kaasi* (*kaas*): p. *kaat*. In VaiK the beginning of apocope can be observed in the occurrence of reduced vowels: *pukkī*, *pappī*; EMA 1 10 'ader', 11 'aed', 2 31 'oder', 36 'küüs'.

In some dialects the character of the essive-locative case is also subject to apocope. E. g. Kuu(S) *nelipühin*, *vanan* (*vanana*), KJnL 'ommen, PltP 'ommen ~ 'omme, KsiJ *ommenn* (*homme*), Kod(KV) *sulasen* (see further KV 151–), KrkK 'soentin (*soendina*), TrvS, Puh *vanan*, SanO *takan*, HarKa *mõtsavahin* (*metsavahina*), RõuT *latsen* (*lapsena*), Lei 'nuoren *p<sup>u</sup>oižin* (*noorena poisina*); EMA 2 51. See also p. 62. Cf. SVP. *tänävon* (E *tänavu*), IngR *koton*.

### 1.5.2.3.2. Later Apocope.

In dialects we find apocope and reduced or voiceless vowels much more frequently than in the common language; even vowels which have in more recent times got to the end of a word have disappeared.

#### 1.5.2.3.2.1. -i and -u.

Sporadic cases of *-i* > 0: KrkA *ega sinna* 'kennigi midäk paranta ei saa (*ega sinna keegi midagi parata ei saa*), *ometig om*,

Hls(J) *aga midäg mul viga ei jole*, PstHol *viimät' tullu* (*viimati tulnud*), SanU *nännükI* (*näinudki*), KrlÄh (156), UrvVa *es's'* 'oneself', SePa term. *köllatsen majan?*, term. 'seenI maan?' 'up to now', SeM *sen'I kon'I* 'until', SeSa *läk'küteh minemä ~ läki sis'üteh minemä* 'let's then go together', SeM *ubinag'I* 'apples, too', SeTr *võd'I* '(they) took', *tap'I* '(they) killed', SeKo *latigek 'män'gvä* (*latikadki mängivad*), SeKos *pin'I* 'haukva' 'the dogs are barking', SeTr *la(ds)I* 'children'; SeRa *kass üt'sindä ol'l' vai ol'I inäbä* (*kas üksinda oli või oli enam*), Lei(O) *ah'* (*ahi*), *tüh'* (*tühi*). Cf. F dial. *käs* (c. l. *käsi*), *ol* (*oli*), SMK 175.

*-u, -ü > 0* occurs chiefly in the *nud*-participle ending in WSE and here and there in SEE, where *-nuD > -nu > -n* mainly occurs in the third syllable when the first syllable is extra long, and in the fourth syllable. E. g. HlsA 'istun, 'oiden (but *saanu*), *mõteln* (~ Hls(M) *võedelnu*), *nuusuten* (*nuusutanud*), PstHe 'uqtan (*oodanud*), *võttan* (but *toonu*, *lügenu*, *kirjutanu*), KrkA 'massæn (*maksnud*) (8), SePa 'murdun, SeLit 'sündün (*sündinud*).

Sporadic cases of *-u > 0*: SaRa *saa' amm 'tiidse?* (*sa ammu teadsid*), HlsAb *sii kēel mädäneg kigen kõrige sull maha* (*see keel mädanegu kõige kõriga sul maha*).

### 1.5.2.3.2.2. -e.

Late *-e > 0, ə* occurs here and there in WE and SE in several morphemes where the consonant at the end of the word has disappeared before apocope took place.

1. In the present passive. E. g. KäiL 'pēetags 'enne (*peetakse*), Khn(K) *lastas* (but *pietasse* [*peetakse*]), MarH *pannassə*, Lih *täna 'tuuas uus 'vanker* (usually *tehasse*), Lih Helveti *minnass*, Aud *kaheldats ~ kahelse*, Hää(V) 'seotass ~ seotasse, PJg-Tor *kiigutaks ~ kiigutasse*, Ris *tõmmataks*, RapN *ollaks*, HlsM *üteltsə, akatsə*, PstH *müvväss* (*müüakse*), KrkK *jäets*, TrvK *tahets*, HELL *nätäs* (*nähakse*), TMrKō 'vōetass ~ vōetasse (older), KrlK, Kan, Plv *tuldass*, Rōu *pandas*, VasLa *saijass* (*saadakse*), SeSa *kōtadass* 'pass. tickle', Lei(V) *sōkkutas*, EMA 2 47 'tuuakse'.

2. In words ending in *-ne*. E. g. JämH *kolme nell'a 'aastana oli*, 'tarblinə, AnsM 'leikminə (*lõikamine*), Phl(A) *neljp-äästpn*, HlsM *sügüsen aig, vil'lä* (*vilja*) *koristəmin olli*, 'ruqtlanə (*rootslane*), *inimen*, HlsVK *punan*, HelK *obən* (*hobune*), *verin*, *rämpsunə*,

KrlÄh *sinnin*, VasLa, SeRa *hopçn* (*hobune*), KrkK *saadu tegemin olli*, Krk(W) *męç olli kige edimen(e) sääl* (*ma olin kõige esimene sääl*), üle *'aasten siga*, Lei(M) *š'in'n'in*, Lei *'raudan*. Cf. F dial. *punain*, SMK 125, Lv. *pu'nni* (E *puņane*), Vt. *tejn* (E *teine*), eglin (E *eilne*), IngR *kehtainE*, IngS *nain* (~ *naine*), *punnain*.

3. In the 1st p. pl. ending. E. g. Hää(S) *'võtsim viha 'lehti* (EK 1931 15), HlsKu *ja lätsim üte talust 'mүүдä* (*läksime ühe talust mööda*), HlsM *mee lätsim ärä kodu, mee ollim ütes kottäl külän* (*me olime ühes kohas külas*), HlsA *pannim puid maha*, KrkK *kauplim* (*but näime*), Krk(W) *tulemä ~ tulem*, HelP *lätsim sinnade*, RöpP *'istsimmә*, LutSJ *kanoo' hїitäm magama* (*kas nüüd heidame*), Lut(V) *ољғем, annaam*, Turku MS *mõtt-lїim* (VKVM 24), *woїrim*.

4. In the *ma*-infinitive ending in WSE, where *-ma* > *-me* (see p. 175). E. g. HlsAb *'vaatem\_min'nä*, HlsM *piap\_kuum olemә*, PstHol *puha pidi käsitsi ärä tettämә*, KrkK *'ütlem* (16), *pitsitem*, HelK *sigä jäänu 'kullәмә* (*kuulama*), *'pandәn mineme, kupatәмә, 'ostmә, surәмә akassive*, TrvS *ta esi nakas pitsitem ja mulime*.

5. In the suffix *-ke* in WSE. E. g. HlsM *ku ma poisik olli, õhuk* (*õhuke*), HlsA *kotik*, KrkAi *kassik, kukek*, KrkK *pik'k'peenik pää olli*.

6. In the allative ending chiefly here and there in WE and WSE. E. g. AnsM *mıs jummal meitel annab*, KrjT *keedeti meitel see kord*, JaaHa *sis 'pandj iga(ü)hel viis 'võrku*, EmmK *'antu,t meestel mõõgat käde*. KäiL *et temç kallal sedaviisi 'jööstags* (for Hi illustrations see Ariste ACUT B 47 : 1 102, 151), MarH *'pealә, kallalә, jәrelә, võtңd 'eesel kça әrjә* (*võtnud enesele ka härja*), Lih *'veistel talvess, teitel, meitel*, Mih(Ste) *enge aur lähәb munadel peal*, HääAl *'rääkisi mehel 'asja*, SaaL *un'i 'tul'li pääl*, RisA *sis läksid se lauba umiku* (*laupäeva hommiku*) *tööl*; in Hls in polysyllabic words, e. g. *an'ds koerale* ~ *-l 'süvvä* (*süüa*): in HlsM and HlsA almost always *-l*, e. g. HlsM *siss ütөл' ta kuql' meistrel, siss omm ta 'põrgu valitsejall ütөлnu*; KrkK consistently *-l*, e. g. *ma pani terä kirstul* (37); PstHol *siss korjati noorikul raha*, HelK *kõnәli ütөл vana\_jinimesel*, *'tartumaalә*, TrvV *kellel sina õppat oma 'tarkuse*, San *anna 'loõmөл süvvä*. *-l* pro *-le* in the allative is very common also in the common language, in careless speech, in unstressed position, and in rapid speech; cf. also PuhV *poissmeestell 'anti sal'l*, *peigmehele 'anti 'kinda*, Turku

MS *Skumban jina issand minoff olet nautnut* (VKVM 24 : 23). Cf. Lv. *mā'ggəl* (E *māele*).

7. In the illative ending here and there in WE and WSE. E. g. MusVö *mette kuskile sadamass pääse 'sisse*, Phl(A) *jähi elus (jäi elusse)*, Hi(A) *läks maçéas ~ maçéass (majasse)*; Hää(S) *Alevi va roti raebe puha mu liha keress açeanu*, HlsM *miu kulsuti ka 'matjusəs* 'I was also invited to the funeral', HlsVKV *jäi tiisikusēs*, KrkA *mēa lätsi pühäbe ommuku kirikuss (ma läksin pühapäeva hommiku kirikusse)*; in Kōp in polysyllabic words in unstressed position, e. g. *aganikus(s)*, 'keldress, ed'ises.

8. In the 3rd p. pl. in WSE, where *-vat > -va > -ve*: HlsMe *sääl müüsiv paa<sup>t</sup>l'u odevemp* 'there (they) sold much cheaper', KrkA *inimese tulev ja 'viave*, Trv *na kutsuv tedä 'lätlasēs*, Hel(M) *Karjatnurme võtiv*, 'took', 'istavə 'sat' (~ *annive* 'gave'), HelP 'olliv kik'k' 'were all'.

9. In the comitative ending spor. in WSE, where *-Ga > -Ge*. E. g. HlsVKV *pikä käüsteg ame (pika käistega hame)*, HlsAb *rõõmu pidug ja käräge vajus maja ärä*, KrkK *oma 'kuürmek (koormaga) kige (kõige) taga, tullu 'lõngek 'vällä (tulnud lõngadega välja)*, miss *selle lūčk,saa (looga)*, PstHol 'ratsa obesteg ollu jah käüt (hobustega olnud käidud), TrvS *narmastek 'kindit*, TrvVä *väeg pael'u (väga palju)*, HelL *obesek\_kodu es saa tulla*. Cf. LvS *rāk (rahaga)*, *jumalak* (E *jumalaga*) (Sjögren LGr 107).

10. In the 2nd p. imperative in disyllabic stems chiefly after *n*, *l* in rapid speech in SEE. E. g. SeKü *tul siija'*, *min minemä, joos ruttu (jookse)*, *pan maahha, min ar'*, *las vallalē*, SeVo *sa' tulē löist 'kõrda*, SeRa *tii kannahteg viil (tee kannatage veel)*, KraO *min sa kohe tahat*; c. l. *las ta tuleb, las ma vaatan*. Cf. Rum. *las sä väd* (E. Kieckers ACUT B 27 : 4 7; see also ib. illustrations from other languages). Cf. Lv. *tu'l* (E *tule*); in F dialect of Tytärsaari in the 2nd p. imperat. consistently *e > 0* after *n*, *l*, *r*, *s*, e. g. *men, tul, pur, pes, valhehtel*. The loss here has been favoured by the particular stress of the imperative; cf. military orders (cf. Penttilä AUA B 3 : 2 56).

Sporadic cases: HelPo *pühad\_aig (pühade aeg)*, *jalg\_all*, Kse *jalg all*; in the metathetic passive imperfect (cf. p. 186): Hls Pera *kuivatit (kuivatati)*, *varastit*, *parandit* (< *-tite* < *-teti*); Turku MS *teje piddat elavag jaama* (VKVM 27 25).

### 1.5.2.3.2.3. -a, -ä.

-a > 0 occurs only sporadically. E. g. Phl(A) *kahe hobuseg* (*hobusega*), *suits läin uksest väll* (~ 'vällä) (*suits läind uksest välja*) (~ 'väljə) (see other examples ACUT B 47 : 1 149), MarH *teised oo jämedarja ja teised peniksarja takud* (*teised on jämeda harja ja teised peenikese harja takud*), Lüg(Ste) *tuli seini müöd* (*mööda*) *kopistamma*, TrvV *ilmasjande* (*ilma asjata*), SeVa *an mullę süvvä* (*anna mulle süüa*).

-a, -ä > 0 in the word *ära* chiefly in SE. E. g. KrkK *siss olli ta esi ärr kadunu* (*siis oli ta ise ära kadunud*), cf. *mine paku tall vjil kõrd ärä* (*talle veel kord ära*), HlsM, SanLä, UrvVa *ärr*, Krl(V) *ärr nõvva* (*ära nõua*), PlvPa, RävV *är*, VasLa *ärr*, Se(M) *Küllatuva ar olku* (*olgu*).

### 1.5.2.3.2.4. Compounds.

The final vowel of the first component in compounds also tends to disappear. E. g. *veski* < *vesikivi*, Vas 'ves'kivi, Lei 'v<sup>i</sup>es'k'iu ~ 'v<sup>i</sup>es'k'ivi, LutSJa *ves'kivi*; Jäm *at'timal*, EmmVi 'aitümgl, Lih 'aitumal, Trm(T) *attüma*, UrvO 'aituma KraO 'ait'ummal ~ 'ait'ümma < *avita jumal*, cf. Vt. *avit jumal*; Kse *leun\_aeg* (*lõunaaeg*), *minevasta*, MMgR *minevuasta* (< *mineva aasta*), Ris *rehalne*, KeiK *rêhalse*, EMA 2 41 'rehealune'; SeKü 'ris'tämm (*ristiema*), *ristäsä* (*ristiisa*), LuthK(V) *ristezä*; cf. Vt. *rissimä* (E *ristiema*); HlsAb 'permès (*peremees*), SanU 'pernainę (*perenaine*), UrvVa 'pernasele; c. l. *tähelpanu*.

### 1.5.2.3.3. On Apocope in Cognate Languages.

Apocope has, similarly to syncope, mostly taken place through reduced or voiceless vowel, as appears from parallel variants in present dialects and other languages. This is particularly evident in Livonian, cf. e. g.  $\bar{q}B \sim \bar{q}b\bar{q}$ , *tidàrl̥ ~ tidàrl̥q* (see Posti LL 68–). A voiceless vowel as an intermediate stage occurs in F dialects (see Hakulinen Vir. 1925 118–). It is possible that in some cases apocope has started before the vowels, as is apparent in some other languages, e. g. in F dialects and in Lv. (cf. Posti LL 72, 74). Apocope before the vowel occurs also in Greek, e. g. *ap' autōn* < *apò autōn* (TPH 360).



As regards the other BF languages we find apocope in Livonian, where it has also taken place after short syllables, e. g. *ma<sup>2</sup>G* < \**mako* (E *magu*), *i<sup>2</sup>G* (E *higi*), and where even a vowel that has later come to stand at the end of the word is subject to apocope, e. g. g. *m<sup>i</sup>e<sup>2</sup>r* (E *mere*), g. pl. *kanàD* (E *kanade*). In Vepsian and SWF (cf. also IngR, Lydian and IngS) apocope has taken place under about the same conditions as in the Estonian common language, e. g. SVp. *tuhk*, p. pl. *maid*, *par'z'ül'*, *kuks* (E *kuuks*). Besides SWF we find apocope all over the Finnish area under certain limited conditions, mostly in unstressed sentence position, in compounds, especially when the second compound begins with a vowel. Apocope occurs very widely in F dialects before a word beginning with a vowel, e. g. FAS *onk mahtanup pankist\_ottaa*. In the Savo and the neighbouring dialects we find loss of *-i*, *-u*, *-ü*. In some morphemes, e. g. in the transl. and the 3rd p. ending, also in the words *yks*, *kaks*, *viis*, *kuus* the loss of *-i* has taken place in most of the F dialects. In addition we find apocope in F dialects also in case morphemes ending in *-a*, *-ä*, e. g. in the ess., part., in., el., ad., all., abl., ab. (on apocope in F dialects see further Penttilä AUA B 3 : 2 44—; see also SMK 104, 119, 175—). In Cr.-Ol. we find apocope sporadically, particularly when the following word begins with a vowel, more widespread and consistent is the loss of *-i* (KAÄ 133—). In Votian apocope is to be found only sporadically, most frequently in compounds; voiceless vowels are also rare in Votian, e. g. *tuppI* (E *tupp*). The *-i* of the 3rd p. ending probably already disappeared in PF, as that loss is also apparent in Votian, e. g. *sāB*, in F and Cr.-Ol., e. g. *šoav* (cf. Kettunen VKÄ 146). As to the other FU languages, apocope is to be found in all except Lapp, and in the second syllable it has also taken place after a short first syllable, e. g. Md. *kal* (E *kala*), Hung. *cser* (: *cserü*) (cf. Hakulinen SKR I 30).

Reduction of the word-final sounds also occurs in Indo-European languages. According to Gauthiot it has taken place in all Indo-European languages in the middle period of the respective language. First it took place in Persian, for Persian was one of the first languages which became a common language and an instrument of civilization (FM 61).

#### 1.5.2.4. ON CONDITIONS OF REDUCTION AND LOSS OF VOWELS

Besides the sporadic cases mentioned above we find reduced vowels to a greater extent in WE, viz. in Sa, Hi and Mar. In Sa they have been recorded particularly in KhkT and VllK, where reduced vowels are found in almost every sentence; but they have been recorded also in Jäm, Mus, Krj, Jaa and Pöi. In Lä they have chiefly been recorded in Mar Halska. The reduced vowels occur mostly in the same position where earlier apocope and syncope have taken place, i. e. in the second syllable when the first syllable is long, and at the end of multisyllabic words, but also in other positions. From a sentence-phonetic point of view reduced vowels at the end of a word occur in all positions, i. e. before vowels and consonants as well as before pauses. E. g. *JämH* 'pinds<sup>h</sup>l<sup>h</sup> tal<sup>d</sup>, *KhkT* kun<sup>d</sup>si<sup>g</sup>p, 'kül<sup>g</sup>ə, *KrjT* 'kusk<sup>h</sup>s, kiidet<sup>h</sup>, *JaaHa* segam<sup>h</sup>l<sup>h</sup>, 'mütmə (mitme), *JaaT* inimənə, *VllK* se 'peksəp tee tale omet<sup>h</sup> midad 'met<sup>h</sup>ə (see peks ep [ei] tee talle ometi midagi [mitte]), *elamšəgp, *vaban<sup>h</sup>ku*, *Pöi* ne 'riidət<sup>h</sup>kuivat<sup>h</sup>t<sup>h</sup> ää (see also Ariste ACUT B 47 : 1 28), *MarHa* 'laht<sup>h</sup>, *kipitamə*, *Phl(A)* 'katk<sup>h</sup>, *inim<sup>h</sup>nə*. According to Ariste there are in Hi "dialect speakers, who under conditions which we already know, further on in the word, i. e. outside the centre, have no difference in quality between sounds. *a*, *u* as well as *e*, *i* have been reduced to an indifferent sound ə" (ACUT B 47 : 1 30). The vowel *a* can be found in its reduced state particularly in Hi (see further Ariste *op. cit.* 24–), e. g. *Käi(A)* 'all<sup>h</sup>, *Emm(A)* irid<sup>h</sup>d (irvitad), *Phl(A)* 'təomə; cf. *Lv.* lūd<sup>h</sup>. Besides the places in NWE mentioned above *-e > -ə* is recorded also from WSE, e. g. *HlsM* rumalə (rumalad), *ubinə* (ubinad), *PstHo* 'uul'madə (hoolimata), *salatə* (salata), *kartulə* (kartulid), 'laijempəd (laiemat), *terävəss*, *KrkA* panə (panen), *HelK* katəsə '8', *obesə* (hobuste), *kaasə* (kaaned). Besides from WE reduced vowels are extensively recorded especially from Vai. In VaiKu all vowels may be reduced, but particularly *i*, *e* after a long first syllable and after non-initial syllables adjacent to a voiceless consonant, e. g. 'külkə, 'tehk<sup>h</sup>, *varastelt<sup>h</sup>*; besides the reduced vowels voiceless ones occur as well, e. g. 'lahtI, 'tarkA (see further Toomse ALSE 1937 95–). Cf. *Vt.* revitt<sup>h</sup> (ib. 97). As regards Lei, it is said: "In the longer*

words *a*, *e*, *ε* in the non-initial syllables tend towards indistinctness and at times we might record them as *ɒ*, *ə*, *ɜ*, but this tendency is not particularly strong." (217).

The basic phonetic condition of syncope as well as apocope has, of course, been the unstressed state of the non-initial syllables. That the vowel has more easily disappeared after a long syllable is a result of the phenomenon that the syllable following a long one has a weaker stress than the syllable after a short syllable. Syncope and apocope are phonetic changes in which the tendency for ease, which plays so important a part in the development of languages, appears most extensively. It is quite natural that this tendency is most evident in the non-initial syllables, especially in languages where the dynamic stress is on the first syllable. W. Wundt says, that when the beginning of a word is uttered, the psychic process of forming the word, as regards short words, has been finished on the part of the speaking person, there remains only the physical process of articulation, which follows mechanically (S 504). It is a very common phenomenon that, when speaking, we neglect the last syllables of the words. Thus the disappearance of a vowel is first of all an easing of articulation (cf. Jespersen L 247). This point must also be taken into account as regards the question: which vowels have a tendency to disappear more easily or be reduced, those which are more close and higher or those which are more open and lower?

Ariste maintains: "vowels with a low articulation are subject more easily to reduction and assimilation than those with a high articulation. The background of this phenomenon is supplied by the law valid in the Hiiu dialects (and also elsewhere in the area of the Estonian language), that high vowels are articulated much more intensively than low ones. More intensive articulation presupposes, among other things, even the fact that every individual sound is formed more precisely at its place of articulation" (ACUT B 47 : 1 50). With regard to this statement Mägiste says that we ought to regard it "in the light of the almost innumerable contradictions which in the Finnish area of BF point to the extraordinary tendency towards loss of just the high vowels (particularly *i*, but also *ü*, *u*), already since PF times (N.B. *kolmas* < \**kolmanti*, *suurus* < \**sūruðe*, and other types) and also

to the particular immunity of the low sonorous *a* in Livonian as against reduction" (EK 1940 58).

It is probable that in Livonian, in the non-initial syllables the vowels have become closer and higher before syncope and apocope, for we find *o, e, e > u* before loss of vowel, and after that *u* and *i* in the non-initial syllables have disappeared, whereas *a* has shown most resistance to loss, though even *a* has partly been reduced to *ə* and has further on even partly disappeared (Posti LL 63, 76). The same phenomenon is to be observed in other BF languages. In Finnish dialects, too, we particularly find loss of *i, u, ü*. In Olonetsian we find the change *-a > -u, -ä > -ü* (KAÄ 131-). In Lydian *-a, -ä > -e* occurs (Penttilä AUA B 3 : 2 60). As to Votian, see p. 176. Remarkable is also the change *o, ö, e > ô, ô, ê* in the non-initial syllables in the Greek Catholic dialect of IngR, especially in the second syllable when the first syllable is long, e. g. *kannôt, tüttö, äärës*. In PF, too, we find in the non-initial syllables *-e > -i; -a, -ä > -i*. In Estonian the change *o > u* has occurred in the non-initial syllable, and the reduction or loss of the vowel through rising is particularly clearly seen in WSE, where the change *a, ä > e, e > ə > 0* has taken place (on rising of vowels in non-initial syllables see further p. 175-). As regards the Indo-European languages we find e. g. *e, o > i, u* and *i, u > 0* in the northern dialects of Modern Greek (Meillet MCLH 88).

A. Meillet believes that if unstressed syllables incline towards losing their special timbre, it is due to the greater intensity of the stressed vowels; but if the unstressed vowels tend to become closer, e. g. *e, o > i, u*, it is due to the greater quantity of the stressed vowels. *i* and *u* are shorter than *e, o* and cannot become shorter in any other way than by disappearing. In Old Armenian unstressed *i* and *u* have disappeared, whereas *a, e* and *o* have survived (MCLH 88-). J. v. Ginneken believes it to be a distinction of the languages with a cacuminal basis of articulation that *i* and *u* while growing weaker become first *a* and then disappear; in languages with a labial basis the vowels before disappearing become labialized and mixed; in laryngeal languages the weakening vowels become *u* and go so far back as possible before they disappear, while in languages with two bases of articulation the weakening vowels become first voiceless,

then become consonants or disappear (DNS 15-). Jespersen believes that in all languages there is a tendency, in syllables with a weak stress, to move closer to the resting position, the result of which is often *ə* or loss, while less often but still quite frequently we find the tendency to raise the vowels of unstressed syllables to *i*, e. g. in English (L 243, cf. LPh 121; see also L 246-). Thus we find both phenomena in the languages: disappearance of vowel by its becoming closer as well as opener, so that in one case the higher vowels tend to disappear more easily, in the other case the lower ones. Both phenomena can be explained phonetically.

According to A. Sommerfelt the reduction of unstressed syllables can be of two kinds, due to the question whether the stress is of strong or weak intensity. In the former case the unstressed vowels are usually reduced into types of slack, imprecise articulation, the place of articulation situated on a descending line, starting from the highest point of the palate (the so-called mixed vowels). In languages with a weak grade of intensity, on the other hand, the weak vowels become reduced as to quantity and ascend, since vowels are the shorter the higher and closer they are (JPs 25 674). That closer and higher vowels are shorter is a fact that is generally known and has been experimentally proved (see e. g. F. Äimä PhI II 202, J. Laurosela Suomi V : 1 231, B. Malmberg Q 6-). As regards Estonian Ariste has shown it in regard to the Hiiu dialects (ACUT B 49 : 5). In reality we cannot say that in a certain language there is but one of these two kinds of vocalic loss, as both can occur in one and the same language, e. g. in Estonian and English. It cannot be stated at present to what extent these phenomena are connected with the kind of stress. Both phenomena can be explained phonetically by the fact that the vowel can disappear by passing the limit either of closing or of opening. A case of the latter is e. g. the apocope in Marathi, where first of all *a* disappeared, whereas *i* and *u* survived longest, as they are pronounced more intensively and became *a* before disappearing (Grammont TPh 161). A similar phenomenon is recorded by Ariste as regards the Hiiu dialects, as we saw above.

As regards loss of vowels in Estonian we see that the general syncope and apocope in the common language has embraced

all vowels. The later syncope, which we find in dialects, especially in closed syllables, has first of all affected the high vowels *i*, *u*, then the medium-high vowel *e*, and finally *a*. Late apocope gives about the same picture with the difference that loss of *e* is more frequent than in syncope, especially in WSE. In WSE we find before the loss of *e*, the change  $a, \ddot{a} > \epsilon, e$ , thus that the vowel becomes more closed. But further on the disappearance of *e* does not take place by further rising to *i*, but through the reduced intermediate stage *ə*, as present parallel variants show. It is not possible to ascertain to what extent there have in Estonian been intermediate stages in the form of reduced or voiceless vowels; it can only be stated that on the islands, and partly in WE and in NEEC the loss has occurred through a reduced vowel, while in SEE it has taken place through a voiceless vowel, as is shown by the present variants.

### 1.5.2.5. REDUCTION OF DIPHTHONGS

#### 1.5.2.5.1. In Non-Initial Syllable.

##### 1.5.2.5.1.1. Primary Diphthongs.

As regards the reduction of diphthongs we find an assimilative influence, whether, as in most cases, that of one component of the diphthong on the other, or that of the neighbouring consonant. In case of the loss of the second component we often have no possibility of ascertaining whether the loss has taken place through the long vowel, as the intermediate stage is lacking, but in some cases this is certain or at least probable. In some cases the reduction of the diphthong has probably occurred directly by the loss of one component without long vowel as an intermediate stage. In Estonian we mostly find direct loss of the second component of the diphthong.

*ai, äi > a, ä.* E. g. *punane, tulevane*; cf. F *punainen, tulevainen*, dial. *puna(a)ne(n)*, SMK 125, 211—. In some dialects the second component of the diphthong has only disappeared in an unstressed syllable; in some dialects (VINE, Vi, TaN) the diphthong has survived only if it had a strong secondary stress and the following syllable was open, cf. SimV *sugulaisi, tulevaisi*, Jõh (*sakslased* :) *sakslaisi*, (*sukulane* :) *sukulaisi*,

Kod(KV) *arul'daisi*, TMrKö *vene'laisi*, San(W) Oina *venelene* : *vene'leisi*, UrvP *mesi'läisi*, Kan `sakslaizilę, Rõu *enämläisi*, VasO `vin'läisi, SePa `vindläine : `vindläse : `vindläist, SeKo *segi'mäiste* (*segamini*); PR 62. Cf. Rossihnius *ᙸúhðleifille* (15), *lāhifēifēl* (73). Cf. F dial. *puna'ne(n)* : *punas't(a)*, *punane* : *punaist*, Vt. *leppän* (E *lepne*) ~ *sōmaaain* (E *soomlane*), IngR *hätäne* ~ *äärimäine*.

*ei* > *e*, *ei* > *ę*. E. g. *eit* (: *eide*) < \**eittei*, *peenike*, *väike*; cf. Jäm(K) *peenigeine*, *lapsukeine*, KrlK `väi'keisi (: `väikesile), UrvO `lōokeist ~ `lōokest, VasS *ristIkeist* (: *ristIkese*'), SeM *ubinageist*.

*oi* > *o* (> *u*). E. g. *vastu*, *kägu*, *talv*, *ilmutama*; cf. F *vastoin*, dial. *maaton*, SMK 204–, Ol. *kägöi*, F *talo*, dial. *talo*; *ilmoittaa*, dial. *ilmo(o)ttaa*.

*ui* > *u*, *üi* > *ü*. E. g. *kuulus*, *suurune*, cf. F *kuuluisa*, *suuruinen*; SeKo imperf. *hōlahtu* < \**hōlahtui* (*helahtas*), cf. Vt. *kukku* (E *kukkus*).

As regards the other BF languages, – in Votian the second component *i* has been lost in unstressed syllables, whereas *i* has been retained in syllables with secondary stress, e. g. *leppän* (E *lepne*) ~ *sōmaaain* (E *soomlane*). In VpS the first component of the diphthong has assimilated the second component, forming a long vowel, e. g. *pin'ikān'e* (E *peenikene*), *punō*, cf. F *punoi*. In Olonetsian we find the loss of *i* in but a few morphemes; in Carelian *i* has chiefly been lost in the unstressed open syllable. In Livonian the PF diphthongs of the non-initial syllables are represented by the second component *i*, e. g. *pu'nni* (E *punane*).

### 1.5.2.5.1.2. Secondary Diphthongs.

The vowels that, as a result of the loss of the intervocalic consonant, came to occur beside each other have probably formed a diphthong which later on has been reduced so that either the first or the second component of the diphthong disappeared. It is possible that in both cases there has been a long vowel as an intermediate stage, cf. e. g. F dial. p. *verkkoo*, *sormee*, inf. *usko* (SMK 188–). Cf. Kettunen EKÄ 179–.

#### 1.5.2.5.1.2.1. Loss of the Second Component.

(*o-a* >) *oa* > *o* (> *u*), (*u-a* >) *ua* > *u*, (*e-a* >) *ea* > *e*, (*i-a* >) *ia* > *i*. E. g. *põldu* << \**pēltoia*, *kurge*, *lapsi*, *kõrge* <<

\**korke<sub>1</sub>a*, MuhL `katsu << \**katsu<sub>1</sub>ak* (*katsuda*), SJnP `pühki (*pühkida*); cf. F *peltoa*, *kurkea*, *lapsia*, *korkea*, *katsoa*, *pyyhkiä*, F dial. *peltoo*, *korkee*, *lehmi*, *usko* (E *uskuda*), IngR *lippuu*, *henkee*, Vt. *ламуа*, *кёркёас*, *куттсуа*, Vt. Koslova *lintõ*, *кёркё*, *куттсõG* < *kutsuaG* < \**kuttсу<sub>1</sub>ak*.

#### 1.5.2.5.1.2.2. Loss of the First Component.

(*a-e* >) *ae* > *e*, (*a-ę* >) *aę* > *ę*, (*u-e* >) *ue* > *e*, (*i-e* >) *ie* > *e*. E. g. *saage* < \**sāka<sub>1</sub>e-*, *kandes*; cf. KuuT *kirjuta<sub>1</sub>ess*, *lahku<sub>1</sub>ess*, *kon'di<sub>1</sub>ess*, F *kantaen*; g. pl. and *e-plural*, e. g. *jalge* < \**jalka<sub>1</sub>en*, PöiJ `põlde, MarH `loomel (*loomadel*), Lih `ärgel (*härgadel*), Aud `poegel, MärLõ `püksega, KeiKlg `sahkega, Juu `sõrme (*sõrmede*), PstHo `aige (*aegade*), HelV `sõprele; Trv(K) *jutte*, Vas(N) *jutte*, Krl(N) *keppega*, KamR `pul'le, PlvAl *pakke* (*pakkide*), RäpT `pot'te; – KuuV *juobuneks* < \**jõpunu<sub>1</sub>e-*, Hlj *viene* (*viinud*, pl.), LügR *surne*, Jõh *saaned*, VaiI *surred* (*surnud*, pl.), IisU *nähned*; cf. F *kadonneen*, *nähneet*.

(*a-u* >) *au* > *u*, (*e-u* >) *eu* > *u*, (*e-ü* >) *eü* > *ü* (> *i*), (*a-o* >) *ao* > *o* (> *u*). E. g. *vargus*, cf. Lei *t<sup>u</sup>oreus* (*toredus*); *tervis*, *õhtu*; cf. F *varkaus*, *terveys*, *ehtoo*, Vt. *ęhtago*.

### 1.5.2.5.2. In the First Syllable.

#### 1.5.2.5.2.1. Loss of the Second Component in the Weak Grade.

*aišt*, *oišt*, *uišt*, *õišť*, *eišť* > *ast*, *ost*, *ust*, *õst*, *est* in CNE, here and there in Lă, Pă, ViW, TaN; in some places (Mär, Sim, KJn, Lei) only in unstressed position. E. g. Mär(W) Lūmandu *pos'te* ~ *po<sup>o</sup>ste* (*poiste*), KadT, SimV *nas'te*, Sim (*paistma* :) *pas'tab* ~ *paistab*, AmbN *nas'tera* (*naisterahva*), SJnP *mõs'tab*, PltP (*poiss* :) *pos'te*, VMr *pos'tega*, Lai *ses'ta* (*seista*), KsiL (*poisid* :) *pos'tele*, ÄksV *nas'te* ~ *naiste*, RanK *nas'te*, TrmKõ *pus'tata*, KrkK *enne-mustetse*, SeVõ *nas'terahvas*. In this phonetic change we find the assimilative influence of the following consonant *s*, apparent also in the fact that *i* being merged into *s* has palatalized the latter. The loss of *i* before *s* occurs also in ELv., e. g. *mùoštāB* (: *moišťā*), in SVp., e. g. *paštāb*, in Ol., e. g. *pasto* (E *paiste*), in a few words in F dial., e. g. *vestä* < *veistää*, and Lydian, e. g. *muštēada*.



*aits, eits, uits* > *ats, els, uts*: Khn(AS) *netsit* ~ *neitsit*, Ris *setsme*, HagKo *set'se* (: `seitsmet), KadT *set'se* (: `seitsmest), VMr *sul'su*, Sim *mat'se*, PltP *set'se* (: `seitsmes). As appears from the examples the loss chiefly occurs in the weak grade of the word *seitse*.

In some dialects *i* disappears (chiefly in the weak grade), e. g. in the following words, too: UrvO (*kõik'*) *kõge*, still also p. *kõkke*; – in the word *leiva* in the islands, LÄS, PÄ, VI, e. g. Jaa *levaks*, Hi(A) *levad* (: *leib*), Khn *levä*, Tös(KM) *leva*, Vig(Ste) (*leib* :) *lebä*, Tor *leba*, SJnP *leva* ~ *leba*, SeLit *levä*, KraK *levaga*; – in the word *teine* here and there in Ha; PÄ, VI, JÄ, TA, SE, e. g. VJgRü *tene*, VaiI *tene*, also p. *test*, Hel, Trv (*'tõisi* :) *tõne*, SanLa *tõse*, KrlK *tõn'i*, UrvP *tõne* (: *tõist*), PlvA *tõse*, RävV *tõse*, Lei (MT 22) *tõze*, KraO *tõne*; – Hi(A) *tevas* (: *'teibpd*). It is apparent that in these words there has been an intermediate stage with a long vowel, at least in most cases, so that in fact we have here a case of shortening which probably started from an unstressed position; cf. Khn(TS) *teene*, Tor *eena*, SJnP *eenad*, Plv *kõõve* (cf. p. 43–). In Kra the *i* > 0 is more widespread, e. g. KraK *nan'õ*, *han'aga* (< *haina-*) (*heina-*), *pävä*, *hõm'uga*, *poz'ile* (*poisile*) Here *i* may have disappeared without a former assimilation into a long vowel. In the word *naine* *i* chiefly disappears in the second part of a compound: VaiI *perenane*, Kod(KV) *perenaene* ~ *perena*, LutJ *'p'ernan'e*. EMA 2 62 'jätku leivale'.

### 1.5.2.5.2.2. Other Cases of Loss of the Second Component.

Sporadic cases: Krl *kõkk* (*kõik*), Sim *veke* ~ *'veike* (*väike*): *'veksed* (in unstressed position), VJgR *vekest*, Lai *veke* (: *'veksed*; SanN *tõseme* (*tõusma*), KrlK *tõse'* : *tõske*, Räv *'nõssi* (*tõusis*), SeKü *nõsema*, Lei(V) *nõzema*, Lut(V) *nõseema*; KJnP *ü'lda* (~ *õeldä* ~ *üheldä* ~ *ööldä*), KrlÄ *ülnu* (*öelnud*), RõuH *ülgu<sup>t</sup>* (*öelgu*), Kan, PlvH *ülnü'*, RävV *üllü* (*öelnud*), Vas *üldä'* (*öelda*), SeKo *'ül'ti* (*öeldi*), KraO *ült* (*öeldud*) – in this word it is probably the elimination of the phoneme *üe* which is alien to the language and inconvenient (because of too long a distance between the articulation points for *e* and *ü*). The *üe* was the result of the loss of the intervocal consonant *lt* and has in most dialects, by way

of assimilation, been replaced by the easier *öe*; Hi(A) *'petm̄p* (*peitma*), TrvP *sõmm* (*sõim*); PltP *plehveter*, cf. G *bleifeder*; Khk(T) *kim'naa-sim* (*gümnaasium*).

### 1.5.2.5.2.3. Reduction of Diphthongs in Unstressed Particles and in Compounds.

In the word *kui* *i* disappears quite often. E. g. Saa *sedä sa<sub>2</sub>ss näe ku<sub>2</sub>ma raha let'i pääl 'pan'nin*, HääAl *ku miis kodu 'tulli*, KeiN *ku ma noor ol'in*, cf. ib. *sui ol'i éa (hea) kui ol'i piima* (10); In HagA the word *kui* is consistently recorded as *Gu*, e. g. *ma pid'in teda 'nuhtlema gu kana tegi äkki kurr, kõik 'sil'made éés<sub>2</sub>gu udu*; SimA *ku<sub>2</sub>da lähäb vett kaevust 'tuoma*, KrkAi *koss sell (kus sel) karjatsel mujal minekut omm (on), ku esäl lää vöi emäl ' . . . goes to the father or to the mother'*, Trv *ku n̄i vana<sub>2</sub>ini-mese ommukult suud 'mösseve*, PuhV *ku<sub>2</sub>n'a sis laolatusi lätsivä*, KrlÄ *ku suur' urik vai unik*, HarÄh *ega<sub>2</sub>siss sääntsiid 'süjike<sub>2</sub>s olék<sub>2</sub>ku nu<sub>2</sub>mm* 'then there were no such meals as there are now', HarK *ku vaimu' 'kääbev (käävad)*, UrvM *vaest ku h̄igitsät (vahest kui h̄igistad)*, RõuS *ku puuder' vähämbälle jäi*, PlvA *ku<sub>2</sub>ma kolme 'aas'tan̄ ol'li*, RöpK(T) *ku<sub>2</sub>tii noid 'halvu 'latsi nimme är' ei 'ütte*, VasM *üt's pühi ku pühapäiv*, SeKo *nakas' kauhaga kaallo 'vällä ammutamma ku 'määntsest 'tõrdost*, Lei(O) *ku pan̄eđe manu, sis saq vä'ämb (vähem), ku võtade 'vällä (välja), sis jääs suureb*, LutK(V) *ku saa viia (veel) poig meia vai tütär*; we must particularly observe the cases in which *kui* has been agglutinated with the preceding particle into one whole, as Lei *'en'igu (enne kui)*, Mär, KeiH *'jusku (just kui)*, Jõh *'jüsku*; VJgR *mutku (muud kui)*, RõuS *sõ<sup>r</sup>m̄e<sup>m</sup> mugu sõvve õnn̄e (sõrmed muud kui sõudsid aina)*, VasV *ja muku klud'e inne (he) beat (imperf.) only'*, HarMõn *salet n̄i<sup>u</sup> vana reos'k (sa oled nii kui vana reosk)*, UrvVa *nigu vanast, Röp nigu' ~ niigu'*; for examples of the *niikaua kui* and *nii kui* see p. 89 and 96.

The word *ei* has often lost the first component of its diphthong after a preceding word that ends in a vowel; this is particularly apparent in SEE, especially in Se, where the *ei* has been agglutinated to the end of the verb, in which case the intermediate stage for the loss was the assimilation of the *e* by the final vowel of the verb (cf. p. 47). E. g. Tõs(KM) *mehele mud'u sa<sub>2</sub>i soa (muidu*

sa ei saa), MarK *ei\_mai\_anna*; sometimes the negative has disappeared altogether, e. g. Mih(Ste) *sii taha 'keegi 'olla (siin ei taha keegi olla)*, MärON *taa 'lausund moõle (mulle) sõnagi, maa tea 'ühtigi kus\_ma läksin*, MarHa *see teeni koa ünäm*; — AmbL *tema\_i 'toht'ind*, TMrVKo *'päivaeg ma\_i jõuwa 'kõn'dida*, KrKa *tema\_i sure*, UrvVa *mai'löwvvä'tedä inämb 'kostki?* (*ma ei leia teda enam kustki*), HarMõn *idikonn omm (< ei tiijä konn)* (*ei tea, kus on*), RävV *'vällä\_i päse?* (*välja ei pääse*), VasV *'kisku\_i (imperat.)*, SeNu *'angu\_i kelle 'maitsa\_i ja ezi ka? 'maitsku\_i* ('don't give (it) anybody to taste and don't taste yourself either'), SeSa *opi'i*, Lut(V) *'aeta?* (passive), KraK *Taija i ma inäb maakeelt 'I don't know Estonian any more'* (31).

Other particles: *ega*; cf. Agenda Parva  $\text{ἔφα}$ , F *eikä*; *väga* < \**väken kansa*, cf. TrvS *'väege*, SanU *ol'live 'väega alva minule*, KamK *väegäde 'sjuissi sedä (väga sööksin seda)*, SeU *'väega rikass*, Rossihnius  $\text{wāgh} \text{ fāhn}$  (98); the word *kui(da)s* in colloquial speech often occurs without *i*, e. g. Lai *kud'as ~ kud'a, kudagi*, Krl(S) *kus's\_sull 'lastus är' minnä* (*kuidas sul lastakse ära minna*); *muidu(gi)*: JuuK, Sim *mud'u*, ÄksV *mud'uki ~ muëdugi*, HlsA *mud'ukist*, KrlÄ *modu*, RõuS *mod'u*; *niikaua*: JMdOrg *ohutand niga\_gu kadund ää*, PlvH *'ol'ti süss nikani ku 'tal'si pühini?* (*oldi süss niikaua kui talvepühini*); — other words: Juu *kaniste ilus ~ kaunis*, SJnP *kan'i (kaunis)* (in unstressed position); Phl(A) *Sääre krahf tuln 'sõitäs 'maandët\_kpdy* (*krahv tulnud sõites maanteed kaudu*) (ACUT B 47 : 1 143), Aud *kada ~ katt (kaudu)*, Tor *teed kada*; in the word *koa (ka)*, e. g. KseO *ussid 'kuulvad su jala kabina ko ää*, JuuV *siis 'lauldi ko üks sal'm kiriku 'laulu ää*.

Compounds: Mih(Ste) *noort (nooreit)* — here the whole diphthong has been lost, Vig(Ste) *tuneli (tunaile)*, Khk(T) *'ombu ~ ombu (õunapuu)*, Hi(A) *'õmbu* (see other examples ACUT B 47 : 1 143).

### 1.5.2.6. LOSS OF WHOLE SYLLABLES

The omission of whole syllables chiefly occurs in long words that are difficult to pronounce, especially in compounds, place-names and foreign words. When the meaning of a component of a compound grows dim, this results in its weakening and finally its loss (cf. Horn SS 4–). Loss of syllables occurs in

word-initial position — only in loan-words the first syllable of which is unstressed — as well as in medial and final position. Loss of syllables occurs in all languages. We often find sudden loss, but the loss may also have taken place by way of intermediate stages without our being able to ascertain the way in which the development has occurred.

In the beginning of the word loss of syllables occurs e. g. in the following words (cf. also aphesis p. 73): MusI *meeriga* (*Ameerika*) (17), UrvVa `res'ti (~ a`res'ti), ÄksR `pis'tlasest (*baptistlaseks*), PlvPa `lektri (*elekter*), Hls(K) pistel (*epistel*), ReiP *taaliase* (*Itaaliasse*), Kõp los'sid (*kalossid*), mas'sid (*kamassid*), PstHol lossi, massi, VilV siin'u (*kasiino*); *kartulid* < G *kartoffel* occurs in several places in the form `tuhvolid ~ `tuhlid, e. g. Khk(T) `tuhlimald (-maalt); *revolver* occurs in the following form: Vig(SteLl) `volber, Kod(K) `volmer, Ote `volvre, TMrKõ `volmri, RõuS `volhfriga; Kõp men'dist (*tsemendist*) (other examples Loorits ACUT B 45 : 3 95), KrkAi *tendis* (*studentiks*), Vän `lopski (*Sokolovski*).

Among cases of loss inside the word we also give examples of compounds, in which a syllable has disappeared at the end of the first word. E. g. KrjT *nelideisend* '14', JaaHa *kahessadeisnd* '18' < -*teistkümmend*, Phl(A) Sääre *ka:kstei:sn : ka:ks'tei-smə* '12', VMr *mesteras* (*meesterahvas*), nas'teras (*naisterahvas*), tes'teras (*teisterahvas*), KJnLa *našteras*, AviK *kõlme'teisme*, '13', KrlÄ *našteras*, RõuH *našteraass*, HelL *naesterast* (: *naesterahvas*); RapHK *kammedee* (*kummelitee*), RisVi *kirklas* (*kirikukülas*), RöpK(T) *kihelkooli poistega* (*kihelkonnakooli*); Kod(K) Ranna *Uhekras* < -*rahvas* (see KD 209-). The expressions *nii kaua kui* and *nii kaua kuni* have in SEE in unstressed position been agglutinated and reduced as follows, the word *kaua* being in SEE represented in the form *kavva*: Krl *nikagu ta usse valla<sup>v</sup> võl't' lips us's' ümbre kaala* 'while he opened the door, the snake slipped round the neck'; cf. *sa<sup>p</sup>piat 'tiäge 'suumä ütē, nikavagu<sup>t</sup> sa elät*, Krl(N) *nika'üüni (vööni)* (32), UrvVa `t<sup>u</sup>uga<sup>k</sup> kannatat *nigagu<sup>s</sup> saa*, PlvH *nikani<sup>k</sup> ku kikka<sup>k</sup> kir'gmä 'naks'* (*niikaua kui kikkad kirema hakkasid*) (170), RöpV `naksimi jalal `astma *nikan'i<sup>g</sup>u 'saimi ütē talu vai mõisa mano*, VasH *olē sa siih (siin) nikann<sup>P</sup> ku ma tagasi tulē*. Especially often such shortenings occur in place-names (cf. Horn SS 6, 9-). E. g. MarK `aaplu

'linnõs (*Haapsalu*), SanM *pühär'e sõda* (*Pühajärve*) (see also Kettunen, Vir. 1927 17). Loan-words: VigS *akenderi* 'kohtusse, cf. G *hakenrichter*, PlvH *vana kaller'di* 'jár'gi (*kalendri*), HMD *korgensen*, cf. G *korkenzieher*; JõeU 'ar'kajlisse (*Arhangelskisse*), KrjT *kammel'dolski* 'Каменноподольский', Kõp *supervaat'* ~ *superuus's* (*superfosvaat*).

At the end of the word: JämH *pole enam ühh olnd*, usually 'ühtid (*ühtigi*), Hls(U) *ü'lõisku* (*üksteistkümmend*), TMr *kaks-teistku* '12', UrvO *luupain* ~ *luupainaja*, MustT *paarg* (*paarkoda*), Hi(A) 'päärgõ [*< \*pārikota*], 'nõõlõgõ (*nõelakoda*) (for other Hi examples see ACUT B 47 : 1 152-); SanLau *ja siss* 'aitasive *kat's naistera<sup>a</sup>meisteraat<sup>a</sup>takast* 'väl'lä, *ja pulmaraa* 'saisive *küik sääl een* (*ja pulmarahvas seisid kõik sääl ees*) (EK 1926 81). Loan-words: RäpP 'hausteli, cf. G *ausstellung*, SeSa 'järmon' (*har-moonik*), JämH *kallinga riije* (*kallinguri riie*), Rõu *kamps* ~ 'kamp-son', Jõh *treht* ~ *trest*, cf. G *trichter*; KeiH 'tikred ~ 'kikred (*tikerberid*), Trm(T) *tärgendi* (*tärpentiini*), KamK 'assen 'Hassel-blatt', JaaT *nol'k* 'Nolcken'.

## 1.6. SHORTENING OF LONG VOWELS

### 1.6.1. In Non-Initial Syllable.

In Estonian all secondary long vowels in non-initial syllables have become short. E. g. p. *kala* < \**kalā* < \**kalaa*, *anda* < \**antā* < \**antaak*, *tõmbama* < \**tempaa-*, *kirved* < \**kirvehet*, ill. *sõrme* < \**sormehen*; cf. F *kalaa*, *antaa*, *tempaan*, *kirveet*, *sormeen*, SMK 179-, Vt. *antā*, ill. *mettsā*; SePa all. pl. *vikatile* < \*-*iille*; cf. KriK pl. el. 'kal'liist < \**kallihista*, Har (E 361) p. pl. *redeliid*, *viidikiid* ~ *viidikeid*. As regards other BF languages shortening of the long vowels in non-initial syllables occurs in Finnish dialects, e. g. SWF p. *kala*, ill. *tuppa*, and in Livonian, where the long vowel is represented by ǝ, e. g. 'kirǝD (E *kirved*).

## 1.6.2. In the First Syllable.

### 1.6.2.1. SHORTENING OF VOWELS DUE TO THE FOLLOWING SOUND

#### 1.6.2.1.1. Before *h*.

The long vowels of the first syllable have in most E dialects been shortened before *h*. E. g. *maha*, *pähe*, cf. *maa*, *pää*, RõuK `maaha, `päähä, SeNu `maaha, F *päähän*; *mehe*, cf. *mees*, Krl *miihe*, RöpT *meehe*, VasM *meehe*; *mehi*, cf. Kan `miihi; *rehi*, cf. Plv *riihh* (: *rehe*), RöpT `riihe : *riihe*, Vas *riih* (: *rehe*), F *riihi*; *rohi*, cf. SeSa, LutSJa *ruuh* (: *roho*), F *ruoho*; *tohud*, cf. LutSJa *tuuh* (: *toho*), F *tuohi*. As appears from the examples, the long vowels have survived in SEE; in some dialects the shortening has taken place only in the weak grade. Cf. Vt. *roho*, *suhõ*. Ariste believes that in this phonetic change we have a case of adaptation to the phonemic system of the language, as the phonemic system of Estonian is opposed to a long vowel directly preceding a following vowel, a short and voiced intervocalic *h* being no obstacle to treating the combination long vowel + *h* + vowel as a combination long vowel + vowel. In order to avoid a combination unfamiliar to the language the long vowel preceding *h* has become short, or extra long before an originally open syllable, as partly in SEE (ACUT B 47 : 1 141–). PA 112.

#### 1.6.2.1.2. Before Vowel.

Long vowels before *i* have become short in early PF at the latest, — if there have ever been any in this position —, in such cases as *puid*, cf. *puu*; *maine*, cf. *maa*; *tõi* < \**toi*, cf. *tooma*. The same change has taken place later in cases like *pae*, cf. *paas*, *roa* cf. *roog*; PärP *mailm* (*maailm*), SanN `maelnu (*maadelnud*), `maeldu < \**māel* < \**māiel*-. Here again we find an adaptation to the phonemic system of the language.

#### 1.6.2.1.3. Before *j* (*ë*).

Intervocalic *j* (resp. *ë*) has in some dialects (in the islands, Lä, Pä, Ha, Vl, here and there in TaN, Se) evidently caused

a similar phonetic condition as *h* (cf. Ariste ACUT B 47 : 1 142), so that here, too, we have a shortening of the long vowel. E. g. *lojus* < \**lōtus*, MusI *sojad* (*soojad*), Kāi *sujuseks* (*soojuseks*) (for other Hi examples see *op. cit.* 142), HääN *so<sub>ɪ</sub>ea*, JuuK *ro<sub>ɪ</sub>ane* (*roojane*), *so<sub>ɪ</sub>eaks*, but in case of the third degree of length '*so<sub>ɔ</sub>ja*, '*l<sub>o</sub>ja*, Kõp, Kod(KV) *sojad*, Se Lõkova *saja*' (*saajad*) 'wedding'.

#### 1.6.2.1.4. Before Voiceless Consonant in Closed Syllable.

Before *st* dial.; in some dialects the shortening has taken place only if the second syllable, too, is originally closed. E. g. MuhL *mestel*, Saa *mes'te*, JuuK *meste* (: *mees*), KadT (*riist* :) *ristad*, VMr *mesteras*, Sim *tus'ti* ~ *tuus'tib*, KsiL *mes'tel*, ÄksV *meste*, in Lai usually *riistad*, but *korista ristad lauwall*, ÄksV '*päs'tja* ~ '*päästja*, RanK *lis'tuga*, TMrKõ *roste*, RõuK *rossest* (*roostest*), HelK, KrkK '*pästen* (*päästnud*), '*pästa*, SeKü '*päs'tmä*, *last*, *lis't'*, *roste<sub>ɪ</sub>anU*' (but '*paastma*, *paast*, '*rüüs'tämä*), LutSJa *pästmä*. It is possible that also some of those words with *st* in which alternation of the short and long vowel occurs in the other BF languages as well, belong here. E. g. Kod(KV) *lass* (*laast*), RanK *lastud* ~ *laastud*; Puh, San, Ote, Rõu, SeKü *last*, cf. F *lastu*; Phl(A) *nast*, Kod(KV) *nass* ~ *naast*, cf. F Lönrot *nasta*; sõstrad ~ Var *suustar*, RapHK '*soostrad*, cf. F *siestar*. Cf. also F *jyystätä* ~ *jystää*.

Before *tt*: *mõte*, *mõtlemä*, cf. *mõõtma*, Lei *mõõtl<sub>ɛ</sub>ss* (Niilus ALSE 1936 153), LutSJa *mõöd'usk<sub>ɛ</sub>l<sub>ɛ</sub>ma* (*mõtiskelema*), LutJ(V) '*mõõtle*'s 'did not think' (75), F *miete*; Trv *kit't'* (*kiitis*), TMrKõ '*kitma* (*kiitma*), SanM '*kitva* (*kiidavad*), HarM '*kitmä*, SeKü '*kit'mä*, SeKü '*kit'mä*; PltR p. *plit'ad* (*pliiti*), San, Krl, HarM, LutSJa, SeKü '*putma* (*puutuma*), RāpTo *ei putu*'; RanK, LutSJa '*sutma* (*suutma*), SeKü (*õi*) *suta*'; KeiH (*töö* :) *tõtega*, (*vöö* :) *võtega*, JuuK *pute* (*puude*), *lute* (*luude*), PltR *rutuga* (*ruuduga*), LaiM *rutu* (*ruut*), KraO *hittä* (~ *hiidädä*) (*heita*); RanK *att*, Wd. *hatt*, cf. F *aatta*. Cf. F *lattia* ~ *laattia*. In a few dialects *tt* has had a shortening influence on the vowel also beyond a voiced consonant between the vowel and *tt*, since a shortening of the vowel occurs before *ntt*, *r<sub>tt</sub>*, *l<sub>tt</sub>*, if the second syllable

was primarily closed : KeiH (*koor* :) *kortega*, *polte* (*poolte*), *sonte*, JuuK *polte*, *kortega*.

Before *ts*: Juu `vitsima, in JuuK only if the second syllable is originally closed: *ei vitsi* (: *viit'sima*), (*piits* :) *pitsaga*, Lai (*püits* :) *pitsad*; MusI *lets'* (*leets*), Ris *lõtsa* (*lõõtsa*).

Before *ks*: Phl(A) *juksi* (< *jooks-*) 'rheumatism', SimE *joksed*, Avi *joksevad*, Lai `piksub ~ *piiksub*. Here probably also belong such words as *vaks*, cf. JõeI *vaaks*, Jõh *vaaksad*, F *vaaksa*, Ol. *vaksu* ~ *vuaksu* (Turunen MSFOu 99 20); *peksma*, cf. F *piesta*. Cf. also F *laakso* ~ *lakso*.

Before *ps*: Lai (*kriips* :) *kripsud*.

It is possible that the following words in which alternation of the short and long vowel also occurs in the other BF languages belong here: *ahel*, cf. F *haahlot*, cf. also F *haahmo* ~ *hahmo*; *juhtima*, cf. F *johtaa* ~ *juohtaa*; (*vaher* :) *vahtra*, cf. F *vaahtera* ~ *vahtera*; *vaht*, cf. F *vaahto* ~ *vahto*; *pühkima*, cf. F *pyhkiä* ~ *pyhkiä*, Ol. *pühkie*, Ld. *pühk-* (Turunen MSFOu 99 31); *uhmer*, cf. F *huhmar* ~ *huuhmar*; *uhtuma*, cf. F *huuhtoa* ~ *huhtoa*; *mahl*, F *mahla* ~ *maahla*; *rippuma*, cf. F *riippua*, Cr.-Ol. *rippuo*; *vikat*, cf. F *viikate*, Cr.-Ol. *vikateh*; cf. also F *jäähtyä* ~ *jähtyä* (for other F examples see Vir. 1922 55, 1938 210; MSFu 67 123; SMK 153; Rapola SKÄ 184). In some F dialects the shortening of the long vowel is consistent in a syllable ending in *h* (N. Ikola AUA B 15 7; E. Lindén KHÄH II 17).

The shortening of vowels before voiceless consonants is a similar phenomenon of reduction and assimilation as the reduction and loss of short vowels before voiceless consonants in a closed syllable. On the whole, vowels preceding a voiceless consonant are shorter than those preceding a voiced consonant (see e. g. Malmberg Q 8-). In FSP, according to J. Laurosela, the vowels preceding a voiceless consonant are as a rule 20.6 per cent. shorter (Suomi V:1 231).<sup>1</sup> Cf. also Horn LL 658-.

<sup>1</sup> In connection with all these shortenings of vowels cf. now the theory of Steinitz according to which in Proto-FU there were only short vowels, and the long vowels of the BF languages came into existence due to the influence of the Baltic languages (FUV 117-). Regarding criticism, see Itkonen FUF 29 222-269-.



## 1.6.2.2. SHORTENING OF VOWELS DUE TO UNSTRESSED POSITION

### 1.6.2.2.1. Compounds.

The shortening of the long vowel in the monosyllabic second component of a compound is a general phenomenon, and it occurs in both open and closed syllables. The shortening occurs especially in the words *puu*, *maa*, *päev* (= *pääv*), *mees*. E. g. *puu* : Kse(Z) *aavebu* (*haavapuu*), KadT *kasebu*, Sim *kuslapu*, LaiKa *kuslapud*, PstK *käärbu*, Kod(KV) *küünärpu*, LügR *linnubud*; KJnL, LaiKa *lodjap* (has proceeded to the type *kirik* : *kiriku*), PstK *margabu*, KadT *marjap*, *ristap*; RisK *mesibu*, Khk(T), LaiKa *sarap*, Sim *sarapud*, ÄksV *sarap* ~ *sarapu*, PstK *uibu* 'apple-tree', LaiKa *visnapud*, Tor *õõnapu*, Sim *õõnapud*, JõhP *õõnapput*, KJnL *õõnapute* ~ *õõnapid*; — *maa*: Khn 'tuõdi *maesõ-malt suurõlt mält 'kas'ka* (*toodi maismaalt, suurelt maalt kaski*), Aud *ee<sup>i</sup>n'amaid* (*heinamaid*) ~ *ee<sup>i</sup>namid* (has proceeded to the type *sadam* : *sadama*), VJg(S) *einamalle*, IisO *einamate*, KJnL *een'amid*, Lai *eenam* Avi *einam*, Kod(KV) *eenämille*; KadT *karjam*, *saksamalle*, Khk(T) 'tuhlimald, JürS, HJnH *vakamad*; — as regards the word *päev* see p. 63; — *mees*: MarH *aidames*, Kod(KV) *ametimes*, VMr, SimV *isames*, Kod(KV) 'kaupmes, VänR *kõrtsimes*, Tor *maames*, Saa *peremis*, JürS *peremes*, KJnL *saanamis*, Jõh *vanames*, Saa 'õemis, KamReo *teomes*; — *tee*: KrjT 'rautest (*raudteest*), AnnS *lähib mäda 'maandid* (*läheb mööda maanteed*), KJnL 'puüldid (*pool teed*), LaiM 'raute, Puh 'maandid 'müüidä; — other cases: Phl(A) *vesigpr vesikaar*); LügR *vikkerkaari*, *vanagu* (*vanakuu*), ämmämor, VilV *jõesu* ~ *jõõsu*, San *vallagoli* (*-kooli*) *poiss*; particularly in place-names, e. g. SimA 'mustve, Lei 'suusare ~ 'suuzare 'Sosaare' (see also ACUT B 47 : 1 138—).

### 1.6.2.2.2. Particles.

In a position phonetically similar to that of the second component of a compound are the postpositions, which have a tendency to be agglutinated to the principal word. A classical illustration in this case is the development of the former postposition *kansa* into the comitative ending *-Ga*, in which we also can observe the shortening of the long vowel: (\**kansa* >) *kaasa* >

*kaas* > *kaa* > *-ga*, cf. the postposition *kaasa*, Müller mehe *kaas* (1), Stahl *kašetžamiije kašš, wešfa (väga)* (VKVM 38), Agenda Parva *šino=ga*, cf. Lv. com. *-ks* < *\*kas* < *\*kās* << *\*kansa*, e. g. *jālgaks*, Vt. *jalgākā*, F dial. *pojanka*, SMK 117; IngR *heposenka* (E *hobusega*). As regards the present postpositions especially *pool*, *-le*, *-lt* and *peal*, *-le*, *-lt* tend to be agglutinated and shortened. E. g. *pool*, *-le*, *-lt*: JaaT *sii 'teibul küla*, LügR *põhjabol, lõunebol, ÄksV ülespole, Kod(KV) seijepole, Hel 'säälbul, San tõisepole ~ 'tõispole, Lei(O) kodē bulē, Lei 'iimbul (eespool), LutJ lät'si' peremehe pole, cf. LutSJ päle hil'ebi tul'l' paul voolain mi<sup>p</sup> puolē (pääle H tuli P. V. meie poole), (9); — *peal*, *-le*: JuuJ 't<sup>e</sup>ee\_bel, KsiL saan'i bäl, lavva\_bal (laua peal), lavva\_bale, Lüg vahebäl, Trv(K) etsa mull 'tjībäl 'aiga ei 'viidä, TrvVä kusa 'lamba sõnnikubäle panet, SanM oma jalabäl, KrlKi lavvapale, Lei tarebäl, lavvabal, KraO lavva päle; cf. Vp. vedēmpäl (LSFOu 86 371); — *ülepea*, e. g. LügR üeksa kõrd ülebä; — *mööda*: VMr ruomas mäda maad, SimE veereb möda moad, Mär(R) möda vallamajasid, AnnS lähib mäda 'maandid, JMdo tulen möda suurt 'muandid, KsiL tiid müda; cf. Vp. *-mu(d)*, *-mü(d)* < *\*mō-* (MSFOu 86 359–); — other postpositions: AmbN *nõnnavisi* (*nõndaviisi*), *kudavisi*, Lüg *sedavisi*; Khn(K) 'kange valu 'liikmete *siss* (*sees*), *see kelle gäst (käest) löüdässe (leitakse)*. Cf. the Vp. secondary cases MSFOu 86 359–72.*

As regards the other particles the unstressed *siss* is most often subject to shortening. E. g. VänR *siss 'os'tsid näd omale kabalasse koha*, SimA *ja seitsme'kest'i ema siss kasvatas 'kõiki, aga siss 'varsti mina ja vanemb õde saime mehele*, KJn *sis tema võt't'is kirstu kaane 'lahti*, HlsA *sis 'an'ti perel pühä*, PstH *sellel 'panti siss 'nel'läskeeli kabel 'otsa*, SeMi *lät's sis sin'nä*, HarÄh *no\_siss võtti tuud*; in the SE dialects the form *sis* with the short vowel has mostly been generalized in all positions; in this word the high position of the *i* between two voiceless *s*'s has favoured the shortening. Other particles: *siiski*; PärP, TMrKõ 'sis'ki, Lai, ÄksV 'siski; — *muudkui*: Lüg *mutku*, MMgR *muku ~ mutku*, HarÄh *mudgu*, SeV 'mutku; — the shortened form of *nii* occurs especially in compounds, but also elsewhere, e. g. ÄksV *nisama*, PlvH 'ol'ti, *siss nikani ku 'tal'si pühini?*, SeVõ *nisamadē? (niisamuti)*; Lai(AT), KodT *nisukesi (niisuguseid)*, ÄksV *nisukesed*; HarÄh *nigu nu' (nii kui nüüd)*, SeNu *nigu tju 'poiskēņē lät's*; —

*veel*: SimA *ja vil nimegi`tiati (teati)*, SeMa *juut`vil maka (magab)* (56), — *seal*: Lai(AT) *piat\_säl ära`käima*, KamR *siss säl mus`utiva tõne tõist*, RävV *kis\_säl omm (kes sääl on)*.

### 1.6.2.3. Other Words.

Examples of pronouns: *need*: HJnP *ned kõrsu (kõrtsu) kohad olid*, TõsKa *siis olid`ennemuiste ned`veimed pruudil*, SJnL *kis`nid*, KJnL *`kisnid (kes need)*; KJn *ja ned üks`teistkümme mīst`puusid ärä*, — *too*: Krl(S) *kuidu kõtu`aiguse ol`li (kui too kõhu haigus oli)*, OtePü *maa kae mistu kell omm (ma kaen, mis too kell on)*, RõuH *sistu suure värinäga<sup>h</sup>heräsi (ärkasin) ma üless*, SeNu *`riibi ar`tu anumakese (12)*; — *see*: KJnL *kis`si (kes see)*, Khn(TS) *kissi*, SJnL *kus`si (kus see)*, KsiK *ja kõik si viis`poega*, KadT *mis se onn*.

We find shortening also in other words in unstressed position and in rapid speech. Particularly verbal forms that have become interjections have been subject to such shortening. E. g. *kuule*: ÄksV, Lai *ole kule vait*, KadT *kule, tule`seije (süa)*, KeiK *kule miss põlle sa olid tõond nõorikulle*, SimA *kuli nüid`nuore.ärra (kuule nüüd noore härra)*, SJnL *kule nüid`ullu*; — *vaata*: AmbN *vata`tõmman sull vasta`vahtimist*, Sim *vata`ullu*, SJnL *vatt sulle pirakas, vata`ullu*, Lai *vata\_guss lol`l*. Examples of nouns and verbs: Phl Sarve *şę pru:t`rüipşs klasi seest`viinş* (*see pruut rüüpas klaasi seest viina*), Kas mei *şme varä(ęp`ö:htşplä (meie saame vara õhtule)* (ACUT B 47 : 1 61–2; see other Hi examples ib. 67, 114, 117, 138–), HJnL *`enne olid sured künad*, but *pered olid suured*, TrvVä *eidä (< ei tää) kass õege`vihma tulep (ei tea, kass õige vihma tuleb)*, SanP *`ohta kistasse malt üless (ohakad kistakse maast üles)*.

In Vepsian all the long vowels in the first syllable have been shortened consistently, e. g. SVp. *sada* (E *saada*), *nor`* (E *noor*).

## 1.7. LOWERING OF VOWELS

Lowering of vowels is a phenomenon of reduction, as it expresses a tendency towards the slackening of articulation (cf. Ariste *op. cit.* 90, 99). In E dialects the lowering of the vowel is

most apparent in the West and partly in the South East, where we also find most of the other vocalic reductions.

Below, those examples of the lowering of vowels where the lowering has been favoured by a neighbouring consonant (such as *h*, *l*) have not been given (the corresponding examples are to be found among assimilations). Furthermore, those examples in which dilation might have favoured the lowering of the vowel have generally been omitted, and are to be found in the respective chapter.

### 1.7.1. *e*.

$e > \varepsilon$  in the first syllable occurs in Hi (among the older generation), e. g. Kas *sɛst*, Käi Luguse *mɛtsad* (see further Ariste ACUT B 47 : 1 86–). Cf. MdE dial.  $e > \ddot{a}$  regularly in the first syllable, e. g. *v'ääd' < ve-* (E *vesi*).

$e > \ddot{a}$  in the first syllable spor.: in the word *vedama* in Sa, Lä, PänW, e. g. JämH *vädasid*, Var *vädämä*, LihP *kihlvädu*, Mär(W) *vädama*, NisK *vädas*; — KhkK, Jaa (E 529) *äga < ega* (*iga*), KäiL *säsögəne* (*seesugune*), Khn(AS) *kräpästüs*, cf. Russian крепость, VaiI *sädeli* (*sedel*). Cf. Hung. dial. *szem < szem*.

$e > \varepsilon$  in non-initial syllables chiefly occurs in Hi, where  $e > \varepsilon$  is found consistently when *e* has not been reduced to *a* (see Ariste *op. cit.* 89), e. g. Emm *mine*, EmmV *inimest* (*inimesed*), similar to the *è* in the non-initial syllable also the second component *è* of the diphthong has developed, e. g. *lae* (*laev*) (ib. 88); also in Sa, e. g. Pöi *tuleb* (see Ariste ib. 90); — SeRa *lugege'*, *imehtelge*, LeiA(O) *katsame astagu vahnude* '8 years old'. Cf. Vp. dial. *kell'ε*, *ol'ed*, Hung. dial. *híres < híres*.

### 1.7.2. *i*.

$i > e$ , *é*, *ę* in the first syllable spor.: Jäm *menuut* (*minut*), KadT *menut*, VNg(W) Koila *menuti* — the reduction of the vowel has here been favoured by its position between two nasals with undistinct oral articulation (see p. 20), Pöi *menD* (*mind*), Mih(Ste) *péka*, MarH(W) *lənad*, Ris *rennust*, *mena*, *rehma*, *eka*, *send*, Juu Kaiu *lenn*, *pend*, *mend*, *send*, 'veskama, *sett*, Vig(Ste) *mena*, Vig(SteLl) *pentsak*, VänLü *vèsand*, Plv *rönd < rend*

(*rind*) — in these words the lowering of *i* might have been favoured by *a* of the second syllable and in some of the words by the following *n*; Phl(A) *sēniisəd* (*sinised*), among some people in Hi the lowering occurs only before an extra long consonant, e. g. Palade *pētk : pitkād*, which can be explained by the fact that in the case of an extra long consonant the intensity of articulation is directed towards the consonant, on account of which the articulation of the preceding vowel is neglected, the result being the lowering of the vowel since the back of the tongue does not rise high enough for the articulation of *i* (Ariste ACUT B 47 : 1 98; on the occurrence in Hi see further ib. 98–, cf. also *i > é* on account of coronality ib. 97–, 108, 164); MarH *ʹrēpma* (*rippuma*), RapR *ʹrengi* (*ringi*). *i > e* occurs particularly in some particles, in which the change has been favoured by the unstressed state of these words. E. g. JämH *mītte*, KhkT, *mēttə*, KrjT *mettə medaid* (*mitte midagi*), VIHK, MarH *mettə*, Mih Nömmē, Aud, PJgE, RāpR *mette*, Ris *mete medagi*, VMr, Sim *mette* (~ *mitte*), SJnP *mette*, HlsM *mettə*, KrlKi *mete medägi*; Khn *metu : ʹmētme*, Kul, Juu Kaiu, AudE *metu*, TösKa *ʹmētmet*; Jäm (E 529) *ʹsenna* (~ *ʹsonna*), Pöi (E 529) *ʹsōnna < ʹsenna*, Kul, HMd, Iis(W) Tudulinna *ʹsenna* (~ *ʹsinna*), PR 25; MarH *ʹsessə*, Juu, VMr *ʹsesse* (~ *ʹsisse*); — in the word *siis* in SEE, e. g. KrlÄh *sōss ~ sōss ~ siss*, Se Treski *sīss*, LeiP(O) *sēs ~ sis ~ ses*, Lei(O) *sēs*; TrvVä, TrvM *sōss*, RōuK *sōss ~ siss*; LeiVä *sōss* — back-vowel variants may be generalizations owing to their position beside a back vowel, but it is possible that they are simply the results of reduction; probably also *nōnda < nenda*, cf. KrkK *ninda < \*niin tavoin*, belongs here, where its position between two *n*'s has favoured the lowering of *i*; PR 60.

In non-initial syllables *i > é, ĭ* chiefly occurs in Hi. E. g. Krj Leisi *ʹseņēd* 'p. pl. mushroom', Phl(A) Sääre *ʹmoqđē, mīdāgēd*, *ʹhuntesē, vilē*, PhlKu *ollĭ*, Rei Ogandi *ʹlahĭ* (see also ACUT B 47 : 1 110); ka MarH *kardulēsĭ* 'p. pl. potato', RisA *ʹkinne, kanepē*; Tor *kapetal*, KrkK *kommesjooni*, Mär *kommessar*, HlsA *kommessaarʹ*, PJgE *kommessar*, HMdK *palʹdeskest*.

A tendency towards *-i(ʹ) > -e(ʹ)* occurs here and there in SEE, chiefly after an extra long first syllable and in polysyllabic words. E. g. RāpTo *vōetʹe* (*vōeti*), *ʹpanʹdʹge* (*panigi*), *ʹkinne, apʹpe, tagase*, RāpT (*kallIs :*) *ʹkalʹle*, term. *pōlvineʹ, rannaneʹ*,

*rinnone*’, *sürmane*’ (~ *maanP*, ‘*taivanP*’); *vassarge*’ (*vasargi*), *mõt-sahke*’ (*metsaski*), RäpV *riig’e* (*riigi*), VasM *sedä’viise*, SeP ‘*kostke* (*kustki*), SeV *midäge*, *sinele* (*sineli*), LutK(V) ‘*pante*, *üttege* (*ühtegi*), LutKi ‘*paare* (*paari*), ‘*särke* (*särki*). *-i* > *-e* also occurs in ELv. (see Posti LL 46).

### 1.7.3. *u, ü, ö.*

*u* > *ó* in the first syllable occurs spor. in Hi, especially in Central Käi when there is no *i*, *u* in the second syllable, e. g. Käi(A) Luguse *kõseb* (: *kusi*), Nõmme *mõstât sõkâd* (*mustad sukad*), Phl(A) ‘*rõskäd* (*rusked*) (see ACUT B 47 : 1 40), Emm *süre*; in the second syllable *u* > *ó* usually occurs in Hi if the first syllable is extra long, and further on in the word also under other conditions (thus the same conditions as at the loss of vowel, which shows the reductional character of this change), e. g. Phl(A) Sääre ‘*armõ*, *tüdrugõd* (*tütrukud*) (see *op. cit.* 43–), PhlK *tüdrugõa*. *u* > *o* on account of the unstressed state: RõuS *modu* (*muidu*).

*ü* > *õ*, *u* occurs in the first syllable in Hi, especially before an extra long consonant, e. g. Phl(A) Sääre *mõts* (*müts*), but also Kas(A) *rõnnâ* < *rünna* (see *op. cit.* 124).

In Hi we also find *õ* > *o* in the speech of some persons, especially if the vowel is followed by a long consonant, e. g. *nõtk* (*nõtk*) (*op. cit.* 121).

*ö* > *ä* occurs in the unstressed word *mööda*: AnnS *lähiv mäda* ‘*maandid* (*maanteed*), VMr *ruomas mäda maad*, KsuJ *mehele mäda* ‘*silmi kohe*.

*u* > *õ*: KsiL *mõdu* (*muidu*) (unstressed).

## 1.8. DILATION<sup>1</sup>

### 1.8.1. Consonantal dilation.

In Estonian, as in most other languages, we only find consonant dilation sporadically. Following Grammont’s example we divide consonantal dilation into three subdivisions on the basis

<sup>1</sup> As regards this term (= assimilation from a distance) see Grammont TPh 251.

of the question whether the element of articulation which passes from one sound to the other, is the place of articulation, the mode of articulation, or both.

### 1.8.1.1. PLACE OF ARTICULATION

A stop assimilates another stop:

$t - k > k - k$ : in the word *tikerberid*: HmD *kikerberi* ~ *tiken* ~ *kiken*, KeiH *'kikred* ~ *'tikred*, VaiJ *kikerberid* ~ *tikerberid*, Avi, Trm(T) *kikerbillid*, KsiJö *kikeberi*, Kod(K) *kikerpillid*, SeSa *kikerbu*; VaiM *kilkastant* ~ *tilkastant* (*tilgastanud*). Cf. F *kirrikajain* ~ *tirrikajain* (Vir. 1938 204).

A continuant assimilates a stop:

$r - k > r - t$ : VigS (*'kuprad* *'pandi*) *'rõutu* (*rõuku*).

A stop assimilates a nasal:

$m - t > n - t$ : KseÕ *anepi* < *aneti* (*ameti*), Lih *anet* (rare) ~ *anep* (*amet*).

$p - n > p - m$ : Juu *pruum*, Rõu *pruum'* (*pruun*).

### 1.8.1.2. MODE OF ARTICULATION

$p - m > p - p$ : KhkT *'päspär* (*päsmer*), JaaL *'päspär*.

$B - n > m - n$ : Vig(SteLl) *'ärmini linn* 'Harbin'.

In most Vepsian dialects  $v - p, b > b - p, b$  regularly occurs, if the word begins in  $v$  and there is a  $p$  or  $b$  at the end of the first syllable or at the beginning of the second syllable, e. g. *baba* < *vapa*. In Livonian Posti assumes a dilative influence of the voiced stop and  $z$  inside the word on the voiceless stop beginning the word, due to which the latter becomes voiced, thus a voice assimilation in such cases as WLv *gīndŗrbū* (E *küünarpuu*), *dūrbal* (E *turvas*) (see LL 143-4; cf. Kettunen LLF 38); Kettunen has assumed the same in such SVp. words as *gar'bō*, *gur'bitš* (ACUT B 2 : 2 3).

### 1.8.1.3. PLACE AND MODE OF ARTICULATION

$k - (m)n > n - (m)n$ : KsiJ *'ni:mnaa'si'kuule* (*gümnaasiumi koole*), KrjT *nimna'stikud* (*gümnastikat*).

$k - l > k - k$ : Trm(T) (*ree*) *kreska*; cf. Russ. кресло.

*st — ks > ks — ks*: MusI `vaksoksi (*vastuoksi*).

*n — l > n — n*: HarMõ `kindran' (*kindral*); Hls(K) *naninsuni* (Nanilsoni).

*m — l > m — n*: *kampsun*, cf. Jõh *kampsul*, G *kamisol*; Saa(L) *mõnemad* (*mõlemad*).

*l — n > l — l*: RapHK *palderjal* (*palderjan*).

*r — n > r — l*: *sirel*, cf. Russ. сирень, RapHK *sirin*; Saa `värtel (*värten*), Wd. *värtel*, *verkel*, *värkel*.

*n — l > l — l*: PItR *posla masla*, cf. Russ. постное масло.

*l — v > l — l*: Mih(Ste) `latle (*latvade*).

*r — n > r — r*: IisO `ärmuorik (*harmoonik*); LügR *kirasseri*, cf. Russ. керасин.

Development of an additional consonant.

On account of the preceding consonant: Hls(K) *rangi ringus* (*rangi rinnus*), MarH *ümär'gorne*, Wd. *ümmarkorne* (*ümmargune*); KrjT `krons'tanti 'ill. Kronstadt'; RapR `praegu (*praegu*).

On account of the following consonant: KosN `ek'leekre (*elektri*), VMr *tele'kter* (*elekter*), *kremmelguid* < *kremmerg* - < *kemmerg*, Lih *treeblet't'*, cf. G *teebrett*; Aud *tessandiin*, KJnL, Hls(K) *tessantiin*. Cf. F *kurmaskettu* ~ *urmaskettu* (Vir. 1938 201).

The whole syllable has come into being on account of a dilative slip: AviP p. `apteteki (: `apteki).

For examples of consonantal dilation in other languages see TPh 251-. Consonantal dilation can be met with very often in the Permian languages (see Uotila KPS 17, 18, 23, 30, 32, 33, 36, 38, 41, 46, 56, 57, 74, 85, 90, 181, 187, 190, 220, 228, 289, 330, 337); also in Mordvin (see Paasonen ML 25, 46, 50-).

## 1.8.2. Vocalic Dilation.

### 1.8.2.1. VOWEL HARMONY

One of the most extensive phenomena of vowel dilation is known by the name of vowel harmony. In Estonian we find vowel harmony on a larger or smaller scale in SE and in few places in NE. The age of vowel harmony in Estonian and in other FU languages is still an unsolved problem. A certain mixed character of BF and some other FU languages also complicates the problem. The prehistoric contacts of BF languages with



non-FU languages have not yet been elucidated, nor the problems of possible substrata. Although it seems rather probable that vowel harmony has been lost in NE, we still lack definitive proof that vowel harmony has once occurred in the whole NE area<sup>1</sup> (on the vowel harmony problem, see further Tauli, *On the Age of Vowel Harmony in Estonian*, *Apophoreta Tartuensia*, Stockholm 1949, 63–). The treatment of vowel harmony in this chapter does not mean that the phenomenon is supposed to have originated in Estonian; on the contrary, it is probable that it dates back at least to PF (respective dialect). Dilative phenomena more or less similar to the Ural-Altaiic vowel harmony<sup>2</sup> are to a less extent to be found also in other groups of languages, e. g. in several African (see L. Homburger, *Les langues négro-africaines*. Paris 1941, 110–) and American Indian languages (see F. Boas, *Handbook of American Indian Languages I* 79). A complete vowel harmony including all words is to be found in the Paleosiberian Chukchee language (ib. II 646–), where the vowels are divided into three groups: weak, strong, and neutral, and where in the same word strong and weak vowels cannot occur together. In Estonian we find only  $a \sim \bar{a}$ ,  $u \sim \bar{u}$  and  $e \sim \bar{e}$ , whereas  $\bar{o}$  is lacking in the non-initial syllable.

### 1.8.2.1.1. Palatalization.

#### 1.8.2.1.1.1 $\bar{a}$ .

$\bar{a}$ -harmony is besides SE also to be found in several places in NE, viz. in Khn, here and there in L $\bar{a}$ , T $\bar{o}$ s, Saa, Juu, NEEC, K $\bar{o}$ p, Vil, KJn, Kod. E. g. in the second syllable: Khn(K) *nemäd*, Var *külä*, T $\bar{o}$ sE *eläb*; in Aud there is on the whole no vowel harmony, a few words excepted, e. g. Koima ja Lindi *ärjäbäd*; Saa *metsäs*, *nel'lä kápägil* ~ *nellä kápägul*, *isä*, but *sil'ma*; in JuuK vowel harmony is commonest in Toomja and Rasala, where we find it among older and middle-aged persons, and where  $\bar{a}$  occurs in the second and third syllable, and  $\acute{a}$  (back  $\bar{a}$ ) further on in the word, e. g. in Juu Kuimetsa one person may

<sup>1</sup> In this paper the NE reconstructions are given without  $\bar{a}$  and  $\bar{e}$  in non-initial syllable.

<sup>2</sup> Cf. on vowel harmony and its disappearance in Turkic languages, A. v. Gabain UAJb 24:1 105–.

have  $\ddot{a} \sim \acute{a} \sim a \sim a$ , but  $\acute{a}$  is most frequent; JuuKu *ärrä*, JuuKa *jäämä* ~ *väl'la*; in Hls we find  $\ddot{a}$  in a few words in the Selja dialect, e. g. *tänä*, *tämä*; Lüg *metsäme* (*metsamehe*), VaiI *päräst* ~ *perast*, VaiKu *setä* ~ *setä* ~ *setä* (~ *seta*) (see further Toomse ALSE 1937 95), ViIv *esmäbä* (*esmaspäev*), KJn *'minnä*, MMgR *eenämid* (*heinamaid*), Kod(KV) *elägu*; HlsPo *ärä*, PstHo *kül'ä*, KrAi *temä*, HelK *jättä*, TrvPi *künnäb*, RanK *keedäb*, Puh *ämärik*, KriKä *pennär*, SanLa *kellä*, Ote *'pästmä*; in KamR  $\ddot{a}$  occurs in the second syllable only if  $\ddot{a}$ ,  $\ddot{u}$ , partly also  $e$  are found in the first syllable, e. g. *'üürgäma* ~ *'ürgäma*, (*näl'sk* :) *nädsä*, *pettä*; cf. *esa* (*isa*), *pia* (*pean*); Vön *tetä*?, TMrKö *rügä* ~ *rüga* 'rye', HarKa *medägi*, UrvVa *imä* (*ema*), RõuK *kinä* (*kena*), Kan *pik'äle* (*pikali*), PlvAl *'küünäl*, RöpT *esändede* (*isandate*), Vas *päävä*, SeM *küt'ä*, Lei *šilmä*?, *k'üpär*, LeiP(O) *minä*, but Lei(Ve) *'päätama*, *'päätanu* (see Tauli *op. cit.* 70), LutSJa *pezä*; EMA 1 13, 14; 2 50, 62.

In some dialects we find  $\ddot{a}$  only in the second syllable, whereas further on in the word there is no  $\ddot{a}$ , thus in KamR, TrvP. Examples from the third and the following syllables: Khn(AS) *'kärämä*, Vig(Ste), Tõs(KM) *ähärdämä* (*ähvardama*), Saa *üpämä* (*hüppama*), JuuK *änämläne* (*enamlane*), JuuKa *värävä*; KuuT *hüppädä*, KJnL *nägemätä*, Avi *kähäräs*, MMgR *tegemätä*, KodSa *el'litäd*, Puh *lämmätämä*, SanLa *elänüvä*?, KriK *veneläse*, UrvVa *püperdämmä*, RõuH *el'iskellemä*, Kan *tegemäldä* (*tegemata*), VönA *emätä*, PlvK *vinnütämä* (*venitama*), PlvR *pedäjä*, Röp *vidämä*, VasM *vähämbäs*, SePa *imehtelemä*, Lei(Vä) *änäbä*, LutSJa *videlämä* (*vedelema*). In some dialects the comitative case is also subject to vowel harmony, e. g. KJnL *'pakhmüsegä*, KodS *kühvüligä*, RõuV *räbinägä*, SePa *võijegä*?. This does not mean that vowel harmony in those dialects is younger than the comitative, but only that the com. ending has conformed to the phonemic system of the dialect. In most cases the comitative ending is not subject to vowel harmony, e. g. RanK *'tüüga*, Ote *küläga*, HarM *vereväga*, RõuK *'pääga*, SeKü *'käega*. Cf. IngR *kiilenkä*. PA 6, 20, 32, 109, 115, 116.

#### 1.8.2.1.1.2. *ü*.

After  $\ddot{u}$ ,  $\ddot{a}$ ,  $e$  in the first syllable in NE  $i$  occurs in the second syllable corresponding to  $\ddot{u}$  in SE and F, e. g. *sügis*, *häbi*, *leppima*,

cf. TrvP *sügüse*, PstHo *äbü*, PlvK *lepüss*, F *syksy, häpy, leppyä*. Presumably this *i* is derived from *ü* (see further Tauli *op. cit.* 65).

*ü* in the second syllable is to be found in a much smaller area than *ä*, e. g. in KamR we find *ü* in the second syllable, but not *ü*. In NE we find *ü* only in Khn, on the Kuu capes and in Vai. E. g. Khn(KA) *küsüs, venümä*, KuuT *käbü*, KrkAi *näkküss*, KrkA(W) *sängü, tülü, äbu (häbi)*, but *käbu*, Hls *väsüme, äbü ~ äbu, tülü ~ tülu ~ tüli, tuluteb*, but *'ker'kume (kerkima), 'sel'gume (selgima)*, cf. Hls(W) Abja *käbu (käbi)*, TrvP *tülütama, tülü ~ tülu, sügüse, tülütama* 'to annoy', cf. TrvM *sän'gust*, in PstHo it is generally *ü*, e. g. *äbü*, but *tül'u, ven'ub (venib)*, SanLa *lännüki (läinudki)*, KrlK *tennü*, Kam Uniküla and Kärevere *sün'dünu, lännü ~ lännu*, UrvVa *tülü*, Kan *'müürü (müüri)*, HarMõ *tükkü*, RõuH *sügüsene*, PlvK *lepüss (lepib), elüga (heliga)*, VasO *'läüdüs (täib)*, SeVõ *veidü*, Lei *süküss (sügis)*, LutSJa *küünütämä (küüni-tama)*, EMA 2 40 'kätki', 48 'läinud'.

Examples of *ü* in the third syllable: SanLa *kingitüst*, KrlK *siblitšünü*, HarM *küüsünü*, Rõu *läp'ähüss (läpastus)*, Kan *äre'väste (ärevile)*, RäpP *'sündünü*, VasV *tellItü*, SeSa *piiretüs's (püritus)*. Cf. also Hls *'kümnus < \*kümnenus (kümnis)*, cf. F *kymmenys*; TrvP *'tervuss < \*tervehus (tervis)*, cf. F *terveys*. Cf. also Tauli, *loc. cit.*

### 1.8.2.1.1.3. *ç*.

The back *e* of non-initial syllables mainly occurs in SE, where it has been denoted by *ç*. E. g. San *'sõðrmeç*, KrlK *võsastikkeç*, Ote *sõrmusseç*, VõnA *parveniç*, UrvVa *'poiskẽç*, Kan *saksulẽç*, katusẽç, RõuS *hobẽç*, PlvH *olẽma*, RäpV *patanẽç*, VasK *kõnẽç*, SeNu *varIkukẽç*, Lei(Vä) *vaneç*, LutV *haagutẽç*.

*õ* occurs in Khn, e. g. Khn(Ka) *'valgõttõ*, Khn *tuhandõsõ*; from Se, too, *õ* is recorded, e. g. SeH *san'dlkõnẽç*; regarding the SeKü dialect it is said that "the first *e* of the suffix *-kene* sounds more like a back sound than the second: *majakõnẽç*" (14); SM *kar'bIkõzẽga*. EMA 1 4 'lõoke', 8 'juuksed', 15 'kahekesi'.

### 1.8.2.1.2. Velarization.

#### 1.8.2.1.2.1. Progressive.

In dialects with vowel harmony we also find a progressive velarization of the vowel, i. e. the front vowel changing into a

back vowel under the influence of a preceding back vowel, thus conforming to the phonemic system of the dialect. This is apparent in cases when an unstressed word is agglutinated to the preceding word.

For instance in Khn, according to T. Saar, the shorter forms of the personal pronouns are subject to assimilation of the preceding word by vowel harmony, e. g. *me* ~ *mõ*, *te* ~ *tõ*, *näd* ~ *nad*, forming a phonetic entity with the preceding word, e. g. *Kus sa* (= *kussa*) *olid?* *Mis sä* (= *missä*) *kuulsid?* *Ju sa* (= *jusa*) *said*. *Paelu tõ* (= *paeludõ*) *kalu saitõ?* *Egä näd* (= *egänäd*) *sedä taha*. *Kaugõl nad* (= *kaugõlnad*) *paissid* (*paistsid*)? In RõuH the particle *inne* ~ *enne* 'only' occurs after a back-vowel word in the form *innẽ* ~ *õnnẽ*, e. g. RõuH *un'ikunn\_umm\_innẽ* '(it) is only in the heap', cf. *tõõnnẽ vid'i inne* 'the other only drew'. An example of compound: HlsM *'seitsme 'lõiskumä '17'*, KrlKä(J) *ütes'dõisku '11'* (< *-kümmend*).

In Vig and Kod, where we usually have *ä*-harmony, there is still *a* in the non-initial syllables if in the preceding syllable there is *u*, *o*, or *ó*, e. g. Vig(Ste) *'näl'guma*, *'vältuma*, *täkõtama*, cf. *ähärdämä*, Kod(KV) *välgotab*, *mälota*. In RanK, where we likewise have *ä*-harmony there is still *a*, if in the preceding syllable there is a *u*, e. g. *'kül'muma*, *'näl'guda*, *'lämbuma*. In SeKü, if the first syllable contains a front vowel, we have in the non-initial syllable *e*, *õ*, if there is an *o* in the preceding syllable, e. g. *näijolẽ* (*neiule*), *pääs'õkkõõõ*.

#### 1.8.2.1.2.2. Regressive.

Mägiste has explained the large number of cases of *e* ~ *õ* that occur in dialects by regressive velarization (Suomi V : 10 244–; cf. Itkonen, Vir. 1945 171–, 179–). First of all we may assume the velarizing influence of the following back-vowel suffix, mostly the *oi*-suffix, on the preceding vowel.

*e* – *o* > *õ* – *o*. E. g. *kõbus* < *\*kepoisa* < *\*kepoisa*, cf. *kebjas*, F *kepeä*; *mõnus* < *\*menoisa*, cf. *menu*, F *mennä*.

*e* – *a* > *õ* – *a* can with a certain doubt be assumed in such cases as: PõiVK *võmmal* (*vemmal*), Vig(SteLl) *õha'valge*, Ris *'sõõõna* ~ *'senna* (*sinna*), *'rõõõnde* (*rinde*), *sõõõna* (*sina*), cf. *rennušt*,

*send*, and  $i > e$  above p. 98; JuuK *rõijal* (*rehe all*), AmbN, KadT, VJg(W) *sõrv* (*serv*), KJnP *tõstamen't*, Plv *nõna* (*nina*).

Mägiste explains the  $\tilde{o}$ 's in these words as follows: "Their origin may be assumed in such dialectal areas in which there is vowel harmony, e. g. where alongside each other we find types like *kõhn* : g. *kõhna* and *lehm* : g. *lehmä*. If such an area borrowed a word like e. g. *kehv* : g. *kehva* from a neighbouring area without vowel harmony, the question would arise with which possibility of vowel harmony the phonemic system  $e - a$ , which was strange to the dialect, was to be replaced:  $e - \tilde{a}$  or  $\tilde{o} - a$ . This question was evidently decided in favour of  $\tilde{o} - a$ . The possibility that  $e - a$  had been borrowed and had then by way of phonetic change become  $\tilde{o} - a$  seems less probable, even if it is not theoretically impossible" (*op. cit.* 248). But as regards such everyday and old words as *nina*, *sina*, *rind*, they were indubitably to be found in all dialects, and there are no grounds for the belief that they were borrowed from another dialect. It is remarkable that in these words we find the phonetic change  $i > e$ . It may be assumed that when the phonetic change  $i > e$  spread from neighbouring dialects to those dialects in which we at present find  $\tilde{o}$  in these words,  $e$  (in  $a$ -stems) was replaced by  $\tilde{o}$ , as a result of which words like *nina*, *sina* (which had already before been in the dialect) were replaced by the forms *nõna*, *sõna*, thus conforming to the general phonemic system of the dialect. In addition we must bear in mind that in some of these words the  $\tilde{o}$  may be a result of reduction, especially before  $n$ . Cf. also Mägiste *op. cit.* 249.

On  $\tilde{o}$  in the first syllable, which according to Itkonen is due to the dilative influence of the back vowel in the non-initial syllable, see Tauli *op. cit.* 66-.

Regressive velarization is also present in the phenomenon called *breaking* (in French *brisure*, in German *brechung*). This occurs in Khn and in Juu Kuimetsa. Here the front vowel of the first syllable has, owing to the influence of the following back vowel, moved backwards, and of the former front-vowel articulation only a short higher "fore-stroke" in the beginning of the vowel is left, so that a vowel somewhat like a diphthong has developed. Thus

$e, \tilde{a} - a, u, \tilde{o} > \text{ʃ}\tilde{o}, ja - a, u, \tilde{o}$ . E. g. Khn  $\text{'s}\tilde{o}\tilde{ndabi} < send$

*abi* 'to help you', *ʼlʲõndõ*, *ʼlʲõnda* (~ *ʼl'enda*, *l'ennud*) < *len-* (*linde*), *jõlm* (*ilm*), Khn(AS) *kʲask* (: *ʼkäs'kis*), Juu Kuimetsa *kjand* (*känd*), *kjapp*, *njapp*, *sjalg*, *mjand* (among a few persons aged 68–85) (see also Mägiste *op. cit.* 250–). The dilative velarizing influence of the following vowel has been active chiefly in the latter part of the vowel. Since diphthongs of the type *eõ*, *ea* are alien to the dialect they have been replaced by diphthongs similar to *ie* (< *ē*), *iä* (< *ā*) which are indigenous to the dialect. Cf. ON *hjarta* < \**herta*, cf. G *herz*, Engl. *heart* (Grammont TPh 259); cf. Posti UUA 1948: 13 49–.

It is also possible that the occurrence of Juu Kuimetsa, where the original *i* is represented by *jɛ* among the older people, belongs here: *ljenn* (*linn*), *rjɛnd*, *mjɛnd*, *sjɛnd*, *ʼpjɛllama*, *vjɛllad*, *ʼsjɛrge*, *ʼvjɛskama*, *sjɛtane*, *mjɛtu*. It is not possible to decide whether *jɛ* is derived from *e* or directly from *i*. In the latter case one might here assume regressive velarization — dilation: *i* > *jɛ* owing to *a*, *u*, *e* of the following syllable. If, however, *jɛ* has developed from *e* (< *i*) one might assume a phonemic analogical generalization of *j* from the words like *kʲand*, *mʲand*. In this case the diphthong *ie* (< *ē*), already present in the dialect, has favoured the development of *jɛ*.

## 1.8.2.2. OTHER VOCALIC DILATIONS

### 1.8.2.2.1. The Intervocalic Consonant Is *h*.

In E dialects we find widespread vocalic dilation if the intervocalic consonant is *h*. In such cases we find assimilation of the following vowel by the preceding one as well as the opposite, in which case the assimilation can be partial, e. g. *üha* > *öha*, or complete: *ahe* > *aha*. The occurrence of dilation just with *h* as an intermediate consonant can be explained by the fact that “*h* has no oral articulation worth mentioning” (cf. Ariste ACUT B 47 : 1 35 and above p. 92), so that two vowels separated by *h* may be regarded as two vowels adjacent to each other, which of course, always try to assimilate one another.

#### 1.8.2.2.1.1. *e* (ɛ) after *h*.

*e* (ɛ) in the illative ending *-hen* (*hɛn*) has in most of the E dialects been assimilated to the stem vowel, to the extent per-

mitted by the phonemic system of the dialect; there is thus no *ä*, *ö*, *ü* assimilation in those NE dialects where these vowels do not occur in non-initial syllables. E. g. *kuhu* < \**kuhen*, *maha*, *sohu*, *suhu*, cf. RöpJ `suu<sup>h</sup>; RüdT *pähá*, IisI *soho*, *tühü* 'work', PlvK `puuhhu 'bosom', VasS `päähhä, SeKü `tüüh'hü. Cf. SVp. *maha*, *öhö*. Further on in the word it has been assumed that already in late PFe (*ǣ*) following *h* was consistently assimilated to the preceding vowel in such cases as ill. *jalga* < \**jalkān* < \**jalkahan* < \**jalkahen*, *saadi* < \**sātīn* < \**sātihin* < \**sātihen*, g. *taeva* < \**taevān* < \**taevahan* < \**taevahen* (Kettunen EKÄ 153-4); cf. F *jalkaan*, *satiin*, *taivaan*, IngS *paljahad*, Vt. *taivāssa*, SVp. ill. *metsha*, *abhu* (E *appi*), *kindhad* (E *kindad*). But in Estonian as well as Votian we lack criteria to support an assumption that the assimilation has here taken place before the loss of *h*; it may as well have happened after the loss of *h*, as a result of the contraction of vowels; cf. SE *he-* ill. such as HarM *kerikuhe*, *palukahe*. Noteworthy is also the fact that in SVp. *i* has had no assimilative influence, e. g. (*nagriž*;) *nagrhen*, while in Cr.-Ol. on the contrary *e* has assimilated the preceding *i* to its likeness, e. g. (*nagris*;) *nagrehen*. PA 112.

### 1.8.2.2.1.2. Other Dilations.

#### 1.8.2.2.1.2.1. The Assimilator Is a.

Progressive.

*ahu* > *aho*. E. g. Lih (*ahi*;) *aho*, Tõs(KM) *jahò* (rare among the older generation), Mär *ahõ* (*ahju*).

*ahi* > *ahe*. E. g. Var *jahemees*, cf. *kaegas* < *kai-*, Aud *jahe* (*jahi*), (*taht*;) *tahe*, *laheng* (*lahing*), Vän(R) *jahe* (*jahi*), SJnP *ahe*, *vaheb*, Hls(U) *lahe* < *lahi* (*lahja*).

Regressive.

*uha* > *oha*. E. g. Käi(A) *lõhå* (*luha*), cf. *tõås*, Aud *pohas* (: `puhtus), VilV *pohasin* (~ *puhkasin*), Se Hilana *juhan*; Müller põhās (5); cf. also the RõuH individual pronunciation *koh'a* (g. *kuhja*): "this time the old woman articulated somewhat slackly and negligently; this word usually occurs in the form *kuha*" (73).

*üha* > *öha*. E. g. Aud *põha*, RapHK *tõhad* (: *tühi*), ÄksV *pühaba*; Müller Põhā (1), Rossihnius põhā (7).

*iha* > *eha*. E. g. Hi(A) *lèhå*, Aud (*vih't*;) *veha*, *lehaveti põhad*

(*lihavõttepühad*), cf. (*síga* :) *sea*, VilV *veha*, *léha*; Müller *leħa* (9). Cf. Lv. *lejà* < \**leha* (E *liha*).

## 1.8.2.2.1.2.2. ä.

Progressive.

*äha* > *ähä*: Aud *kähär*, (*mähk* :) *mähä*, RapHK *kähär*, Rak *kähäras*, SJnP *ähärdama*.

*ähe* > *ähä* widely in NE. E. g. Pöi *lähäd*, MuhL *ma lähe*, Khn *pähäl* (*pähkel*), cf. Wd. *pähel*; Aud *vähä*, PärP *tähändab*, *vähändama*, Mär *mähä* (: `mähkmed), *ei lähä*, HMD *lähädamal*, *tähäd*, KeiH *tähändab*, Juu *vähä*, *lähän*, JõeR *lähäb*, JMdSo *vähäks*, KadT *mähärdune*, *vähändab*, VMr *tähälebanu*, *nähä*, *lähäks*, Rak *vähä*, VJgR *nähäs*, JõhP *lähät*, VaiI *läheb*, IisI *lähäb*, *vähä*, SJnP *vähä*, LaiKa *tähäd*, MMgR *vähä*, TMrVKo *kähen*, RõuS *lähätedüss*, VasM *vähämbäs*, LutK(V) *lähätäss*.

*ähi* > *ähe*: Khn, Tõs(KM), RapHK *vähed* (*vähid*).

Regressive.

*ihä* > *ehä*. E. g. VilV (*viht* :) *vehäst*.

*ehä* > *ähä*: Var *rähä* (*reha*).

## 1.8.2.2.1.2.3. o.

Progressive.

*ohu* > *oho*. E. g. Aud *kohos* (: `kohtus), Vig(Ste) *kõhos* (: `kõhtu ~ `kuhtu). Mär *kohos*, KeiK *roho*, RapR *rohost*, KJnL *noho*, KsiL *kohotama*, IisI *kohos*, *noho*, *kasetoho*, AviP *rohod*.

*ohi* > *ohe*. E. g. Var *ei tohe*, cf. *roegas* < *roi-*, AudE *rohe*, Tõs(KM) *ei tohe*, PJgE *koheseb* (*kohiseb*), *ei tohe*, SJnP *tohen*, *rohe*, UrvM *ei<sup>t</sup>tohe<sup>k</sup>*, RõuS *ess tohe<sup>k</sup>*.

## 1.8.2.2.1.2.4. e.

Progressive.

*ehi* > *ehe*: AudE *ehetat'i* (: *ehitud*), PJgE *ehetada*.

Regressive.

*ihe* > *ehe*. E. g. Kse(Z) *sëshess* < *sihes*, Aud, PJg-Tor *kehelgond*, ÄksV *vehelda*, HlsM *seherine* (*sisemine*), TrvP (*tihklema* :) *tehelda*, *kehelgonna*, RanK *tehe* ~ *tihe* (usual), RõuS *eheruse*. Cf. Vp. dial. *k'eher* ~ *kiher*.

*ühe* > *öhe*. E. g. KrjT *ühë* Pöi (E 529) *öhessa* '9', Mar *ühe*, Mih(Ste) *õhõ* < *öhe*, Aud (*üks* :) *öhe*, *löhedalt*, cf. (*süsi* :) *sõe*,



Hää(N) (*üks* :) *öhe*, Kul *õhel*, NisA *öhe*, Juu *öhe*, *öheksa*, PltR *õhös* (*ühes*), ÄksV *ühessa*, *ühes*, Kod(KV) *põhördämä* < *põherdämä*, Lüg *põhördäb*, KeiK *õhöksa* < *öheksa*, Stahl *õhe* (VKVM 35); cf. in RõuS the individual *lõhelik* — “it is usually pronounced *lühelik*, but sometimes the old woman also says *lõhelik*” (25).

*uhe* > *öhe*: *oherdi*, cf. Jõh *uherdiga*, Lüg *uherd*, Tõs(KM) *uhurdi*, F *uhari*; MarH *kohes* (*kuhu*), Lai *kohe* (~ *kuhu*), AviMu, KsiL *kohe*, HlsVKA *koel* < \**kohel* ‘where’, RõuH *kũhe*, UrvO *koes* (*kuhu*), Kan *kohegina* (*kuhugi*), SeR *koes* (*kuhu*) (cf. Ojansuu AUA B 1 : 3 87) — it is possible, however, that *o* in this word is of different origin, cf. Puh *konass* (*kunas*), KamU *konaki* (*kunagi*), HarKa, PlvAl *kooni*? (*kuni*); Kod(KV) *mohe* (*muhe*), SePa (*kohUss*: ‘*kohtu*’) ‘*kohtohe*.

*öhe* > *ehe*, *ehe*: here and there in Sa, Muh. E. g. Jäm *vehemad* (Ariste EK 1931 78), KhkK *leheb*, Ans (E 529) *pehe* (*pähe*).

#### 1.8.2.2.1.2.5. õ.

Progressive.

*öhe* > *õhö*. E. g. Mih(Ste) *õhõ* < *öhe* < *ühe*, KeiK *õhöksa* < *öheksa* < *üheksa*, Lüg *põhördäb*, Kod(KV) *põhördämä* < *põher-* < *püher-*, PltR *õhös* < *öhes* < *ühes*.

*õhi* > *öhe*: PJgE *rõhetsed* (*rõhitsed*), *kõhema* (*kõhima*).

#### 1.8.2.2.1.2.6. ü, u, i.

Progressive.

*ühi* > *ühü* in NEE. E. g. SimV, VJgRü, Lüg, IisI *tühü* (*tühi*), SimV *mühüseb*, Lüg *pühüde* < *pühide*, Jõh *pühüb*, IisI *lühükene*, Jõh *lühüke*, IisI *nühüb*. Cf. SVp. *pühütädä*.

*ühe* > *ühü* in WE: Tõs(KM) *ühüssä* ‘9’, TõsKa *ühüspool* (*ühel pool*), Var *ühüss* (*ühes*), *lühüm*, Lih *ühüssa*, MarH *ühõle*, Vig(Ste) *ühüssä*, Mär *ühüs*, *lühüm*, Mär(R) *ühüle*.

*uhe* > *uhu*: Tõs(KM) *uhurdi* (*oherdi*).

Regressive.

*ohu* > *uhu*: HarKa *kuhut* (: ‘*kohtu*’), *uhukęę*.

*ehi* > *ihi*. E. g. Jäm, Hi(A) *mih* (*mehi*).

*ohi* > *uhi*. E. g. HarKa *ruhi*, *uhilõig* (*ohelik*), Krl *tuhik*.

As is evident from the examples given above, the dilation in connection with the intervocalic consonant *h* is most general in WE.

### 1.8.2.2.2. The Intervocalic Consonant Is *j*.

Another consonant which, owing to its weak articulation, better than other consonants permits the assimilating influence of the vowel to assert itself, is *j*.

Progressive.

*aju* > *ajo*, resp. *ajo* ≡ pro *o* > *u*. In those dialects in which in the non-initial syllable we usually have *o* > *u*, we cannot, as regards words with primary *ajo*, like *vajoma*, decide whether it is a secondary transition *aju* > *ajo* or whether the primary *o* has survived due to *aj*. E. g. here and there in Lă, Pă, Sim, Vl, TaN, WSE *pajo* (~ *paio*), Mär *sačoga*, SimE *vajob*, *ačod*, *lačeo*, *sačone*, KJnL *kajo* (*kaev*), *vajoma*, Kod(KV) *ajote* (*ajuti*), *vajoda* (cf. *madu*, *jagu*), Hel *ajo*, *kajo* (: g. *kaju*).

*aju* > *ojo*, resp. *ojo* ≡ pro *o* > *u*. E. g. KeiK *kočeob* ~ *kočob* (~ *kučub*), Mär, SimE *kočeo*, Ris *kočō*, RapHK *ojoma* (*ujuma*), *tojo* (*tuju*), Hel *lojoss*, Trm(T) Töreda *kojo* (*kuju*), *tojo*; EMA 2 60 'koju'.

Regressive.

*uja* > *aja* in the word *mujal* in WE and CE. E. g. Kei *mačeal*, Ann *majal*, JaaHa, JuuK, JMd (EMA) *maal* < *majal*; EMA 2 55 'mujal', PR 26.

*uja* > *oja* in the word *mujal*, e. g. Aud *mojal* ~ *majal*.

*ōja* (resp. *oja*) > *aja* in the word *najal*: JMd, AmbN, SimE *naal* < *najal*, cf. *nōjatama* ~ *najatama*, Lüg, MMg *nōjal*, Vai (EMA) *nojäl*, cf. F *nojalla*, Vt. *nejaaaa*. EMA 2 54 'najal'.

*aju* > *uju*: Ans (E 529) *lujus* (*lojus*), JämH *kuju* (*koju*).

### 1.8.2.2.3. Other Intervocalic Consonants.

#### 1.8.2.2.3.1. *l*, *r*.

It cannot be stated for certain that besides *h* and *j* there are other consonants that favour vocalic dilation. We have a few examples which might allow the assumption that the liquids *l* and *r* have that quality. Thus in Mär, according to R. Toona, a certain tendency has been found towards the change *oru* > *orū*, *orō* e. g. *orō* : *orūs*, *sorō*, and *äre* > *ärē*: *ärēvil*, *järēle*. As regards *r* we might further mention the following cases: HMd *järälä*

(*järele*), SimV, Avi *toru* (~ *toru* ~ *tõru*) (*tõru*), PuhV *keresse* (*kerise*), Wd. *keres*, LutSJa *nurul'* (*noruli*), *nurutama* (*norutama*).

As regards *l* we may present the following cases: PJgE *pooltsei* (*politsei*), VMr, Jõh *poletsei*, VaiI *poletseinik* ~ *politseinik*; Lih *kilimat'iga*, Tõs(KN) *kilimet*, SimV *kil'imit*, Jõh *kilimit* (*külimit*) — here the *i* in the two following syllables has most probably favoured the transition  $\ddot{u} > i$ , LaiKa *mälätama* ~ *mälästama*, *mälästus*, *mälätsema* (< *mäle-*); Mih(Ste) *vele* (*vile*), SjnP *velets*, Kõp *velets* ~ *vilets*, SeSa *pelet* (*pilet*).

### 1.8.2.2.3.2. *u, o.*

In some dialects we find a consistent dilation in case of  $o \sim u$  in the non-initial syllable. In Kas e. g.  $\acute{o}$  corresponds to the primary *o* and *u* in the second syllable, when in the first syllable there is a long  $\acute{o}$ ,  $\acute{u}$ ,  $\acute{\ddot{o}}$  or  $\acute{\ddot{u}}$ ; in case of other vowels there is a *u*, e. g. *rõõmõs* (*rõõmus*), *kõõlõd* (*kaalud*), but *kuumus*, *kodu* (ACUT B 47 : 1 45).

In southern Kod(KV) (Alatskivi) and partly in the western part, the primary *u* and  $u < o$  have become *o* in the second syllable, when in the first syllable there is *o*, *ä*, *ö*, or *e*, whereas *u* has survived after *a*, *u*, *õ*, *i*, or *ü*. E. g. *kodo*, *kopotama*, *kägo*, *lähnod* (*läinud*), *sõõnod*, *elo*, *peso* (cf. *kulu*, *kannud*, *rõõmuga*). In the northern part there is  $u > o$  also after *u*, *i*, *ü* (108–116). Evidently it is a partly completed change  $u > o$ , which is spreading by way of phonemic analogy to more and more words.

$u > o$ , resp.  $o \equiv$  occurs regularly in some dialects if there is an *o* in the preceding syllable. E. g. PilKa *kodo*, 'lol'los, *kopotama*, PltK *obone*, 'tooros, 'loksoma, KJnL *kopotan*, *orod*, *toedod* (*toidud*) (cf. *elu*). It seems that the dilative influence of the *o* of the first syllable is especially favoured, besides *h*, by the lenes *D*, *B*. Thus in some dialects the *o* in the second syllable has chiefly survived in the words *kodu* and *hobune*. E. g. JuuT *kodo*, *obone*, PilM *obone* (cf. 'vanduma), KJn *kodo*, cf. *palub*, HmD *kodo* ~ *kodu*, KsiL *kodo*. EMA 2 60 'koju'.

The *u* of the second syllable has had a preventively dilative influence on the change  $au > ao > \bar{a}$ . Thus in some dialects in which assimilation has taken place between components of that diphthong (see p. 43), words that had *u* or *i* in the second

syllable, have not been subject to that change. E. g. PJgE *paugu*, cf. *laada*, Mär *laulud* ~ *laqlud*, *kausid*, cf. *saanad*, JuuK *augud*, cf. *kaanad*, SimE *augud*, cf. *kaanad*, SJnL *laulu*, cf. (*laut* :) *laada*, Pil *augud*, cf. *laada*. In other dialects the *u* of the second syllable has not prevented the change *au* > *ā*, e. g. MMgK *aagust*, Kod(KV) *paauguga* (*pauguga*), Puh *laalu*. Cf. SWF *laulu* : *laola*. In Central Käi(A) we find *u* > *o* in the first syllable except if there is an *u* or *i* in the second syllable, cf. *lõbâ* (*luba*) ~ *ullõd* < *hullu-* (*hullud*) (cf. p. 100). A preventive influence of *u* is probably found in AudE *ehetal'i* : *ehitud* pro *ehetud* (cf. p. 110).

Dilative influence of *u* may furthermore be assumed in the following sporadic cases: KJnL *ommoko*, Avi, PalK *ommuku*, HelP *omugult*, PuhV, TMrVi *ommuku*, HarÄh *ummukult*, Rõu *hummuk*, RöpT *hummok-* (*hommik*); MarH *'moosuse* (*Moosese*), RõuH *moosuse*; VMr *kaludur* (*korridor*); RisV *purjud* (*purjed*), Wd. *pur'ju*; Hls Abja, Laatre *tudruk* (*tüdruk*). Cf. LpL dial. *a* > *o* in the second syllable when there is an *o* in the first syllable (Wiklund LFL 70).

### 1.8.2.2.3.3. *i*.

$\bar{e} - i > \bar{i} - i$ , i. e.  $\bar{e} > \bar{i}$  in the first syllable if there is an *i* in the second syllable, here and there in WE. E. g. MusI *'siimid*, *tüinib*, *piinike*, *küilik*, *müilitab*, *miiriga* 'America', Vän(R) *'miilitama*, *piinike*, *'tiinima*, *süilik*, Tor *piinike*, JuuK *iiring* (*heering*), *piinike*, *miilitämä*.

A preventively dilative influence of *i* occurs in some dialects at the assimilation of the components of diphthongs in such cases as JuuK (*leil* :) *leili*, cf. (*ein* :) *eendest* (*hein*), *kausi*, cf. (*kaun* :) *kaanad*, PJgE *kausi*, cf. (*aun* :) *aanad*, Mär *kausid*, cf. *saanad* (*saunad*), ÄksV *poisi*, cf. *koedu*; PJgE *'päibi* : *päev*. Cf. SWF *päivist* : *päevä*. In Central Käi(A) we find *u* > *o*, except if *i* or *u* occurs in the second syllable, e. g. *sõreb* (*sureb*) ~ *suri* (cf. p. 100). PA 99, 100.

Also the following sporadic cases seem to be due to the dilative influence of *i*: TõsKa, KseÕ, RapHK, JuuK *isi*, Sim *is'i* ~ *ise*, Kõp *is'i*, KJnL *is'i*, HelJ *isiäralikud*, PR 33; Mih Nõmme *sügisi*; Lüg *misike* (*missugune*), *nüisike*, JõhP *nüisikene* (*nüisugune*);

Khn(AS) *i'bi'stel* (*epistel*); RapN *esimine*, Wd. *esimine* — here evidently being mixed up with the suffix *-mine*, favoured by the dilative influence of the *i* in the preceding syllable; Krk(T) *misiliste* (*mesilaste*); HlsPo *mitti midaki*; KrkA *mitti ütte* (*mitte ihte*).

#### 1.8.2.2.3.4. Other Vowels.

A dilative influence of the *e* may be assumed in the words: KeiH *'ohvetser*, JuuK, VMr *ohvetser*, JaaH *ohvetsäär* (: *ohvitseri*) — here we may assume a dilative influence of the *o* in the first syllable and of the *e* in the third syllable upon the *i* in the second syllable.

A dilative influence of *a* occurs in the 3rd p. pl. and in oratio obliqua here and there in the islands, in Lää and Pää. E. g. Jäm *tulad* < *tulavad*, *nägad*, *tegad*, AnsM *tegad* ~ *tegavad* (cf. p. 60), MusI *'jõõskavad* (*jooksevad*), Khn *tulad* ~ *tulõ<sub>4</sub>ad*, RidK *tulavad* (*tulevad*), KseÕ *tegavad*, Var 3rd p. pl. *tulavad*, VigS *olavad* (*olevat*), Mih(Ste) *'rääkad* (*räägivad*), TõsKM *panavad* (rare among the older generation) ~ *panevad*, Aud *tegavad*, PJgE (*näib*) *olavad*.

In some dialects we find dilative influence of *a* in the word *päev* due to vowel harmony, if it is the second component of a compound and there is an *a* in the first component. E. g. KJnLa *'lauba* (*laupäev*) (cf. *metsä*), HelJ *lauba* (cf. *emäle*), TõsE *'ar'pane pä* < *argipäevane*, cf. *pühäpä*.

A dilative influence of *a* may be also assumed in the following cases: Sim *pandarul'l'* (*panderoll*), Kod(K) *pandarul'l'*, Rõu *pandarol'l'*; MusV (*pärast*) *jaagapi* (*Jaagupi*); PJgE *kantsaleis*; Ris *uisa* ~ *paisa* (*uisapäisa*) — here the assimilative influence has been exercised by the two surrounding *a*'s.

*ä — e > ä — ε*, *ä* chiefly in Lüg and Jõh. E. g. Lüg *näkemine* (*näge-*), *äpene* (*häbe-*), Jõh *väkevad* (*vägev-*), *mälestuses*, *äkeda* (*äge-*), JõhP *kättä* (*kätte*), *'nähnät* (< *nähnet*) 'pl. seen', VJgR *kättä*; RidT *jällä*, PlvA *läsä* (*lese*).

A dilative influence of *ü* is probably present in the following cases: *ü — e > ü — i*: AudE *'kulgis* (*küljes*), Ris *kulgi*, RapN, HelL *'kül'gi* (*külge*); RisVi *'ülgiks* (*hülgeks*); — KrlK *siblitšünü* (: *siblitš*). PA 5

As regards other FU languages, see e. g. on Hungarian vocalic dilations Horger MNY 83-.

### 1.8.2.2.3.5. Epenthesis and Metaphony.

The anticipation of the articulation of *i* in the following syllable is also the starting point of those phenomena apparent in E dialects which are usually known under the name of epenthesis. As the result of phonetic change we here find *i* (after a short vowel), as in SE *läits*, or the raising of the final part of a (long) vowel into *e*, as in WE *taet*. It is not quite clear by way of which stages this development has taken place. Of such variants as Trv(W) *läits* : *latse* : *latsi* and Tös(W) *paet* : *paadi* : *'paati* it might be assumed that they are due to (penetrative) interverson (see p. 184), since epenthesis is present only in connection with the loss of *i*, thus directly *'latsi* > *läits*. It is possible that such a development has really occurred in the case of some so-called epentheses, but in regard to the case *paet* it is difficult to assume a development *'paati* > *paet* or *'paati* > *\*pait* > *paet*. Interverson is also contradicted by a few cases in which we find epenthesis together with the survival of *i*, as in Jäm *mainitsema*, and the Khn variants such as *lo<sup>l</sup>kk* (*plokk*), *re<sup>l</sup>* (*trell*), which words decidedly have found their way into the dialect after the apocope. The usual assumption has been that epenthesis has taken place by way of a palatalized consonant, and this seems to be the most probable explanation. This assumption is favoured by the fact that in the same dialects that show epenthesis in cases where the following *i* has disappeared, we find palatalization under the same conditions, as is apparent in e. g. Tös(W) *paet* : *paadi* : *'paati*, and *las's'* : *'lassi*, or Jäm(W) *koel* : *kooli* : *'kooli*, cf. VII *an'd* : *'andi*. Thus the epenthesis mentioned here should rightly belong to the chapter: Consonant Assimilates Vowel. Since the palatalization of the consonant here has taken place only under the influence of the following *i*, the assumption that epenthesis occurred by way of a palatalized consonant does not exclude the possibility of interverson, i. e. the *i* in being reduced and disappearing could transfer its palatal articulation to the preceding consonant by way of palatalization, or to the preceding vowel by way of epenthesis. That epenthesis

has come about just by way of a palatalized consonant is proved also by such cases in which there has been no *i* at all in the following syllable, such as PJaE *muesutand* (*musutanud*).

*i*-epenthesis.

Before *ts* in WSE and NSE, e. g. HlsM *üit's* '1', PstHe *läits* (: *lätsive*) (*läks-*), KrkAi *kait's* '2', Trv(W) *laits* (: '*latsi*), Hell *kait's*, RanK *läits*, PuhK *kaits*, San, KamK *läits* (: *lätsi*), Ote *üit's*. Before other consonants, e. g. PöiJ *vaëht* (: *vahi*), Khn(AS) *re<sup>h</sup>p* > (*repp*), Mih(Ste) *u<sup>h</sup>nt* (*hunt*), *ke<sup>h</sup>pp* : *kepiga*, KrkA *näin'* (: *nänni*), *äit'* (*ätt*), Puh *ju<sup>h</sup>nn* (: *junni* : '*junni*); Jäm *mainitsema* (*manitsema*), JämH '*kuitsikad*, KrjT *mehha'inik* (*mehaanik*), Müller *mainitžanuth* (142); UT *maenitjema* (VKVM 328); PuhV *uiss*, OtePü, UrvM, Kan *uiss* < \**ussi* < *uksi* (*uks*); Ote *eis'* ~ *es's'* ~ *esi* (*ise*). Cf. Lv. *k<sup>u</sup>o'iG* : *k<sup>u</sup>o'iğiD*, *me'iŽ* (E *mesi*), Zyr. dial. *koid* ~ *kod'*, *šait* ~ *šat'* (Wiedemann SGr 35).

*e*-epenthesis chiefly occurs in the islands, here and there in Lä, Pä, Ha. E. g. Jäm(P) *moes* (: *moosi*), Khk(T) *poel* (*pool*), MusI *toer* (~ '*toori*) (*toober*), VII *saen* (*saan*), JaaV *loes* (: *loosi*), PöiVK *soen* (: *soaniga* : '*soanisi*) (*saan*), MarH *moed*, Var *suen* (: *sooned*), Mih(Ste) '*oetsma* (*otsima*), Tõs(W) *paet* (: *paadi* : '*paati*), Hää *taet* (*taat*) Ris *poed* : '*puodi*, KeiKlg *toaēt* (*taat*), RapHK *tøet'*, Juu *to<sup>u</sup>et* : *tuadi*, KadPa *tjel* (: *tjalid*), Lai *moesik* (*maasik*), PJaE *muesutand*,

A phonetic change related to epenthesis is the phenomenon called metaphony (French *métaphonie*, German *umlaut*), i. e. the rising of the vowel due to the occurrence of an *i* in the following syllable, which usually takes place without the intermediate stage of a palatalized consonant. In the E language area we find a metaphonical *a* > *ä* in Khn and Var, viz. in the diphthong *ua* (< *ā*). E. g. Var *tuär* (: *tuari*), *uäk* (: '*uaki*) (*haak*), Khn(TS) *puäs* (: *puasi*). Cf. Lv. *pāp* (E *papp*) : *pāp̃iD*. As this phonetic change occurs in the same dialectal area and under the same conditions as epenthesis, i. e. if the following *i* has disappeared, it is probable that this metaphonic phenomenon has taken place, similarly to epenthesis, by way of a palatalized consonant, as is also assumed with regard to the Livonian and Lettish metaphonic *a*, *o*, *u* > *ä*, *ö*, *ü* (see further Posti LL 105–).<sup>1</sup> In addition we

<sup>1</sup> B. Collinder is of different opinion UUA 1939:13 71–; cf. criticism by E. Rooth, *Studia Neophilologica* 13 103; Collinder's reply ib. 291.

may assume a metaphonic *i* and the influence of a palatalized consonant preceding the former in the following sporadic cases: Kul *krät't'* (*kratt*), KeiH *näs'tik* (~ *nas'tik*); PlvK, SeSa *püt'sk* (*putk*), cf. F *putki*; Ris *lūsikas*. Cf. also the word *ätt*, cf. dial., e. g. Aud *at't'*, LVEM 118, cf. F *ätti*, Vt. *ätä*, Md. *at'a*, Cher. *ači*, *at'i*, *at'a*, *ät'ä*, Voty. *ataj*, Osty. *at'a*, Hung. *atya* (MSFOu 10 : 1 137).

As regards the other BF languages we find consistent epenthesis and metaphony in Livonian, where it is connected with the corresponding phenomena in Latvian dialects (see Posti LL 99–). Regarding Ind.-Eur. languages, metaphony is widespread in Germanic languages, cf. G (*vater*:) *väter*. On phonetic explanation of metaphony see Essen, Vox 21, 19, Grammont TPh 255–, where there are also illustrations of metaphony and other vocalic dilations from many languages. As regards the Scandinavian languages, see e. g. P. Wieselgren, Fest. Sahlgren 177, Posti UUA 1948: 13 39–.

## 2. Tendencies of Differentiation and Articulatory Strengthening.

### 2.1. DIFFERENTIATION OF CONSONANTS

#### 2.1.1. Glide Consonants.

Between voiced consonants.

*nl* > *nDl*, *nr* > *nDr*, *lr* > *lDr*. E. g. *'keldri*, cf. G. *keller*; *kindral*, cf. G *general*, Vän *'kinral*; AmbN *'kaendla* ~ *'kaenla*, PöiVK, MuhLõ *'kaindlus*, Juu *'kaendla*, VaiM *kaintla*, cf. F *kainalo*; JürS *'küindra* (*küünra*), Puh *'küindre*, cf. F *kyynärä*; Lih *'piindlik* (*piinlik*); TrvVä *'teęnder* (*teener*), Hls(J) *'tjįndre*, cf. MLG *dener*; Juu *'vaendlane*, VaiM *vaintlane*, KJnP *'vaindlane*. Cf. Vp. *kündl'ed*.

*ml* > *mBl*, *mr* > *mBr*. E. g. *kambri*, cf. LG *kamer*, G *kammer*, F *kamari*, Mih Nõmme, KeiK, Pil, PltR (*kammer* :) *'kamre* (Ariste ACUT B 46 : 1 13); *sambla*, cf. F *sammal*, KeiK *'samla*;



*ämblik*, cf. F *hämähäkki*, Aud, KeiH, JuuK *'ämlik*, Wd. *häm-malane*. Cf. MdM *jomla* ~ *jombla*. Cf. on the other hand *nDl* > *nl*, *mBl* > *ml* p. 48. As regards other languages, cf. e. g. Engl. *alder* < *alre* (Bloomfield L 383), Greek *andrós* < \**anros*, Fr. *chambre* < \**chamre* (TPh 235).

Between a voiced consonant and *s*.

*ns* > *nts*, *nDs*. E. g. *õndsa* < \**onnisan*, JõeI *län'ts* (: *länne*) (*lääs*), cf. F *länsi*, Jõh *mantsikad* (~ *maasikad*), PJgE *'teędsin* (*teenisin*), Mär *teentsin*, Ris *'õentsaks* (*õõnsaks*), RõuK *'indsinäär* (*insener*), Kul *'konts'taabled*, TrvV *'konstaabeli*, Aud *'pe'ntsiin* (*bensiin*), Vig(SteLl) *pintiin*, Tor *'pentsin*, HmD *pentsiini*, HlsM *tjijn'ds* (*teenis*), TmrKõ *pent'siin*, San *pendsiin*, HmD *'pintsjun* (*pension*), SJnP *pin'tsijoon'*, RápT *'õõndsambast* (*õõnsamast*).

*ls* > *lts*, *lDs*, *rs* > *rts* chiefly here and there in Sa and WE. E. g. Kse(Z), VarH *'uulsa* (*hoolsa*), *'eiltse* (*eilse*), JämH *ma kultsi* (~ *'kuulsi*), Kse(Z) *'kuuldsime*, Mär *'naertsin*, *'keeltsin*, PõiA *ma kuulsi* (~ *kuuli*), PJgE *'kuuldsin*, Krj (*'kuulus* :) *'kuultsad*, PõiLa *'kuultsad*, KadP *'kuultsad*, Ris *'pealtsed*, HmD *ildsid* (*hülsid*), Ris *'paltsam* (*palsam*), HmD *'naertsin*, KhkT *'äärtsəd* (*äärsed*), HlsM *revidjir'ds* (*revideeris*). Cf. Lv. *kūldzi* < \**kūlusa*-.

*ms* > *mps*, *mBs*. E. g. *kampsun*, cf. G *kamisol*, Mih(Ste) *'ampsest* (*ammusest*), Khk(T) *'armpsad*, JaaHa *'armpsama*, Hi(A) *'ermpsp* (*hirmsa*), PJgE *'ilmpsi*, JaaT *'irmpsat* (*hirmsat*), PõiLa *'irmpsad*, HlsKu *'irmpse*, PõiA (*toimne* :) *'toimpse*, PJgE *'toimbsed*, *'viimbsed*. Cf. on the other hand *nts* > *ns*, *mps* > *ms*, etc., p. 48.

### 2.1.2. Differentiation of A Consonant Adjacent to Another.

A differentiation of the place of articulation probably occurs in the word Trv *'okman'n'* (*opman*), VasVä *'hok'man'ni* — differentiation has here occurred in order to facilitate articulation, since it is easier to pronounce completely different sounds beside each other than sounds with only a slight difference: the place and mode of the articulation of *p* and *m* are alike, as they are both labials and occlusives, the only difference being that *m* is a nasal. A differentiation of the same kind can be found in the word Rõu *'vasklabäiv* (*vastlapäev*).

## 2.1.3. Glide Vowels.

### 2.1.3.1. BEFORE LIQUID

In Estonian glide vowels chiefly occur in order to avoid the cluster of two consonants which happened to be left at the end of a word after apocope, whereas glide consonants are chiefly to be found in consonant clusters which came into being on account of syncope. As regards the phonetic explanation of glide vowels see Ariste ACUT B 47 : 1 153-. In the common language we chiefly find the glide vowel between a stop and a voiced consonant.

Between a stop and *l*, *r*.

In *tr*, *Dr*, *kl*, *Gl*, *kr*, *Gr*, *pl*, *Bl*, *pr*, *Br*. E. g. *ader* << *atra*, *sõber*, Khn (EMA) *atõr* (*ader*), Juu *põdär*, *nõdär*, Hls *libel* (*lible*), TrvP *nõgel* (*nõel*), Puh *nagel* (*nael*), KriK *sõber* ~ *sõpr*, UrvO (among the younger generation) *põdär'*, *adär'*, cf. among the older generation *põdär*, *adär*, Kan *puður'* (: *puðroga*) (*puder*), *kabul* 'string' (: *kabla*), Rõu *kubel'*, Rääp *vedär* (: *vedro*) (*vedru*), *kapel* ~ *kabel*, VasO *puðir* (: *puðru*), *lipär* (*lible*), SeSa *vigil* (*vigel*), *vedär* (: *vedro*), SePa *sõbär* (: *sõbra*), *nagil* (: *nagla*). Cf. KriI (E 361) *kapL* ~ *kabl*, *mügr* ~ *mükR*, *vakL* ~ *vagl*, *nakL* ~ *nagl*, Lei *kukR* (*koger*), LutSJa *taka* (*tael*), KraO *vigil*. EMA 1 10 'ader', 2 31 'oder'. Cf. ELv. *pë'ddärZ* (*põdär*), *ka'ggäl* (*kael*), SVp. *pedr*, *kagil*. PA 82.

As in word-final position, so Estonian also in word-initial position attempts to avoid clusters formed by a stop and a voiced consonant. In word-initial position such clusters have usually been avoided by leaving out the stop, cf. dial. *laas* (*klaas*) (see p. 187-). Sporadically, however, we find in dialects attempts to avoid the cluster of stop + voiced consonant in word-initial position with the aid of a glide vowel. E. g. PJg-Tor *pa'rauhti* (*prauhti*), *kiristus* (*Kristus*), SJnL *pa'rauhti*, *palärts* ~ *palarts* (*plarts*), *palarinal*, *parantsatas*, PilKa *kiristus*, *pa'rauhti*, *palärts*. Cf. Hung. dial. *kirisztus* (N. J. Berze, A hevesmegyei nyelvjárás, Budapest 1905, 11), SOsty. *palastir* < Russ. пластырь.

Thus the cluster of stop + voiced consonant was originally familiar to the E phonemic system only inside the word. In such a case as VJg *proguramm* (*programm*) the primary

stress is on the syllable *gramm*, which has been subjected the same phonetic treatment as a word-initial syllable.

Between *h* and *l*, *r*.

E. g. *kihelkond* < *kihlakunta*, Jöh *kihilgunnas*, cf. PlvH *'kihlkõnna*, Kod(KV) *mahal* : p. *mahala* (: g. *mahla*), *kihilama* (: *kihilatud*), HarM *sulahane* < \**sulha-* (*sulane*), RöpT *mahel* (: *'mahla*), *nüher* (: *nühra*) (*nüri*), *kaher* (: *kahru*) (*karu*). As we see in the case of *h*, the glide vowel has also come into being if the cluster was in word-internal position. Cf. NCr. *mahala*, *šulahane*.

### 2.1.3.2. BEFORE NASAL

In *hn*, *hm*. E. g. Emm(S) *taham* (*tahm*), KeiKrj *vih<sup>h</sup>m* (*vihm*), VaiM *tehent* (: *tehnet*) (*teinud*), *nähent* (: *nähnet*), Kod(KV) *puhumad* (: *puhmas*), *taham* (: *tahmane*), p. *vihima* (*vihma*), *ühüm* 'schneebrei', *uhumer* (*uhmer*), *võhõmma* (: *võhmima*) 'to beat', *pahan* (: *pahna*), *ahanus* (*ahnus*), *tuhunja* (*tuhnija*), KodA *pehmess* (*pehmeks*), PlvAl *puhem* (*puhm*), Röp *lõhen* (*lõhn*), *vihem* (~ *vihM*), RöpT *ähen* (*rähn*), Wanradt-Köll *fõhenrettyd* (*kõhnrett*), cf. Müller *Rochnreti* (27), Vigæus *vehima* (*vihm*) (VKVM 78 : 13). Cf. F dial. *lehemä*, NCr. *lahina*. PA 80.

In *sn*, *sm*: TMrKõ *käsen* (*käsn*), Röp *käsen* ~ *käsN*, VasO *käzän* (: *käsnä*), SeSa *k'azən* (: *käznä'*): Trm(T) *'paasem* : *'paasmad*.

In *rn*, *rm*: *kaaren* < \**kaarn* < *kaarna*, *koorem* < \**koorm* < *koorma*, JämH *ar<sup>h</sup>m* (~ *ar'm*), KJnP *'saarem* (*saarmas*). Cf. F dial. *silmä* < *silmä*, SMK 199, NCr. *šalamo*.

Between a stop and *n* in the *nud*-participle in WSE. E. g. HlsM *tappõn*, PstHol *tappan* (*tapnud*), KrkAi *'panden* (*pannud*), Krk(T) *võtten*, KrkKa *tappänigi* (*tapnudki*), HelK *'sõitøn*, TrvV *'lasken*, SanN *'andenu*, KrlÄh *'oitunu* (*hoidnud*), Krl(S) *'võidunu'* (*võinud*), HarMõn *'kuuldanu* (*kuulnud*) (for more examples see Toomse, *ta-*, *tä-*, 223–). On that glide vowel see also Toomse ib. 233–. Cf. Lv. *kušən*, *jùobən* (Posti LL 91).

### 2.1.3.3. BEFORE STOP

In wide areas in SE a glide vowel *e* or *i* (probably due to the dilative influence of the suffix *i*) has arisen between the

stem consonant and the suffix *-ki*, *-gi*. E. g. Hls(K) *rottigi* (*rottki*), *'koerigi* (*koerigi*), HlsM *ärräligi* (*härälgi*), *'ommigi* (*ongi*), PstHol *'nüidigi* (*nüidki*), KrkKa *tappanigi* (*tapnudki*), KrkA *'kustigilt* (*kuskilt*), *'saitigi* (*saidki*), *aidastigi*, TrvPi *kohutigi* (*kohutki*), *olessigi* (*olekski*); in RanK the glide vowel is especially regular if there is a *k* at the end of the stem, e. g. *pakkegi* (*pakki*), *kasakkegi* (*kasakki*), *e* occurs quite often in the case of other consonants as well, e. g. *'vihtegi* (*vihtki*), *'kas'segi* (*kasski*), *'kul'pegi* (*kulpki*), whereas in the case of voiced consonants *e* is rarer: *kul'l'gi* (seldom *'kul'legi*), *kärrgi* (seldom *'kärregi*) (*kärugi*), *'kaivgi* (seldom *'kaivegi*) — “On the whole there is great uncertainty regarding *-gi* and *-egi*: even the same persons pronounce the same word sometimes with *-egi*, sometimes with *-gi*” (40); Ote *'veitegi* (*viisidki*), *'poissegi* (*poisski*), *'pan'degi* (*panečki*), *'siinegi* (*siingi*), Kan *kumbegi?* (*kumbki*), RõuK *määrestigi?*, SeR *'ül'segi* (*ükski*), SeM *'püjmeği* (*püjngi*), LeiA(O) *ül'segi* (*ükski*); Verginius *üffüföd*, *šilm* (VKVM 203 : 29). Cf. F dial. *jalaka* < *jalka*, SMK 199.

#### 2.1.3.4. BEFORE SEMIVOWEL

Between *t* and *v* here and there in Pä, VI, Ta; SEE. E. g. Tor *lõdev* (: *lõdva*) (*lõtv*), PltU *ladev* (: *ladva*), TMrKõ *ladev* (*latv*), Ote *lõdev*, Rõu *ridev'* (: *ridva*) (*ritv*), Röp *ladev*, VasO *ladiv*, SeSa *ladev* ~ *ladiv*. PA 65.

Between *s* and *v* in Kod, TaS and SEE. E. g. TMrKõ, UrvO *U-Antsla kesev* (*kesv*), Ote *rasev*, Rõu *rasev'*, Plv *rasev*, RöpT *kasgev* (: *kasvo*), VasO *rasiv*, SeSa *razev* (: *razvane*), EMA 2 31 'oder". PA 82.

Between *h* and *v* chiefly in Kod. E. g. Kod(KV) *ahav* (: *ahviss*) (*ahv*), *krahav* (*krahv*), *õhõv* (*õhv*), *kohov* (*kohv*); also in medial position in case of extra-long degree of length, e. g. *rahavalle* (*rahvale*), *ohover* (*ohver*), *trahevma* < *'trahvma* < *'trahvima*, *sähäväb* (*sähvab*), *nähävämä* (*nähvama*), *tuhuv* < *tuhv*, cf. G *stufe*; *treheväb* (*trehvab*) (see further KV 229), Kod(K) *kahaver* (*kahvel*), KodS *kühüv'igä*; Röp *kehev* (*kehv*). Cf. CrT *ahava*.

Between *h* and *j* in Kod, e. g. Kod(KV) ill. *põheja* (: *põhjas*), ill. *ahaju* (: *ahjun*).

### 2.1.3.5. ON THE GLIDE VOWEL IN GENERAL

As is evident from the examples the glide vowel is mostly *e*, resp. *ɛ* (in the SE back-vowel words). Exceptions: (1) here and there we find *u* after labial consonants, e. g. Kan *sõbur'*, from which *u*, probably by way of analogy, has been transferred also to occurring after non-labials such as Kan *pudur'*, (2) after *h* we find in some dialects, especially in Kod under the dilative influence of the vowel of the preceding syllable, the same vowel as glide vowel as occurs in the stem, e. g. *mahal*. It is probable that these glide vowels have directly originated as such and not via *e* (and later, by way of assimilation,  $e > u$ ,  $a$  etc.). (3) In a few other cases, probably due to the dilative influence of the vowel of the neighbouring syllable, we find instead of *e* a vowel similar to that of the neighbouring syllable, e. g. PJg-Tor *pa'rauhti*, *kiristus*, Hls(K) *rottigi*. (4) In SEE *ĩ* partly occurs as glide vowel, due to Russian influence. (5) *i* occurs owing to the influence of a palatalized consonant, e. g. JämH *ar<sup>i</sup>m*. As regards the other BF languages the glide vowels consistently occur in word-final as well as in medial position in Livonian before *l*, *r*, *m*, *n*, if not succeeded by a vowel (LL 90–). A similar glide vowel is also to be found in Lettish dialects in the vicinity of the Livonian area. As regards the other FU languages, see e. g. on the glide vowel in LpL, Wiklund LFL 13–.

## 2.1.4. Change of the Syllabic Function of the Semivowel.

### 2.1.4.1. $v > u$ .

In some dialects the combination of consonant + *v* in word-final position has been avoided by the *v* changing its syllabic function: from a consonant it has become a vowel:  $v > u$ . Here we find the following changes.

$rv > ru$  in the islands and in SWE. E. g. JämH *sõru* (*serv*), MusI *tõru* (*tõrv*), Krj *kõru* (: *kõrvad*) (*kõrv*), JaaH *tõru*, PöiJ *kõru* (*kõrv*), Phl *seru* (*serv*), KseO, Kõp *tõru* (*tõrv*), Tõs(KM) *karu* (: *karva*), Hls(U) *seru*, PstP *kõru*, *karu*, TrvP *tõru* (: *tõrva*),  $r'v$  has not taken part in the change, e. g. PstP *ir'v*, *jär'v*.

*lv* > *lu*: HelL *salunu* < `salvnu < `salvanu, PuhV *valuma* < `valvma < `valvama.

*tv* > *Du* chiefly in Sa, Rei, Phl, LäSW, Pä, Vl, WSE. E. g. Jäm *ladu* (: *ladva*), Var *lõdu* (: *lõdva*), Tõs(KM), Tor *ridu* (: `ritva), KJnP *ladu* (*latv*), but *lõdev*, *ritv*, TrvP *lõdu*, Hel(K), KamR *ridu*.

*hv* > *hu*: PöiK *vahu* ~ `vahva, Vig(Ste) *vaho*, PstP, Hel *kihu* (*kihv*), Ote *ahuna* (*ahvena*) < \*`ahvna, SeSa *ahuna*'.

*sv* > *su* chiefly in WE, Vl, SE. E. g. Jäm, VllK, KseN, Var, Kõp, KJnL, Hls(U), Puh *rasu* (: *rasva*); LutKi *kazunu*' < `kasvnu- < `kasvanu-.

In some dialects the second component of a diphthong, *i*, has had the same influence before *v* as a consonant. Thus

*iv* > *ju* in Hi, PäS, WSE, Lei. E. g. SJnL *kajuda* < `kaivda (*kaevata*), Hls(U) *kuju* (*kuiv*), Ote *vaeo* (*vaev*) << \*`vaivo, Lei *seju* (: *seiva*) (*tiib*). PA 42, 57, 59, 65.

#### 2.1.4.2. *j* > *i*.

The semivowel after a consonant has had the same development all over Estonia as *v* had in some dialects, i. e. when, due to syncope or apocope, it has obtained a syllable-final position, it has become a vowel: *j* > *i*.

*lj* > *li*, *rj* > *ri*. E. g. *nali* < *nalja*, *kuri* < *kurja*, *hiline* < *hilja-*; PöiK *kiri* (*kirju*), Lüg *kiri* (*ib.*), *pal'i* (*palju*), Khk(T) *koli* (: *kolju*), Var, KJnL *karima* (*karjuma*), Mär *mulitud* (*muljutud*), *karis* (*karjus*), Puh *kirivä* < *kirjävät*.

*sj* > *si*, *hj* > *hi*. E. g. *kahi* < *kahjo*, *kuhi* < *kuhja*, *asi* < *asja*, *osi* < *osja*.

*kj* > *Gi*, *tj* > *Di*, *pj* > *Bi*. E. g. *padi* < *patja*, *kabi* < *kapja*; TrvP *vagi* < *vakja* (: *vagja*) (*vai*), PuhU *vagi* (: *vaja*).

#### 2.1.5. Development of a Vowel at the End of a Word.

In NEEC, MMg Saare and Kod a vowel *e*, *o* has developed at the end of the word *on*. E. g. Vai(W) Kutru *tämä ono kupsal*, Kod(KV) *one minuss üvässi suurem* (*on minust hästi suurem*) (156); cf. Ing *one*. For other examples from Estonian and other BF languages see Mägiste EK 1938 169, 171–, 179–. On Cheremis see Lewy TG 50. This vowel has probably originated from

the loose word-ending characteristic of Estonian, on account of which, when the word ends with a voiced consonant, we hear at the absolute end after the consonant a short sound similar to an indifferent vowel. According to Ariste the explanation of this phenomenon is the following: "while articulating voiced consonants the vocal chords are in a phonation position. When the oral articulation of the corresponding consonant has been finished the vocal chords do not immediately resume their open position, but stay for a moment in their former position. The result is an extremely short indifferent vowel that lacks every shade of oral articulation" (ACUT B 47 : 1 154-), The development of such a loose ending into a complete vowel might be due to careless articulation (see also Ariste EKH 78, cf. Mägiste *op. cit.* 179-).

## 2.2. DIFFERENTIATION OF VOWELS

### 2.2.1. Glide Consonants.

#### 2.2.1.1. $u > w$ , $w > v$ , $i > j$ .

A change of syllabic function opposite to that treated above has occurred if the second component of a diphthong,  $u$ ,  $i$ , and the semivowel  $w$  on account of the loss of the intervocalic consonant have got into intervocalic or syllable-final position. Here mainly belong two groups.

(1)  $u > v$ ,  $i > j$  as a result of interversion or loss of  $h$ .

$uh$  ( $üh$ )  $> hv$ ,  $ih > hj$ . E. g. *jahvatama*  $<$  *jauha-*, *jõhvid*  $<$  *jouhi-*, *kehva*, cf. F *jauhaa*, *jouhi*, *köyhä*; *lahja*  $<$  *laiha*, *kahju*  $<$  *kaiho*, cf. F *laiha*, *kaiho*.

$u > v$  in ViC and TaN, e. g. Kod(K) *jõvi*  $<$  *\*jou-i*  $<$  *jouhi* (*jõhv*). See p. 56.

(2)  $u > w$ ,  $ü > w̃$ ;  $w, w̃ > v$ ;  $i > j$  as a result of the loss (resp. change) of the weak variant of a stop.

In the type (*raud* :) *raua*  $<$  *\*rau<sub>l</sub>a-*, *kaua*  $<$  *\*kau<sub>k</sub>a-*, etc. we find the following types of occurrence in E dialects.

$u, ü > v$  (type *rava*) here and there in islands, Pä, Vi, Vl, Ta. E. g. *havi*  $<$  *\*hawi*  $<$  *\*hau-i*  $<$  *\*hau<sub>k</sub>i*, JaaH (*mā*) *leva*  $<$  *\*leü-an*  $<$  *\*leü<sub>i</sub>an*, EmmV (*loud* :) *lova* (*laua*) (as regards Hi see further Ariste ACUT B 47 : 1 13, 57-), Khn(Ka) *ravass*, SimV

*rava* < \**rau-an* < \**rau<sub>t</sub>an*, Kod(KV), Hls(J), PstHo *kava* < \**kau-an* < \**kau<sub>k</sub>an* (*kaua*), KrkA *kavass* (*kauaks*). Cf. F dial. *kawan*, SMK 49, 100, 163.

*ɥw*, *ūw*, *üŵ*, *ũŵ* > *ɥv*, *ūv*, *üv*, *ũv* (type *lauwa*, *kuuve*) here and there in VI, ViE, TaN, Har. E. g. Hls(K) (*liud* :) *liwa*, *lauwa* (~ *lavva*), TrvP *kuuress* (~ *kuvress*) < \**kuuwe-* < \**kūte-*, RāpP *kuuve*(*kümne*); Hls(K) (*rüüd* :) *rüüvi* (~ *rüvvi*). Cf. Cr.-Ol. *kuuven*, *käuvä*, F dial. *tuwa-* (Vir. 1925 1–, SMK 49, 74–, 163). As to this type it is most natural to assume that the weak variant of the stop, which probably was a spirant, did not disappear completely but became the glide sound *w* (*ɥ<sub>t</sub>a* > *ɥwa*). Analogically we ought in this case in the preceding *rava* type also to assume not a complete loss of the consonant (*ɥ<sub>t</sub>a* > *ɥ-a*), but a glide sound similar to the *w* between *ɥ* and *a*. As, however, in this case it would be more difficult to explain the development of the *rava* type, we must assume that the glide sound here was a slight one, so that it did not develop into an independent phoneme, but was fused with the preceding *u*. It is, of course, possible even in the type *lauwa* to assume the complete loss of the consonant, in which case the development would have been *lau<sub>t</sub>an* > *lau-an* > *lauwan* > *lauwa*. To this group probably also belongs the type *raava* in the islands. E. g. Khk(T) *raavad* < \**rauwa-* (cf. *aũ* > *ā* p. 43), JaaH *kööved* (*köied*), PöiP (*aud* :) *aavad*, PöiLa (*täis* :) *tääved*, Phl(A) *laavâd*. Mägiste doubts in this type the change *au* > *ā*, *äi* > *ã*, *öi* > *õ* and assumes *a*, *ä*, *ö* > *ā*, *ã*, *õ* before *v* on certain conditions. M.'s doubts are supported by the fact that in Hi there is not otherwise any *aũ* > *ā*, cf. Kas(A) *saunâ*, nor do we find other diphthong assimilations in the weak grade, such as *aĩ* > *aẽ* > *ã*. Exceptionally we find in a few words in the strong grade *au* > *ā*: *lââl* (*laul*) 'lâât<sub>m</sub>ps (*lautamas*) (ACUT B 47 : 1 60), but these words cannot be compared with the usual cases of assimilation of diphthongs in the weak grade, even if they give evidence of the fact that the *au* > *ā* is not unfamiliar to the Hi dialects. But the examples given by M. such as Hi *lääve* and 'kaajus do not prove the assumption as to the lengthening of the vowel in the *raava* type, as the conditions of these two changes as well as their geographical distribution are quite different. It is to be assumed that in the *raava* type the reason for the assimilation of the diphthong has been the unstable



combination *auwa*, which also in other dialects generally has not survived, but has developed further into (SE) *avva* (see below; cf. Ariste *op. cit.* 57, 82, Mägiste EK 1940 59, Posti FUF 27 48-).

*uw, ūw, üw, ũw* > *uv, ūv, üv, ũv* > *vv, uvv, üvv* (type *ravva*). From the viewpoint of differentiation this main SE type belongs to the former group, since its development in regard to differentiation has been exactly the same. The difference lies in the fact that after differentiation, assimilation has taken place: *uv* (> *vv*) > *vv*, i. e. the consonant has assimilated the vowel. E. g. VaiM *lõvvat* (< \**lõwvat*) < \**lõuvat* << \**lõu<sub>k</sub>at* (*lõuad*), ViV *lõvvad*, KsiL *lavva* (*laua*), ÄksV *ravva*, Hls(J) *lõvvab* < \**lõüva*- < \**lõüüva*- < \**lõüüta*- (*leid*-), KrkP *kõvvest* (*köiest*), Hel (*liud* :) *livva*, Krl (*aug* :) *avve*', RanK 'kävvä (*käia*), Puh (*liug* :) *livvumägi*, Ote (*siug* :) *sivvu*, VõnA ('*lõugu* :) *lõvvu*, TMrKõ *lõvvad*, Rõu *kiivu* (: *kiud*), Plv(S) *tävvelt* (*täietl*), Röp *havve*', VasM *kavvedahe* (*kaugele*), SePa *jovvu* (*jõu*), Lut(V) *havvegl'* (*haugles*); Hls(K) (*rüüd* :) *rüüvi* < \**rüüüvi*- < \**rüüüvi*- < \**rüüti*-, PstHo *puuva* < \**puuva* < \**puuva* < \**puuwa* < \**poowa* < \**põta*- (cf. p. 132), PstK (*kuub* :) *kuuve*, HelPo *süvväss* (*süüakse*), Puh(S) *lүүvā* (*lүүia*), SanLa *ruvvast* (*roast*), Ote *ruuva*, KamK *kuuve* 'g. 6', Röp *lүүveh* (*lүүies*), SeKü *ruuva* (*roa*), Lut(M) *mүүväss* (*mүүakse*). Cf. F dial. *kavvan*, IngR *tuuva*, *tävvest*, Ol. *süvvä* (SM III B 126), Vt. *ravvaD*, *avvākā* (E *luuga*), *levvān* (E *leian*).

The development phases of the type *rawvva*, which in some SE dialects occurs along with the type mentioned above, are not yet clear. It is possible that *w, ü* (*u, ü*), before *vv* is due to stem generalization from the other forms of the paradigm; cf. n. *raud*. E. g. Hls(K) *kävvä* (*käia*), KrkKa *lүүvvä*. UrVva *lүүvvä* (*leia*), Kan *tävve*, RõuH *kavvedahe* (*kaugele*), PlvH *liuvva<sup>k</sup>* (*liud*); EMA 1 14 'leian', 2 32 'haug : haugi', 47 'tuuakse'. Cf. IngS *lүүvvaD*,<sup>1</sup> F dial. *tuuva*, SMK 74-, 100. PA 64.

*ī* > *j*. E. g. *aja* < \**ai-an* < \**ai<sub>k</sub>an*, *poja* << \**poi<sub>k</sub>an*, dial. *aja* (*aiā*) < \**ai<sub>t</sub>an*, e. g. HJnH *aja*, EMA 1 12; Phl(A) ('*hoidm<sub>y</sub>* :) *o(ēā)*, PlvAl (*neid* :) *neju*. Cf. F *ajan*, *pojan*, SMK 50.

For illustrations of the *īv* > *ju* in the type *kujū* (*kuiv*) see p. 124.

<sup>1</sup> A. Sovijärvi supposes that the assimilative tendency *uv* > *vv* has only got half-way, so that of the former vowel an extra short *ū* is still left (Suomi 103 119).

2.2.1.2. *h, v, j.*

At present we find here and there in E dialects *h* representing  $*_t$  between vowels. There are two ways to explain that: (1) *h* is the direct sequel of  $*_t$ , (2) *h* has developed to avoid the hiatus after disappearance of  $*_t$ . A few facts seem to be in favour of the second assumption. (1) In Tor and MMg *h* occurs after the first syllable even in cases in which there has been no  $*_t$  before in its place, but in which (due to dissimilation) *tt* has disappeared, e. g. Tor *ühelda* < *üelda* < *ütelda*. But this phenomenon might also simply be explained by phonemic analogy with the words *sühed* (*söed*), *lühed* (*löed*), since the unit *üe* is alien to the dialect and has no chance of surviving in a single word. (2) In SEE we find in Vas Luhamaa *pümme* : *pümehe*. Here we might assume that  $*_t$  was lost in the whole paradigm. In the nominative case a contraction of vowels and consonant gemination have taken place. In the other cases, however, in which the third syllable was followed by an inflexional ending the third syllable was somewhat more stressed, for which reason the vowels, after the loss of the  $*_t$ , had a greater chance of surviving in separate syllables. This hiatus was, however, soon got rid of by *h* appearing between the vowels. The assumption that in the nom. case it was  $*_t > 0$ , in the other cases  $*_t > h$ , is more difficult to explain. (Cf. also Collinder Q 40 and Kettunen EKÄ 65, 82).

*h* after the second syllable. E. g. HarM *pümeheüss* (*pimedus*), *kadēhuss*, *lubahuss*, *vabahuss* (138), Har(W) Mõniste *magahamada* (*magamata*), *pümeheid* (*pimedaid*), HarM(S) *majahust* (*maiusl*), Rõu (*jämme* : ) *jämehep*, *kibēhep* (*kibedam*), RõuK *tsirahhus*, *tsorahhus*, cf. Rõu Väike Ruuga (E 136) *tsira<sub>us</sub>*, *tsora<sub>us</sub>*, PlvH *kõlahus*, Vas *kadēhuss*, *pümehhüs*, Luhamaa (*lakē* : ) *lagēhhe*, (*pümme* : ) *pümehe*, SePa *lubahazē*? (*lubavad*) (: *lubada*? : *lupa* [*lubab*]), n., g. (*pümme* : ) p. *pümehet*, *segähäze* (*segavad*) (: *seädä*? [*segada*] : *sekä* [*segab*]), SeSa *magahase*?, Lut (*nopē* : ) *nobēha*, Lut(V) *magahama*, *pagēhema* (*pagema*); cf. Krl *jäme<sub>et</sub>*, *rasēiid* (*raskeid*), *püme<sub>üs</sub>* (E 361, 41), HarK *prähv<sub>ä</sub>üss*, Urv (*jälle* : ) *jäle<sub>emb</sub>*, Rõu Väike Ruuga (E 136) *tubli<sub>us</sub>*, PlvA (*sõke* : ) *sõge<sub>elē</sub>*, PlvM *kadē<sub>uss</sub>*, SeSa (*kevväi* : ) *kevä<sub>äl</sub>* (~ *kevä<sub>jäl</sub>*) (*kevade*), Lei *püme<sub>üs</sub>*, Agenda Parva *ja<sub>ggē</sub>ete* (*sagedasti*). Cf. Cr.-Ol. *korgehuš*, *levehüs* ~ *korgie*, *pehmie*.

*h* after the first syllable. E. g. *mihuke* < \**mihu-* (Ojansuu AUA B 1 : 3 12), Jäm(K) *mehugene*; KhkT *sihes* < \**shie-* (sees), Jaa *sihes*, Kse(Z) *sêhess*, Lih *sihest*, Han *sehel* ~ *sehesh*, Var *sehetsê pool* (*seespool*), Tõs *sehesh* ~ *sehesh*, Mih, Lih, Ans *sehesh*, KrkAi, Trv(K) *sehen*, KsiL *sehesh* (cf. Saareste EKirj. 1920 293)<sup>1</sup>; Tor (rare among the older generation) *ühelda* (*ütelda*), *sühed* (*söed*), *lühed* (*löed*), *sihes* (*sees*) : *sihessepool*, MMgRu *ühelnud* (*öelnud*), MMgR *üheldi* (*öeldi*), TrvPi *kähen* (*käesh*), *ehen* < \**ehe-* (*ees*), OtePü *sihen*. Saaremaa MS *wehešt* (*veesh*) (VKVM 134: 16), in the year 1589 *ežen* (VKVM 4 : 6). Cf. Vt. dial. *sühed*, (*sõta* :) *sõhassa*, (*susi* :) *suhed*. After the first syllable as well a very few cases of the hiatus occur in dialects, e. g. KadPa *sii(ist)* (*siidist*). Cf. also LTÕ “*šūj* uš *aš*ž *ūš* šort šepitūt on šee ep šehē ušēštē šainvatūt šanna (VKVM 3), *šehē* and *ušēštē* most probably ought to be read as *pe(ä)* < \**pi(ä)-* and *uu(este)* (< \**ū(ē)-*); Müller *Mæhe* (*mee*) (87), Peasant Oath (from the end of the 16th century) *pešap* (*peesh*) (VKVM 51), Vigæus *lehotawat* (*leotawat*), *lehotap* (VKVM 78) — here it may partly be a question of a purely orthographic *h*; cf. also LpL, Wiklund LFL 185. It is interesting that here and there in WE even the diphthong derived from PF has been differentiated by the *h* appearing between the two components: Phl(A) *jähid* (*jäid*), Jäm, MarH, Kul, Ris Hmd *jähi* (*jäi*), also Rossihnius *jähji* (144).

*v* occurs as a glide sound beside a labial vowel, especially *u*.

*a-u* > *avu*; chiefly here and there in NEEC, Vi, Ta, Rõu. E. g. Hi(A) *avåvõs* (*avaush*) (cf. Ariste ACUT 47 : 1 243), Lüg *sekavus* (*segadus*), *jakavus*, *rapavus* ~ *rap(au)s*, KJnL *vanavus* (~ *vanadus*), Kod(KV) *vanavus* < \**vanha-us*, Help *tasavuss* (3), OteN *tulebuhavuss* (see also Toomse ALSE 1936 288). Cf. Cr. *korgevuš*, *šilevuš*, F dial. *ravot*, SMK 45, Hung. dial. *csunyávu* < *csunyául* (Horger MNy 92).

*u-e* > *uve*, *ü-e* > *üve*, *i-u* > *ivu* in Kuu and Vai. E. g. Kuu (*olut* :) *oluve* (*ölut*), (*koskut* :) *koskuve* ‘spruce bark’, Vai (*lühüt* :) *lühüve* ‘short’, (*kätküt* :) *kätküvest* (*kätki*) (all examples from ALSE 1936 268); VaiKu *jo<sup>ve</sup>* (~ *jo(ē)* ~ *joe*) (*jõe*), *miu* (~ *mi(ä)* ~ *miü*) (*minu*) (see Toomse ALSE 1937 94). Cf. F dial. *joven*,

<sup>1</sup> According to Mägiste we have in the words *sihes*, *sehesh* a dissimilation: *sihes* < *sisässä* (cf. *sisse*), likewise *sihuke* < *sisuke* < *seesugune*; by analogy *mihuke* < *misuke* < *missugune* (personal information).

*luven*, SMK 41–, 69–, 102, Sippola *olu(v)en*, *kätkü(v)en* (ALSE 1936 269); IngR *lühüven*. This variant is probably a loan from Finnish dialects (cf. Toomse, *op. cit.* 270). In Hi *v*, *w* can also appear before a word beginning with a labial vowel, if the preceding word ends in a vowel, e. g. *ons<sub>s</sub>se* 'votsps *jubâ* (*ons see otsas juba?*), *taa* 'wollë ~ 'völlë (*ta oli*) (ACUT B 47 : 1 245).

*j*.

A glide sound *j* has developed in the beginning of a word after the word-final *-j*, *-i* of the preceding word. This phenomenon is due to the loose contact characteristic of Estonian on account of which adjacent words are merged and treated as a whole: the combination *j*-diphthong + vowel is alien to Estonian, cf. *leijan* (Standard Estonian spelling *leian*) pro *lei<sub>i</sub>(an)*, likewise *ei<sub>i</sub>janna* pro *ei<sub>i</sub> anna*. The phenomenon is analogous to the gemination of the consonants (cf. Ariste EKH 79 and below p. 149). E. g. MarHa *ei<sub>i</sub>jarmasta*, HagA *ei<sub>i</sub>jole*, AmbL *sa<sub>i</sub>j<sub>i</sub>josand*, VaiK *ei<sub>i</sub>jolt* (*ei<sub>i</sub> olnud*), KrkP, TrvVä, SanM *ei<sub>i</sub>jole*, UrvVa *ma kai<sub>i</sub>jet* 'I saw that . . .', RõuH *sai<sub>i</sub>jabi*, *ei<sub>i</sub>j<sub>i</sub>näp* (*ei<sub>i</sub> enam*), PlvA *ei<sub>i</sub>jan<sub>n</sub>a<sup>h</sup>*; UrvVa *nii<sub>i</sub>j<sub>i</sub>use ma näi<sub>i</sub>jun<sub>e</sub>* (*nii<sub>i</sub> öösel ma nägin und*), *nii<sub>i</sub>j<sub>i</sub>ast<sub>e</sub>* (*nii<sub>i</sub> astus*), *nii<sub>i</sub>j<sub>i</sub>kk* (*nii<sub>i</sub> itkeb*), RõuH *nii<sub>i</sub>j<sub>i</sub>ol'gi* (*nii<sub>i</sub> oligi*).

It is also possible that in the case of the supposed phonetic changes *\*<sub>i</sub> > j* and *h > j* in the non-initial syllable (see p. 33 and 40) *\*<sub>i</sub>* and *h* disappeared, and later on the glide sound *j* developed in order to avoid the hiatus; cf. SeSa *kev<sub>i</sub>äl* ~ *kev<sub>i</sub>jäl*. Cf. IngR *kiskojes*, *etsijes* ~ *elä<sub>i</sub>essä* (see Mägiste RMP 37).

The appearance of the glide sounds *j* and *w* between two vowels belonging to different syllables, is a phenomenon well-known in languages (TPh 233–; for French illustrations see G. Millardet DL 471–). As regards *j* in FU languages, cf. e. g. F dial. *jajan* << *\*ja<sub>k</sub>an*, *mäjet* << *\*mä<sub>k</sub>et*, SMK 37, 40–; Mde *aj<sub>a</sub>ščan* < *a aščan*, Hung. dial. *bujár* < *\*buár* < *buvár*. For the Permian languages see Uotila KPS 280. Probably the *j* and *v*, which in Livonian at present stand instead of an *h* between vowels in some of the words after the first syllable, are also glide sounds, whereas otherwise intervocalic *h* has disappeared in Livonian; less probable is the transition *h > j*, *v*, e. g. *kejà* (E *keha*), WLv. *püvà* (E *püha*) (cf. also Posti LL 242).

Millardet has separated the development of the glide sound, from differentiation, classifying it as segmentation. Millardet

gives the following phonetic explanation of the development of the glide consonant: "lorsque deux voyelles se suivent immédiatement, les organes, n'ayant pas le point d'appui solide que procure l'articulation de la consonne, peuvent facilement dépasser leur but, et produire une fermeture excessive" (DL 488-9).

### 2.2.2. Development of *v* in the Beginning of the Word.

( $\bar{a}$ - >) *ua*-, *oa*- > *vua*-, *voa*- in HaNW, Juu, ViW, Pil, Lai, Kod. E. g. KeiH *vuasta* (*aasta*), 'vuambal'k (*haampalk*), *vuam* (*aam*), 'vuamber (*haamer*), 'vuasa (*aasa*), JuuS *voavata* (*haavata*), JuuKu *voak* (*haak*), *voamer*, *voav* (*haav*), *voaval* (*haaval*), JMd *vuam*, *vuan* (*ajan*), KadP Kesk-Palmse *vuavik* (*haavik*), VMr *vuam-pal'k*, *vuak*, *vuadu* (*Aadu*), VJgRü *vuadu*, 'vuaki, Sim *vuak*, *vuamber* (*haamer*), 'vuasta (Viru-Roela) (~ 'uasta ~ 'aasta), PilKa Virtsjärve *vuak*, LaiKa *vuam*, *vuambal'k*, *vuavabuu*, Kod(K) *vuak*.

Here we have a continuation of the differentiation begun with the long vowel turning into a diphthong (see p. 133). As the change only concerns the  $\bar{a}$ - > *ua*- words, it is possible that it took place at that very time when the change  $\bar{a}$  > *ua* was spreading. It may be also assumed that in the beginning *v* only appeared after a word ending in a vowel (cf. p. 129-) and later on was generalized in all positions. In ELv. we find a consistent  ${}^u o$  > *vo*, which is the direct sequel to the diphthongization *o* >  ${}^u o$ , e. g. *voràb̂Z* (E *orav*), Wlv. *v<sup>u</sup>oràB*. Cf. F *odottaa* ~ *uottaa* ~ *vuottaa* (E *ootama*) (Toivonen FUF 29 160) and LpL examples, Wiklund LFL 188.

### 2.2.3. Strengthening of the Consonant Adjacent to a Vowel.

*v* > *B* chiefly in WE, here and there in CE and SEE. E. g. PärP *tulabad* (*tulevad*), Vig(Ste) *tanab* (*tänav*), Mih(Ste) *kaltserdabad*, MärKa *pil'b*, *latp*, *urbad*, PJgE *kõba* (~ *iva*), 'tarbis, *kebadi* ~ *kevadi*, *abi* (*havi*), Riskõ *päüb*, JuuK *kibi*, SJnP *iba*,

*kuib* (: *kueva*), ViLV *kabal*, *abitan*, but *orav*, *sügäv* (46), PltP Puiatu *Adavere sabi*, KrkA *vesi omm kiiß*, SanM *kõba*, RõuH *krabat'*, cf. Russ. кровать, VasO *külbi*, SeSa (*jõudu*) '*tarbis'*', LutSJa *tubi*, *läbi* ~ *kõva*, *kivi*, *irbitama*, *külb*. PA 41, 48, 57–, 67, 116.

It is possible that this change has taken place through  $\beta$ . Ariste assumes that the people who have started this phonetic change may have been old people without their upper teeth, who instead of a labiodental *v* articulate a bilabial  $\beta$ . From those old toothless nurses the new generation acquired its  $\beta$  articulation (ACUT B 47 : 1 240). Cf. Phl(A) *keßåde* (*kevade*), MusT *kißid*, Tõs *kißi*, MarHa *kaleßipoja*, ViLV *üleßäl* (see *ib.* 239–).

*j* > *d'* in Lei. E. g. Lei '*d'ääniba* (*jaanipäev*), *d'igä* ~ *g'igä* (*jää*), '*d'uuga* (*jooge*), *d'alg* (*jalg*), *d'älg* (*jälg*), but *jagama*, *jär'g'*, some persons have an alternation *j* ~ *d'*, e. g. Lei(L) *jalg* ~ *d'alg*, *jana<sub>u</sub>uma* ~ *d'ana<sub>u</sub>uma*. Also *rj* > *rd'*, e. g. Lei *mard'a* (*marja*), *kurd'a* (*kurja*). Cf. the same phonetic change in Vp., Ld. and Cr. dialects (Tunkelo VKÄ 465).

## 2.2.4. Rise of the Medium-Heigh Long Vowels before a Vowel.

$\bar{o} > \bar{u}$ ,  $\bar{\delta} > \bar{i}$ ,  $\bar{e} > \bar{i}$ . E. g. JaaHa '*kiijes* < \**kē-e* < \**kē<sub>t</sub>e* (*keedes*), Phl '*tuuwp* (*tuua*), '*juuəs*, '*kiijp*, Tõs(KM) *tuuwasse*, Kuu(S) Tapurla (*viemä* :) *viijä*, Hää(V) *kiija*, TrmT *ei tiijjä* (~ *tiä*) < \**tē<sub>t</sub>ak* (*ei tea*), Hel *kijjä* (*keeda*) (: '*kē<sub>m</sub>ě* [*keema*]).

As is evident from the examples, a glide sound *w* or *j* has appeared, between the rising long vowel and the following vowel. Here the differentiation has taken place in order to avoid the inconvenient combination of long medium-high vowel + short vowel, which is alien to the phonemic system of the language. There are also other ways in E to avoid this combination, viz. the shortening of the medium-high long vowel as in (*roog* :) *roa*, and the assimilation of the final part of the long vowel by the following semivowel, as '*keija* (see above p. 92 and 26) (cf. Ariste *op. cit.* 71–).

## 2.2.5. Diphthongization.

A most extensive phenomenon of differentiation in E dialects is the diphthongization of long vowels. Out of four possible kinds of diphthongization we chiefly find but two in E dialects: (1) the rising of the initial part of the vowel, which is the most widespread and the chief mode of diphthongization in the BF languages, (2) the rising of the final part. In Estonian, in general, we do not find diphthongization by lowering the initial or the final part of the vowel, except in sporadic cases in Hi, North Trv and Se, and in Lei and Lut, where it is probably due to foreign influence (see p. 203).

### 2.2.5.1. RISE OF THE INITIAL PART

#### 2.2.5.1.1. Low Vowels.

$\bar{a} > oa > ua$  chiefly occurs in two separate areas in NE, one in the West, SaE, Muh, Khn, here and there in LÄSW, the other in the central and eastern area, Ha, Jä, ViW, VINE, TaN. E. g. JaaHa *rõasuksed*, PöiVK *'moandlevad (maadlevad)*, MuhL *p<sup>o</sup>aari*, MuhLõ *'s<sup>o</sup>aadud*, Khn *suajassõ (saadakse) : ei soaja (ei saada)*, in the younger words  $\bar{a}$  remains unchanged, e. g. Khn(TS) *saadik, saak*; Khn(Ka) *t<sup>o</sup>aari*, Var *tuari*, KeiKlg *moa*, HagS *lindjuan* (cf. G *lineal*), RapN *vuanas (vaagen)*, JuuH *soadeti*, JMd(M) *suat (saatnud)*, KadP *'truavel (~ 'traavel)*, VMr *vuak (haak)*, VJgRü *suare*, SimE *'moale*, PilKa *mua*, PilM *roamatud*, KJnL *luas' : laas'i*, PHP *uav*, Lai *loalatus (< laalatus < laulatus)*, Avi *suat 'until'*, Trm(T) *muan'di (maantee)*, PalR *soan*, MMgR *suab*, Kod(K) *'muatab < maata- < \*ma<sub>k</sub>atta- (magatab)*, Se Truba *kuas (kaas)*, Lut(V) *(aama [ajama]:) uä (ajan) : uava'*; Turku MS *moa*, m<sub>h</sub>oa (VKVM 18). Widespread in NE is the diphthongized word *ka*, e. g. PhaV *koo < koa*, Ans (E 529) *ko*, Jaa, Pöi, Lih *koa*, PärP *koo ~ ko*. Cf. F dial. *moa, mua*, SMK 154, Cr. *moa, mua*, Ld. *huab, hõab, huob* (E *haab*). PA 16, 95.

The diphthongization of  $\bar{a}$  has also taken place in two separate areas, which are almost the same as those for the diphthongization of  $\bar{a}$ . The diphthongization of  $\bar{a}$  chiefly appears in two variants, of which one is most probably a further development of the other.

(1)  $\bar{a}$  (? >  $e\bar{a}$ ) >  $i\bar{a}$ . E. g. Khn(AS) 'piästlik ~ piäsüke, Var 'kiändin '(I) returned', Tõs sõjar, Juu Kaiu Toomja riägib, VaiK 'riäkimä (: 'rääkis), KJnP 'siädnd (seadnud), Kod(KV) piäsoke, KodS kjänäväd. Cf. F dial. peä, piä, SMK 154; Cr. eäni, piäžemmä, Ld. d'iädä (E jääda). In the word-initial position  $i\bar{a}$  has been further differentiated to  $j\bar{a}$ , thus

$\bar{a}$ - >  $i\bar{a}$ - >  $j\bar{a}$ -. E. g. VMr jääł (hääł), SimU, VJgRü jääres, AviMu 'jääre (ääre), Kod(KV) jääł.

(2)  $\bar{a}$  (>  $e\bar{a}$ ,  $i\bar{a}$ ) >  $ea$ ,  $ia$ . E. g. in the words *pea*, *peal* in most NE dialects, PR 10, cf. Müller Æéé (9), pæle (85); MuhL <sup>4</sup>ea, Var *ia*, Aud *ea* ~ <sup>4</sup>ea (*jää*), Juu peasuksed, JMd riägib, KadT peasuke, SimV 'riakima, VJgR reagitud, VaiI tiadaga (*teadke*), PilKa 'riakima, PltK *vianata*, Lai *jiatus* (~ 'jäätus), *eal* ~ *ial* ~ *jial* ~ *jeal* (*hääł*); cf. Müller erapæřtaba (85), PR 75. Cf. LpK *ienamp* ~ *ianap* (E *enam*) (Wiklund UL 195). In word-initial position we here and there find

$\bar{a}$ - > *ia*- >  $j\bar{a}$ -, *ja*-. E. g. JMdO 'jaari (*ääri*), Trm(T) jias (*ääs*), jiar (among the older generation) ~ jäär.

In *ea*, *ia* we probably have adaptation to the secondary diphthong in such words as (*sigä* :) *sea*, (*pidama* :) *peab* (cf. p. 45 and 189). PA 14, 95.

### 2.2.5.1.2. Medium-High Vowels.

The medium high-vowels have everywhere been diphthongized together and, as was the case with the low vowels, in two separate areas, viz. here and there in Sa and Lä; Muh, Khn, in the northern and central parts of Ha and Jä, Vi, TaNE. PA 18, 95.

$\bar{o}$  > *uo*. E. g. KhkT 's<sup>u</sup>oqlp, Pöi 'juotu (: *joodu*), Muh(Ki) 'l<sup>u</sup>oomi : *loomad*, 'uoder (*vooder*), <sup>u</sup>oodata, Khn 'kuormu : 'kuõr-massõ, Ksc(Z) 'puodi, KeiH s<sup>u</sup>õned, KeiK löom : *lõoma*, HJnH kojupuole, Juu j<sup>u</sup>oodik, Kuu(S) Tapurla nuorel, JMd(M) 'suolane, KadT 'juõksma, KadPa kuoli, VMr 'suomlane, Rak uost (*hobust*), SimV juodin (*jootsin*), VJg kuonal, LügR luotod, Jõh uodav, VaiR tuoti (*toodi*), PalR (*kuul* :) kuolist, AviM tuol'e (*tooli*), TrmT nõores (~ *noores*), 'uol'ind (*hoolind*), MMGr puolite. Cf. F nuori, Cr. šuo, Lv. jùoB, Hung. dial. juo (c. l. jó), LpN nuorra (E *noor*) (Wiklund UL 202).

$\bar{o}$  > *uo* > *uõ* > *ua* chiefly in NEE, Avi, Kod. E. g. AmbN



*puq̄d*, Jõe *tual'i*, KadPa *tʉal'id* (*toolid*), `kuaki (*kooki*), *kʉart* (*koort*), VJg(S) Roela `luåtus, IisI *uost* (*hobust*); in Hlj Vainupää, Mustoja, Käsmu, Sagadi, Salatse Lahe, Lobi we do not find the diphthong *uo* in its pure state, but "the second component of the diphthong sounds like a labialized *a* (especially among the younger generation)", "in any case *o* is articulated lower than usual", e. g. *tuq̄ma : tuq̄n*; VaiI *juåb*, *suål*, *luåk* (~ *uo*); JõeI *puad*, *juapnuks* (*joobnuks*), Avi `sualikad, Kod(KV) (*ruup* : *ruabi* (*roobi*)), KodL *nuared*; KodS *pq̄ale* (*poole*). Cf. F dial. *tuan*, SMK 155.

*o* > *ua* (~ *uo*) occurs also in Romanic languages. R. Menéndez Pidal believes that here we do not have the development of one variant (*ua*) from the other (*uo*), but that already at the development of diphthongization a lot of variants occur, and that only the direction of diphthongization has been given (from higher to lower), while the two final points, i. e. the first and the second component of the diphthong vary (Orígenes del Español I, Madrid 1929, 126–, 135–, cf. Schmitt AD 117). A. Schmitt believes that the narrowing of the initial part of the vowel is compensated by an opener final part (AD 123). It is possible that this explanation is also to a certain extent valid as regards corresponding E variants, especially the variant *uq̄*. As regards the Kod variants it is possible that *ua* (< *ō*) is an adaptation to the phoneme *ua* derived from *ā* (see p. 133), as, moreover, in other instances it is evident that in Kod, in the speaker's mind, the *ua* derived from *ā* and the *ua* derived from *ō* have got mixed up (see KV 62 note). If we assume that in the case of *ua* (resp. *uq̄*) there is a tendency towards compensation, an inclination towards ease may be hidden behind it, i. e. the intenser (higher) articulation of the initial part is compensated by a slacker (lower) articulation at the end. Cf. also Posti LL 121 regarding *uo*.

*ō* (> *uo*) > *uõ* in Khn, e. g. Khn(TS) *suõl*, *luõtma*, *tuõma*, *luõm*.

*õ* > *üö*. E. g. MuhL `l`üöõma, Khn(K) `süömä, Var *üö* (*vöö*), HagKo *ja\_tjöd* (*head ööd*), JuuK *s`üön* (among the younger generation), Lüg *vüö*, Jõh *tüö*, IisI *rüövib* (~ *tüe*), *süömä*, Avi `vüöl-*müldrid* (*vöörmündrid*). Cf. F *työ*, Cr.-Ol. *üö*, Ld. *üö*, WLv. *tüö*, Hung. dial. *füöz* (c. l. *főz*).

$\bar{o}$  ( $> \ddot{u}o$ )  $> \ddot{u}ä$  in Kod in the weak grade, e. g. Kod(KV) *süädä* (: 'süümä), *tüäle* (*tööle*). Cf. F dial. *süän*, SMK 155.

$\bar{o}$  ( $> \ddot{u}o$ )  $> \ddot{u}e$  in Khn and in NEE central dialects. E. g. Khn(TS) *lüemä*, *üebik*, JõeI *üesetel*, JJnLä *nüep* (: *nüöbid*), SimV *tüe* (in stressed position), VJgRü *müeda*, VaiI *üese*, AviM *tüed*, TrmT *nügrid*, 'ügrsks. Regarding the VMr *üö*, too, it is said "that the second component is no pure *ö*. It has a shade of an *e* in it. This mainly depends on the sentence stress: in stressed position it inclines more towards *e* than in unstressed position" (39). As is evident from the occurrence of *üe* particularly in stressed position and in the third degree of length, we have probably here a case of articulatory overexertion. The same is valid for ( $\bar{o} >$ ) *uö*.

$\bar{e} > ie$ . E. g. Khk Kalmu 'p<sup>i</sup>e<sup>e</sup>n<sup>i</sup>säd (~ *peenisäd*) (*peeniksed*), MuhI 'p<sup>i</sup>eetse (*peetakse*), Muh(Ki) *liem* (: *leeme*), Khn(AS) *triegid* (*kreegid*), Khn(Ka) *sie*, Kse(Z) *vie*, KeiKrij *liemed*, HagS *njed*, Juu 'k<sup>i</sup>eerma, 'eenäd (~ *eenäd* ~ *ein-*), HJnH *pieterboris* (*Peterburis*), Kuu(S) Tapurla *viel*, JõeI *sienesse*, AmbN *sien*, KadT *kiedus*, KadPa *pjenemad*, Hlj *mies*, VNgK *vie*, VJg(S) *kioletu*, Sim *liem*, Lüg *siemend*, Jõh *piendrad*, VaiK *rautiet* (*raudteed*), AviP *sies*, TrmT *kjev* : *kéeva*, MMgR *miesterahvas*. EMA 1 9 'seelik'. Cf. F *liemi*, Cr.-Ol. *kieli*, Ld. *kiel'* ~ *kieli*, Lv. *mieZ*, Hung. dial. *szép* (c. l. *szép*), LpI *tietted* (E *teadma*) (Wiklund UL 188).

$\bar{e}$  ( $> ie$ )  $> iä$  chiefly occurs in the weak grade in Kod, e. g. Kod(KV) *viädä* (: 'viimä), *liäme*. The intermediate phase is represented by IisU *tiëb*. Also in VasM, SeKos 'kiäki (*keegi*) (50). Cf. F dial. *viän*, SMK 155. The explanation of *iä* is analogous to that of ( $\bar{o} >$ ) *ua*.

The diphthongization of long vowels by way of rising the initial part of the vowel is a widespread phonetic change in BF languages. The diphthongization of medium-high  $\bar{o}$ ,  $\bar{o}$ ,  $\bar{e}$  is to be found in the whole of the Finnish area, in Livonian, Carelian-Olonetsian and Lydian; the diphthongization of the low vowels  $\bar{a}$  and  $\bar{ä}$  occurs in the Eastern F dialects, Cr.-Ol. and Ld., where we also find diphthongization of the long vowels in the non-initial syllable. A tendency towards diphthongization is also to be observed in Votian dialects. See survey of diphthongization phenomena of the BF languages in Penttilä AUA B 3 : 2 14-.

Among the Indo-European languages such diphthongization is commonest in the Romanic languages.

### 2.2.5.1.3. Explanation of Diphthongization.

The psychic factor behind the above-mentioned diphthongization is probably articulatory overexertion, which has been favoured as a phonetic condition by a strong stress in the beginning of the word (cf. Penttilä, *op. cit.* 41–), and the phenomenon that Schmitt calls a strongly centralized accent. Thus the rising of the initial part of the vowel and its growing more close is a result of the intenser articulation. Diphthongization has started with a short and somewhat higher so-called “fore-stroke”, which later on has developed into a complete first component of a diphthong, which later on could even seize the second component (cf. Ariste ACUT B 47 : 1 65–6). The development of the diphthong is also favoured by the acoustic impression: as the phonemic system of the language e. g. lacks an intermediate vowel between *e* and *i*, the slightest raising of the front part of the vowel might be felt as *i*, when in reality it is, perhaps, only *e̞* or *e̝* (Schmitt AD 122), and so the sound in one dialect in reality articulated as *e̞e*, is in the other dialect which takes over this feature reproduced as *ie* or *i̝e*. That this diphthongization has started just from an intenser articulation is also proved by the fact that in Estonian diphthongization has started from the strong grade, i. e. from the vowels of the third degree of length (cf. M. Rapola, *Vir.* 1925 6). It is best shown by such variants in which the diphthongization is limited to the strong grade or in which in the strong grade the initial part has risen more than in the weak grade, such as Muh(Ki) *liem* : *leeme*, *l<sup>u</sup>oomi* : *loomad*, *uoder* ~ *uoodata*, Khn *är* *suadaga* : *ei soaja* (*sa-*), KeiK *loom* : *lõoma*, KJnL *luas'* : *laas'i*, TrmT *kjev* : *kēeva*.

That affective articulation can be the reason for that kind of diphthongization is illustrated by an example from the Sicilian dialect in which, according to H. Schneegans, the normal variant is *e*, in case of affection *ié* and in case of still stronger affection *ie* (LSD 18–, 22–, cf. Schmitt AD 68).

In order to prove his theory, according to which diphthongization is particularly characteristic of languages with strongly

centralized stress, Schmitt declares that in the language of the lower classes, which according to S. is more centralized than that of educated people, there are more and also more strongly marked diphthongs. S. bases his assumption on Schneegans' data from Sicily, according to which diphthongs there occur among the lower classes and in less educated districts, likewise on O. Jespersen and H. Sweet, according to whom diphthongization has developed further in Cockney, and on A. W. de Groot, according to whom the difference between the components of the diphthong is larger in vulgar Dutch. But this phenomenon can be explained also in a different way. It may partly be true that the speech of common people is somewhat more affected, i. e. more pronounced, "more centralized", and thus they are more inclined to diphthongize. But we may probably in general explain the fact that we find more diphthongization in the language of the common people by the fact that in diphthongization we find a dialectal phonetic feature, which has not been corrected by the common language or by neighbouring dialects where such a phonetic change has not taken place. And it is a fact that the influence of the common language is slighter in more isolated places and in places with less education. According to descriptions of E dialects diphthongization is just such a dialect feature which people try to avoid, and which, on the whole, more than other dialect characteristics tends to disappear in the language of the younger generation. Thus we have information from quite a number of dialects that diphthongization is a characteristic known only to the older generation, or the oldest, or that it is very rare even among the old people, at any rate, that it is a phenomenon destined to disappear. A few examples: Tös: "The diphthong *oa* has in the northern part of Töstamaa, even among old people, mostly been replaced by *ā*" (2-3); JMd: "This phonetic change (*ā* > *oa*) is widely disappearing" (21); PilKa: "*ä* > *ia* is only to be found in the speech of old people and even they use it very seldom" (26); KJnP: "according to the language informants a diphthong occurrence was general in their childhood" (45); PltK: "Diphthongal forms are even here known only to the older generation" (28); Trm(T): "the phenomenon has to a large extent disappeared even from the speech of the older generation" (72). Kod(KV) "Doch ist zu bemerken, dass

sich das *iä* im allgemeinen (auch in den einheimischen wörtern) nur auf die sprache der älteren generation beschränkt, wie es mit *ua* (statt  $\bar{a}$ ) der fall ist" (38). The same is the case in MMg (according to personal information from Prof. Mägiste). In accordance with Schmitt's statement is also the fact in E dialects, that diphthongs with a greater difference in the components, such as *ua* ( $< \bar{o}$ ), *uö* ( $< \bar{o}$ ), *üe*, *üä* ( $< \bar{o}$ ), are to be found in more out-of-the-way places, such as Kod, in the coastal dialects and in Khn. That people are more ashamed of diphthongization than of other dialect features and try harder to avoid it (see also regarding F dial. *oa* ( $< \bar{a}$ ), *eä* ( $< \bar{a}$ ) Kettunen SM II 28 note), is easy to understand as this is a phonemic feature that occurs more often in speech than any other, and gives to the whole speech a certain distorted taint. The coastal dialects according to G. Vilberg (Vilbaste) sound "somewhat squeaky" on account of the *ie* sound (EKirj. 1910 339).

In what manner an intenser articulation on account of stress favours a diphthong is shown by the Avi Venevere  $\bar{a}$  variant, in regard to which A. Aavik says: "In Venevere we find in regard to  $\bar{a}$  on the whole the literary language variant, only in stressed position in the sentence we find the diphthong in such words as *kua*, *mua*, *sua*." This does not mean that on account of the stress there appears a diphthong here whereas  $\bar{a}$  survives in other cases, but that on the whole, owing to the influence of the literary language, the diphthong has disappeared and that the old way of articulation only appears in everyday words when they are used in affective speech in stressed position.

Diphthongization must on account of its very wide distribution in the BF languages be considered a very old phenomenon. The opinion has been voiced that it has its roots as far back as PF, thus Rapola has assumed a PF alternation  $e : \bar{e}$  (Suomi V : 2 286). But considering the occurrence of other BF languages in which there is no diphthong at present, there is no necessity for such an assumption, since the predisposition for diphthongization in PF could only be limited to certain stress conditions (cf. also Penttilä AUA B 3 : 2 37-8). As regards M. Airila's hypothesis, according to which the present BF long vowels have all been developed from a diphthongal form in PF (FUF 27 189-), the only thing we can say is that it has not been proved

at all. Even though it would be possible to explain the present occurrence in the BF languages in this case (as Airila does) if it had developed from diphthongs, it is possible as well to derive it from the long vowel, which, at any rate, is more natural and simple (for criticisms of Airila's views see Kettunen, Vir. 1946 19–). It is possible that diphthongs occurred in some of the PF dialects.

### 2.2.5.2. RISE OF THE FINAL PART

$\bar{u} > \bar{u}i$  very widely in NE and SE (lacking chiefly in NEE and SEE), in some dialects only in the strong grade, whereas in the weak stage  $\bar{u}$  is retained. E. g. MarH 'n $\bar{u}i$ tki, Tõs (KM) 'k $\bar{u}i$ nes (k $\bar{u}i$ nis), Aud 'k $\bar{u}i$ n : k $\bar{u}i$ nid, H $\bar{a}$  k $\bar{u}i$ n : k $\bar{u}i$ se (k $\bar{u}i$ s), PstP p $\bar{o}$ ld p $\bar{u}i$ , HelH 'k $\bar{u}i$ ndle (k $\bar{u}i$ nla), TrvP r $\bar{u}i$ b $\bar{a}$ t $\bar{a}$ , 'u $\bar{u}b$ uma (h $\bar{u}i$ ubima), but 'p $\bar{u}i$ nm $\bar{a}$ , k $\bar{u}i$ n $\bar{a}$ r (it is possible that here the rising of the final part of the  $\bar{u}$  has been prevented by its strong nasality due to the following  $n$  (cf. p. 20), KJnL 'k $\bar{u}i$ ndl $\bar{a}$  ~ 'k $\bar{u}i$ nl $\bar{a}$  : k $\bar{u}e$ n $\bar{a}$ l, PltP k $\bar{u}i$ n $\bar{a}$ r $\bar{n}$ ukk, Kod(KV) 'k $\bar{u}i$ n $\bar{r}$ g $\bar{a}$  : k $\bar{u}i$ n $\bar{a}$ r, Puh k $\bar{u}i$ n $\bar{a}$ r, TMrVi s $\bar{u}i$ d (s $\bar{u}i$ ), OteN kala'b $\bar{u}i$ dja; Müller nuit (n $\bar{u}i$ d) (5); cf. Kuu(S) Viinistu n $\bar{u}i$ t, M $\bar{a}$ rL $\bar{o}$  m $\bar{u}i$ vad; EMA 2 36 'k $\bar{u}i$ s', 37 'k $\bar{u}i$ ned'. See also Ariste EKH 52–. All long high vowels have this in common that in articulating the final part of the vowel the back of the tongue rises strongly. The oral articulation of  $\bar{u}$  is thus the same as that of  $\bar{u}i$ . The higher oral articulation of  $i$  has had an influence also on lip articulation, which, perhaps in compensation for a more intensive tongue articulation, has grown slacker, so that in the end labialization has completely disappeared, the result of which is  $i$  (Ariste ACUT B 47 : 1 130–1). PA 95.

$\bar{o} > \bar{o}e$  ( $\bar{o}e$ ) in a few words widely in NE and SEE. E. g. Aud s $\bar{o}$ erd, Tor r $\bar{o}$ emus ~ r $\bar{o}$ mus, KeiH 'v $\bar{o}$ ersil, AmbN m $\bar{o}$ ek, KJnL l $\bar{o}$ eg, TrvP v $\bar{o}$ erass ~ v $\bar{o}$ erass (: 'v $\bar{o}$ ora), SeSa p $\bar{o}$ en ~ p $\bar{o}$ en (: p $\bar{o}$ na). PR 13. PA 76, 122.

$\bar{o} (> \bar{o}e) > \bar{o}i$  ( $\bar{o}i$ ) here and there in Sa, SEE and linguistic enclaves. E. g. P $\bar{o}$ iL v $\bar{o}$ eras : 'v $\bar{o}$ erad, P $\bar{o}$ iK p $\bar{o}$ isas : 'p $\bar{o}$ esad, SanN, PlvAl l $\bar{o}$ ig, R $\bar{a}$ p l $\bar{o}$ ig ~ l $\bar{u}$ ig, VasK 'l $\bar{u}$ iga, SeSa ts $\bar{o}$ ir ~ ts $\bar{o}$ ir (s $\bar{o}$ ir), SePa l $\bar{o}$ ig (: l $\bar{o}$ ija), Lei l $\bar{o}$ i (l $\bar{o}$ ig) (: l $\bar{o}$ ija), Lut 'r $\bar{u}$ imza : r $\bar{o}$ emuss, v $\bar{o}$ erass : v $\bar{u}$ ira, LutSJa r $\bar{u}$ isk : r $\bar{o}$ eza, ts $\bar{u}$ ir : ts $\bar{o}$ ir'i; Müller r $\bar{u}$ imja (20). As appears from the examples, the final part has in Sa further risen in the weak grade, in SEE and in linguistic enclaves

on the other hand in the strong grade (for the occurrence in Sa cf. p. 22).

$\bar{u}$ ,  $\bar{i}$ ,  $\bar{i} > u\bar{u}$ ,  $\bar{u}\bar{i}$ ,  $\bar{i}\bar{i}$  (resp.  $\bar{u}w$ ,  $\bar{i}w$ ,  $\bar{i}j$ ). To the articulation of the high long vowels in Estonian the phenomenon that while articulating the final part of the vowel the back of the tongue rises considerably is generally peculiar, thus giving the final part a certain spirantic shade, and  $\bar{u}$ ,  $\bar{i}$ ,  $\bar{i}$  are really articulated as  $\bar{u}w$ ,  $\bar{i}w$ , and  $\bar{i}j$  (Kettunen K 14, 18, Ariste ACUT 47 : 1 69, 117, 130-). This phenomenon is more pronounced in case of extra long vowels. In case of  $\bar{u}$  this higher and closer final part has developed into  $i$ . As regards  $\bar{u}$  and  $\bar{i}$  as well as the  $\bar{i}$  that has not become  $\bar{u}\bar{i}$ , the change of quality has in the final part been so obvious in some of the dialects that dialect recorders have considered it necessary to record it by using the graphemes  $u\bar{u}$ ,  $\bar{u}\bar{i}$ ,  $\bar{i}\bar{i}$  or simply  $uu$ ,  $\bar{u}\bar{i}$ ,  $\bar{i}\bar{i}$  instead of  $\bar{u}$ ,  $\bar{i}$ ,  $\bar{i}$ . The phenomenon has been observed in the following dialects: in PstHo "the articulation of 'uu, 'üü, 'ii in the strong grade sound like diphthong 'uü, 'üü, 'ii;" In SeKü likewise consistently, e. g. *tuul* : *tuule*, 'tüünämä : tüünänü' 'to push with the elbow', *hiir* : *hiire* ("The second component of the diphthong is much more consonantal than e. g. in the diphthong *ai*. It approaches to some spirant sound"); Lei(O) 'püilde (poole), 'sugri, 'milde (meelde), 'šüümä (sööma), KraO *kuu*, *püüd*, *sijmnit* (seemneid). See also H. Jänes EK 1924 170. Cf. VpÄ *vijž*, *kuž* (cf. also for Ld., Turunen MSFOu 99 28).

As we see, diphthongization by way of raising the final part occurs only with high vowels and with the medium-high  $\bar{o}$  (for the latter see Kettunen K 16). This is also the diphthongization in which the beginnings of diphthongization are most clearly seen already when articulating the normal long vowel, i. e. here we can even in the usual long vowel clearly recognize the difference in quality between the beginning and the end of the vowel. The development of this difference in the final part of the vowel into a clearly defined second component of a diphthong is due to a rise in the intensity of articulation. That even this kind of diphthongization is really due to an intenser articulation is particularly proved by variants from those dialects in which diphthongization has taken place only in the vowel of the [third degree of length or has developed further

in it, as Aud *küin* : *küünid*, SeSa *põen* : *põõna*, Lut *'rüinza* : *rõemuss*.

Sporadic cases: PärP *'jeisus* *'kõrstus* (*Jeesus Kristus*) — here diphthongization is evidently the result of affective articulation, which proves in its turn that also diphthongization by way of raising the final part of the vowel is a case of exaggerated intense articulation.

## 2.2.6. Differentiation of Diphthong.

*ei* > *äi* in the negation particle may be assumed as a result of affected articulation, e. g. KhKo, Jaa, PöiL, ReiP, LeiO *äi*. But *ä* in this word may be of different origin, cf. Lv. *äb*, *äd* (Kettunen LW). According to Ariste *ai* even occurs, if the negation is strongly stressed: Phl Sääre *ai tee* (*et tea*), *ai ta 'vangës pole mettä olõ* (*ei ta vangis pole mitte olnud*), Kää Valli *ai sellest pole abi midäd* (*ei sellest pole abi midagi*), Luguse *ai ole* (*ei ole*) (said most persuasively) (ACUT B 47 : 1 83). This phenomenon seems to prove the view that diphthongization by lowering the initial part of the vowel is also due to overexertion. We also find in Hi(A) *'äigp* < *ei-* (*ega*).

## 2.3. LENGTHENING

### 2.3.1. Lengthening of Consonants.

#### 2.3.1.1. GEMINATION IN CASE OF LOSS OF CONSONANT

##### 2.3.1.1.1. In Case of Loss of *h*.

Regarding the loss of *h* in the non-initial syllable we find consonant gemination in the preceding syllable in the following groups.

(1) In the illative we chiefly find gemination after the first syllable in NE among the stops in everyday words, whereas gemination of other consonants only occurs in a few adverbs. In SE the change includes all consonants, in some places to a smaller, in others to a greater extent. E. g. *vette* < *\*vetehe*, *sekka*,



(*tuba* :) *tuppa*, *sisse*, *sülle*, *alla*; Phl `lumme, Khn(TS) *mättä* (*mädasse*), Tös(KM) `merre (rare), Saa `tulle (~ *tulesse*), SJnP `pessa, Pil `tülli, KJnL `võssa, PltP *kuppu* (*kubusse*), Trm `tallu (~ *talusse*), Pal (*uba* :) *uppa*, Kod(K) `perrä, KrkKa `tõisse (*teise*), TrvP `linna (*linasse*), HelL(K) `lävve, San *mutta* (*mudasse*), Puh `nõnna (*ninasse*), Ote `tävve, KamK `arru, TMrKõ `savvi, Krl(S) `minnu 'to me', Urv `kõvva, HarMõ `ojja, Rõu (*raba* :) *rappa*, Plv `tarre, RöpT `immä (*emasse*), Vas `essä (*isasse*), SePa `munna, SeSa `lihha, Lei *nappa* (*nabasse*), LutSJJa `kanna (*kanasse*); in Se and Lut also in the pl., e. g. SePa `uppe (*ubadesse*), LutSJ `kül'li (*küladesse*), Lut `sõttu (*sõdadesse*). Gemination is lacking in the ill. in NEEC, Sa and Var, and partly in Hi and Khn, e. g. JämH *tule* (*tulle*), JaaT *tuba* (*tuppa*), Hi(A) *käde* (*kätte*), Khn(TS) ill. *pesä*, VarH *segä* (*sekka*), KuuK *vele* (*vette*), Hlj ill. *maja*. Cf. SWF *vette*, *tuppa*, *pessa*, IngR *mäkkee*, *pessä*, VtJ *pajjā*, Lv. *kä'ddā*. PA. 41.

(2) In the *h*-nouns. E. g. *g.rukki* < \**rukihen*, *ikke*; VilV (*vene* :) `venne (: *venet*), TrmT `venne, Hls(U) `amme, TrvP (*ime* :) `immess, Puh `kõnnest, San *valle*, Krl(N) `perre, HarM(S) *perre*, RõuS *perremjiss* (*peremees*), PlvK (*mure* :) `murre, VasLa *perril* (*peredel*), SePa (*pereh* :) *perre*, Lei(M) *v<sup>l</sup>enne* (*vene*), Lut `hamme; HlsA, KrlÄ `parra < \**parahat* (*parajad*). Cf. IngR *tokkeet*, Lv. *r'ggāD* (E *rukkid*).

(3) In the 3 p. sg. imperf. chiefly in SE, here and there in Hi, Pä, Ta. E. g. Phl(A) `surre < \**surihen* (*suri*), Tös `olle (*oli*), Hää(V) `panni, VänR `ol'li, VilV `põl'li (*põles*), KJnP *tul'li*, KodL `kul'li (*kulus*), Hls(J) `väs'se (*väsis*), KrkA `mun'ni (*munes*), Pst *ol'li*, HelL(K) *panni*, TrvV *olli*, SanN `elli (*elas*), KrlÄ *näk'k' < \*näk'ki < \*näkihen*, Puh *katte* (*kadus*), KamR *tul'l' (tuli)*, Urv `vässü (*väsis*), KanK `el'li (*elas*), PlvK `pa'li (*põles*), Röp(R), SeLi `vaiju (*vajus*), VasS `küsse (*küsis*), LeiP(O) *ol'li*.

(4) In the *hen*-adverbs. E. g. Tös(KM), Mih(Ste), JuuK, HlsA, Rõu `tassa < \**tasahen* (*tasa*), SanM `kõvva (*kõvasti*), PlvPa, Lei `varra (*vara*).

As is evident from the examples, the geminate consonant due to the loss of *h* is in most cases extra long, but we also find short geminates. The extra long geminate occurs consistently in the illative. It is possible that in the case of the short geminate we find generalization from other word types.

### 2.3.1.1.2. In Case of Loss of \*<sub>t</sub>, \*<sub>k</sub>.

Regarding the loss of \*<sub>t</sub> we find gemination in dialects in the following groups, in NE chiefly among the stops.

(1) In *da*-nouns in Muh, Phl, Central Lā, Mih, PāS, SE. E. g. Lih *sōke* < \**soke<sub>t</sub>a* (*sōge*), Saa *'jämme* (~ *jāme*) (*jāmeda*), *lappi* < \**lap<sub>t</sub>i<sub>a</sub>* (*labidas*), Hls(U) *elle* (*hele*), KrkK *sakest* (*sagedasti*), Hel(K) *lipe* (*libe*), TrvP *'pimmess* (*pimedaks*), Krl(N) *jäl'le* (: *jāleda*), SanN *pimme* : g. *'pimme* (: p. *pimet*), San *elle*, *jämme*, but *äge*, *libe* (14), Ote *make* : g. *make* (~ *mageda*), KamR *sil'le* : g. *'sil'le* : p. *sil'let*, Puh *lake* (*lage*), VönKV *pimmen* (*pimedas*), Urv *make* (: *magē(id)*), HarM *putē* (*pude*), Rōu *kipē* (: *kibēhep*), Plv *hōpē* (*hōbeda*), Rāp *tihē*, Vas *pümme* : g. *pümme* (~ *pūmehe*), (*pime* : *pimeda*), SePa *pümme* : *pūmehet*, SeSa *lahhe*, Lei(M) *d'ämme* (*jāme*), Lut *nope* (: *nobēha*). On the whole we find short geminate consonants in this group, whereas the g. *'pimme* is probably due to the analogy of the g. *'venne*. Cf. F dial. *pimnee*, SMK 191, IngR *sokkee*. EVt. *piñmiä*.

(2) In the partitive sg. and pl. in Rid, Vig, Ris, Mih, Tor, Saa, MMgP, SE. E. g. p. sg. Vig(SteLl) (*jōgi* :) *jōke* < \**joke<sub>t</sub>a*, Ris(W) Vilivalla *mäkke*, HelL *eka* (*iga*) (21), Trv *emma* (*ema*) (~ *emäd*), KrlK *sōta* (*sōda*), (cf. ill. *sōtta*), SanU *ratta* (*rada*), Puh *uppa*, KamR *sata* (*sada*), HarM *mai<sub>j</sub>a* (*maja*), Kan *sōta*, RōuH *umma* (*oma*), RāpV *ellü* (*heli*), VasM *varra*, SePa (*pezä* : *pessä*, Lei(M) *tüvve*, LutSJ *rahhu*; p. pl. Jäm(K) *tagumissi*, Kōp *'süs'se*, *'käs'se*, HlsM *'süssi*, KrlÄ *ummi* (*omi*), San *reki* (*regesid*), KamR *vannu*, UrvO *tiker'perri* (: *tikē'perä*), Rōu *vessi* (*vesi*), Plv *pühhi*, RāpS(R) *linno* (*linu*), VasM *kallu*, SeRad (*paja* :) *paiju*, SePa *'pessi* ~ *pessi*, *kerri* ~ *'kerri*, Lut *hüvvi*. Thus, in the partitive, too, we most frequently find a short geminate consonant. Cf. SWF p. *vikka*, IngR *pattaa*, Lv. *ka'llə*, EVt. *kañnā*.

(3) In the *da*-infinitive in SEE. E. g. Puh *'aija* (*ajada*), Krl(V) *ellä* < \**elä<sub>t</sub>äk* (*elada*), RāpT *aijeh* (*ajades*), Plv *kuta*' < \**kuta<sub>t</sub>ak* (*kududa*), Vas *sulleh* (*sulades*), SePa (*kōhima* :) *kōhhi*?, Lei(Ve) *purre*(?) (*pureda*), Lut(V) *pa<sub>l</sub>ma*' (*pōleda*). The geminate consonant is on the whole short. Cf. FAS *sannoo* (E *sōnuda*), Lv. *ja'ggə* (E *jagada*), EVt. *su<sub>k</sub>kəa* (E *sugeda*).

(4) In verba contracta here and there in WE, Kod, SE. E. g. Lih *makab* < \**maka<sub>t</sub>api* (*magab*), Kul *maka* (*magā*), MärKa

*kokon* : *kokote* (: *kogovad*) (*kogu-*), *makab* (: *magavad*), Kod(K) *makkan*, Hls(J) *makkab*, KrlK 1st p. pl. *maka* (: 3rd p. pl. *magavę*), HelL(K) *ei läpe* (*läbe*), SanN *makass* (*magab*) (: *magasi* [*magas*]), PuhK *makale*, Kan *makasse*' (*magasid*), HarM *mii lupa* (*me lubame*), Plv Mooste *makama*, Röp *lupa* (*luban*), Vas *lupat* (*lubad*), SeSa *ma' sekä* (*segan*), Lei *tapa* (*taban*), Lut(V) (*rabahama* [*rabama*] :) *rapa* (*raban*) (: *rabas's* : *rabaanu'*). In this group, too, cases of short geminate are in the majority. Cf. F dial. *ruppeen*, *ruppen*, SMK 193, 196, IngR *makkaan*, Lv. *ma'ggqb̥D*.

As concerns the gemination in case of the loss of \*<sub>k</sub> we only find sporadic cases: Mär *itted* < \**ite<sub>k</sub>et* (*idud*), *kupped* < \**kupe<sub>k</sub>et* (*kubemed*), cf. F *kuve* : *kupeen*. Cf. FAS *satteet* < \**sate<sub>k</sub>et*.

### 2.3.1.1.3. Explanation of Gemination.

As regards the other FU languages we find gemination in case of loss of the consonant in the following syllable, in the Votian eastern and Jöepära dialect, in Livonian, in Finnish dialects (SMK 2, 179), and Lapp.

What factors are behind this gemination? What is the phonetic condition of this phonetic change: loss of consonant, the contraction of syllables, or the following long vowel? The generally assumed so-called compensatory lengthening explanation chiefly starts from the increase of stress in the first syllable, due to contraction of syllables. Thus already M. Veske (VGFS 13), likewise Collinder (Q 68), and Posti (LL 304). This explanation is in disagreement with those cases in the BF languages in which gemination has taken place without contraction of syllables, such as Vt. *pajjā* < *pajan*, but particularly Ing. *heppoizen*, *kuttoizin*, *ommeenat*, *pakkeenen* (V. Porkka ID 38), F Tytärsaari *punnaista* (see also on F dial. *jallaan* Kettunen SM III B 94; cf. SMK 52), Inari-Lapp n. pl. *kapp'ēreh* 'mütze' (: loc. sg. *kap'ērist*) (E. Itkonen MSFOu 88 50). Even Collinder has to admit: "Die ingrischen verhältnisse scheinen somit den erklärungsweisen zu spotten, die in der vorhergehenden untersuchung auf ähnliche erscheinungen angewandt worden sind" (Q 67). — "Aber ebenso wie die

intensitätsabnahme des schlussvokals hat kontinuierlich geschehen müssen, muss wohl auch vorausgesetzt werden, dass die kompensatorische intensitätszunahme des ersten (und des zweiten) tales kontinuierlich geschehen ist, und a priori kann wohl mithin nicht bestritten werden, dass ein einem solchen phonem in einem gegebenen dialekte der seitenlaut des wurzeltales schon vor dem schwunde des schlussvokales hat durch ersatzakzentuation in eine so druckstarke umgebung geraten können, dass er infolgedessen geminiert worden ist. Eben dies dürfte im ingrischen der fall gewesen sein, und zwar sowohl in formen mit geschlossenem drittem tal vom typus *pakkeenen* wie in formen mit offenem tal vom typus *ommeena*" (Q 70). The hypothetic assumption as to "ersatzakzentuation" and the shifting of stress (Q 71) in order to explain the Ingrian cases cannot be considered convincing. The phonetic explanation of compensatory lengthening is viewed by C. as the partial transfer of the stress freed by contraction to the preceding syllable or syllables, where on account of the rise of intensity an increase of quantity occurs (Q 68). It is difficult to prove the occurrence of compensatory lengthening in case of gemination phonetically as well as psychically. At any rate, it is not possible to connect such gemination with the general-phonetic principle of compensation, which is valid everywhere and always, as Collinder seems to do (UUÅ 1939: 13 66-).

E. Lagercrantz (SGL 27) and Posti (LL 303, 305) have tried to explain the phenomenon as an attempt of the language to create two different structural types, but that only seems to be a statement as to the result of the phonetic change which has here given us two types of different structure. The same applies to A. Sovijärvi's explanation regarding the Ingrian geminates: "the striving of word structures towards greater clarity and intensity, towards so-called pregnancy of structure" (SIM 22-).

According to Wiklund the Ing. and SE gemination is due to the following long vowel which in its turn is due to its secondary stress (MO 9 229-). According to Kettunen on the other hand, the Ing. gemination is the result of the increased stress of the following syllable, which is due to the length of the vowel (SM II 183). According to Itkonen the gemination in the Inari-Lappish "dehnungstypus", e. g. *lott'ēn* 'keil' (: *lot'è*), and probably in

Ingrian type *ommeena*, too, is due to a medium-strong secondary stress on the following syllable (MSFOu 88 50–).

It seems that the real phonetic condition of gemination has already been given by V. Porkka, who explains the Ingrian gemination in the partitive case *kallaa* as follows: “Zur Hervorbringung des kurzen auslautenden *a* des Nominativs braucht der Exspirationsstrom verhältnismässig schwach zu sein und bewirkt auch keine energische Articulation des *l*, wogegen für das lange *a* des Partitivs die Energie des Luftstromes gesteigert werden muss und folglich die Hemmung desselben, bei Bildung des *l*, vielfach kräftiger sein muss. Und gerade durch dieses Verharren der Zunge in der *l*-Stellung wird der Laut geminirt” (ID 40–). This assumption is also established by phonetic measurements. According to J. Laurosela in FSP the consonant preceding a long vowel is longer than that preceding a short one (Suomi V : 1 231).

We agree with Ariste’s assumption that in all such cases gemination has started from the intenser articulation of the consonant due to the following long vowel: “the stop or any other consonant is articulated much more intensely before a long vowel than before a short one. The consonant articulated more intensely and thus longer could in an intervocalic position in this way easily become a so-called geminate” (ACUT B 47 : 1 148). Probably we have here a case of articulatory overexertion: the more intensive exertion necessary for the articulation of the following long vowel has attracted attention to the extent that the more intensive articulation has started already with the preceding consonant, on account of which that, too, has been articulated more intensively (cf. K. Vilkuna, Suomi V : 6 : 3 25). Thus we here have an anticipation of the intensity, a precipitation. In so far this phenomenon is similar to assimilation. How the consonant begins to grow longer due to a following long vowel, is particularly illustrated by the examples given by L. Hakulinen from those Finnish dialects in which in such cases the lengthening of the consonant has not yet reached the length of a short geminate, as in Utajärvi *vie<sup>n</sup>neet*, *lei<sup>p</sup>pää* (Vir. 1926 176–). F. Äimä, too, believes that gemination has taken place after the development of the long vowel and before it grew short. He reconstructs: *kalada* > *kala<sub>a</sub>* > *kalā* > *kalā* > *kallā* (Vir. 1922

13). Likewise in the Ingrian cases, such as *ommeena*, *pakkeenen*, it is probable that a long vowel first developed and then gemination, as believed by Kettunen, who has also refuted Porkka's opposite assumption (SM II 184 note). The same development is assumed by Setälä and Sovijärvi (SIM 25).

The difference in the length of the geminates in cases of the loss of *h* and *\*t*, where in the first case we have a long and in the second a short geminate, must remain unexplained for the present. Probably it is connected with the difference in time for the disappearance of *h* and the *\*k*. (cf. e. g. Äimä Vir. 1922 17). The reason why stops have a greater tendency towards gemination than continuants is to be explained by the phonetic character of the respective sounds (cf. Collinder Q 69).

It is probable that SE, Livonian and Votian geminations are to a certain extent genetically connected (cf. Kettunen JSFOu 30 : 18 6–, Collinder Q 68, N. Ikola, Vir. 1925 128, Lagercrantz SGL 26).

### 2.3.1.2. GEMINATION IN THE TYPE *jummäl*.

At present we find gemination in SE in the apocopic forms of those originally trisyllabic words in which the first syllable was originally short and the second open. E. g. Hls(J) *suuve* < *suven* < *suvena* 'in the summer', Pst *suuve*, HelP *taka* < *\*takana* (*taga*), HelL(K) *elläi* < *eläjä* (*elajas*), Krl(N) *satam* (: *sadame*), San *kummer*, apen (: *abena*) (*habe*), Puh *vassar*, Ote *ikäv* (: *igävä*), KamR *näi tullev* < *\*tuleva* (*nägin tulevat*), VönK *sipul* (*sibul*), HarMö *annum*, UrvO *terräv* (: *terävä*), Kan *kahhin*, Rõu *rummal*, PlvK *lattem* (*lade*), Röp *ettev* (*edev*), VasLa *satam* (: *sadame*), SePa *allas's* (: *alazi*), Lei *pallaw* (*palav*), LutSJa *otav* (: *odaava*), palLav (: *palaaava*), *valluz* ~ *valloz*, *nätäl* (: *nädal'i*), Lut *orrav* : *orava*.

This gemination, too, is explained by Collinder as due to compensatory lengthening or stress ("ersatzakzent"). Posti, too, believes that the loss of the vowel has caused increase of stress in the first syllable, the result of which was gemination (LL 311). Kettunen assumes that even here gemination may have started from the length of the vowel of the second syllable (JSFOu 30 : 18 7). Thus also Wiklund, who believes that the second

syllable preceding an unstressed third syllable (the vowel of which disappeared later on) acquired a secondary stress which made the vowel of the second syllable grow longer, and that finally the consonant before it was geminated (MO 9 230). Even Collinder admits that gemination might have started before the loss of the final vowel (see p. 146). At present it is impossible to give an incontestable and convincing explanation of the origin of these geminations. Wiklund's and Kettunen's assumption, too, is complicated by the fact that we here only find a half-long vowel, although it can be comparatively long and sometimes even longer than the so-called long vowel (see p. 167 and Ariste ACUT B 49 : 5 54–, 57, EKH 83). At any rate the geminations seem to be connected with the secondary stress and the length of the vowel of the second syllable.

### 2.3.1.3. SANDHI GEMINATION

The phenomenon that the consonant in word-final position before a word beginning with a vowel tends towards shifting to the beginning of the next word, or, particularly in the case of half-long consonants, towards gemination, is due to the loose contact characteristic of Estonian. Dialect recorders have usually left this phenomenon unrecorded, but in a few cases we find it indicated in dialect texts. E. g. Krl(S) *pühapäiv<sup>v</sup>om*, '*puhtas<sup>s</sup>är<sup>?</sup>*' (*puhtaks ära*), KrlKä(J) *länik<sup>k</sup>om*, UrvM '*tütrukk<sup>o</sup>l'l'*, *s<sup>š</sup>ss<sup>o</sup>l'l'* (*siis oli*), RääP *täü'l<sup>?</sup> ära<sup>?</sup>* (*täitis ära*), SeTr *hummoqut<sup>t</sup>om* (*hommikult on*). Cf. also *ei<sup>?</sup>jole* on p. 130. The same phenomenon is to be met with in Cheremis (Lewy TG 48). As regards Ind.-Eur. languages, cf. French liaison. Likewise we find the phenomenon that an initial consonant geminates if the preceding word ends in a vowel, e. g. RõuH '*mut<sup>p</sup>'ku<sup>p</sup>pagesi<sup>?</sup>* *inne*, SeRad *vanah<sup>?</sup>halb*.

With the preceding gemination and the loose contact of the Estonian some linguists have also connected the gemination in cases like *õunapuu*, *Kuressaare*, *sinnapoole*.

E. g. *potissepp*, *Kuressaare*, KhkKo *lauppa*, Tor Riisaküla *õõna<sup>?</sup>ppu*, AmbN *s'ara<sup>?</sup>ppu* ~ *s'arabu*, *marja<sup>?</sup>ppu* ~ *marjabu*, KadT *marja<sup>?</sup>ppud*, Jõh *paatsa<sup>?</sup>ppu*, Sim *kusla<sup>?</sup>ppu*, LaiKa *visna<sup>?</sup>ppud*, *lod'<sup>?</sup>ja<sup>?</sup>ppud*, ÄksV *sara<sup>?</sup>ppu*, HelP *pikässilla*, Krl(S) *pühä<sup>?</sup>ppäiv*, Lei

*pillap̃pou* (*pihlapuu*), *õngepp̃ou*, *pajupp̃il'l*, *maruṛṛ<sup>l</sup>eni*, LutSJa *nel'äppäiv* (*neljapäev*), *pühaṛṛpäiv*; Khn(AS) *s'ennakkohe* 'in that direction', HJnH *kojuṛpuole*, KadT *eteṛpole*, Jõh *sinneṛpuole*, Kod(KV) *seijeṛpole* (*siiapuole*), Ote *siijaṛpuole* (~ *siijapuole*), SeRa *tõiste<sup>p</sup> puulde* (*teisepuole*), *'taadeṛpoole* 'backwards', Lei *šideṛ<sup>p</sup> paika* 'up to here', *k<sup>u</sup>odeṛpõle* (*kodu puole*); cf. also Lei *'maaitii* (*maantee*). Cf. IngR *ketraṛppuu* 'spindle', *vüpsiṛppuu*, *nurmiṛpäi* 'upside-down', (*ei*) *kuikka* (RMP 56). A recent explanation of this phenomenon has been offered by Ariste (EKH 81, ACUT B 47 : 1 186): as most E dialects do not know intervocalic (short) [*k*, *p*, *t*, *s*], these sounds have, in the beginning of the second component of a compound, become *G*, *B*, *D*, *Z* due to sandhi, or have lengthened into a (short) geminate. This change must thus be considered an adaptation to the phonemic structure of the language. Though this explanation seems convincing at first, it has a point that creates some doubts. Already Mägiste has drawn attention to the fact that this explanation cannot be applied to the corresponding Votian geminate type, as Votian has intervocalic (short) fortis stops (EK 1940 63). The same applies to NEE dialects in which we find intervocalic (short) [*k*, *t*, *p*] but also the type *õunaṛppuu*. E. g. Jõh *tupa* (*tuba*), *opose* (*hobuse*), *sapa* (*saba*) and *lauppa* (*laupäev*), *margaṛppu* ~ *margap*, *tõiseṛpuole*, *õunaṛppud*, *sinneṛpuole*, *paatsaṛpu*; VaiM *rape* (*rabe*), *käpi* (*käbi*) and *õunappu*, *sarappuu*, *lauppa*, *seijeppuole*, *allappuole*. The possibility remains that in these dialects the type *õunaṛppuu* is a loan from other dialects, but it is not very probable.

A completely convincing explanation of this type of gemination is still lacking. It is quite possible that in a great number of compound and postposition cases, the geminate originates from the assimilation of *np* and *kp*. It is probable because we here mostly have old and everyday words, which had certainly become a solid phonetic unity already before the loss of *-n* and *-k*, and in which the assimilation of these sounds with the following consonant is most to be expected, particularly if we take into account the sandhi gemination of *-n*, *-k* (see p. 60 and 62). Some cases of gemination in postpositions and in compounds may have developed afterwards by way of analogy.

Yet in this case gemination in compounds after a voiced component remains unexplained.



E. g. VaiJ *maanl̥te* ~ *maande*, KrkA *'puull'ppek* 'Saturday', Hls(K) *'puull'ppe*, LutJ *puul'ppävä*, KrkAi *täemppe* 'today', UrvO *suur'tti* ~ *suur'di* ~ *suur'ti*, c. 1. *alkkiri* (*allkiri*). Cf. F Rauma *külk kaiket* (< *küllä kaiket*), *sillp pahall sendän* (< *sillä-pahalla sentään*), *samant talvenk ko me* (< *samana talvena kun me*) (Streitberg Festgabe 198).

Kettunen has explained the E type *ḍunaḍpuu* and other similar cases in the other BF languages as a result of "den artikulatorischen Intensitätsverhältnissen des Aus- und Anlauts" (ib.), and states that the geminate has been created "by the energetic articulation of the stop beginning the word and particularly close contact of the preceding word" (EKÄ 21). Even this explanation does not include cases of gemination after consonant. In addition the question arises why we have close contact here, as in E we generally have loose contact, and accordingly also in compounds *k-*, *t-*, *p-* > *G-*, *D-*, *B-*; cf. also PJgE *sarabuu*, Mär *'alla'boole*, San *siabõõle*.

We may assume that the geminate has here come into existence on account of the energetic, intensive articulation of the initial stop, the purpose of which has been that of more strongly joining the second part of the compound to the first in order to stress the homogeneous character of the compound. In this case it would be a certain anticipation of the articulation of the stop. It is possible that only the cases after a consonant belong here, but perhaps, even those after a vowel.

#### 2.3.1.4. GEMINATION FOR RHYTHMIC REASONS

It is chiefly the voiced continuants that tend to be geminated after a syllable with secondary stress (as original geminate consonants tend to survive, see p. 30-). The cause of this phenomenon is a rhythmic tendency and it occurs chiefly in NEE and SEE.

*m* > *mm* occurs particularly in the *ma*-infinitive, but in some dialects also in other cases. E. g. HääAr *'eitsimme* (*heitsime*), HääAl *elasimme*, Lüg *tallutamma* (cf. *panema*), *vikkastimmed* 'scythes', *soldattimmed* 'soldiers', *ḍnnetummast* (~ *-m-*), Jõh *aspeldamma* (~ *makama*), VaiM *ehmattamma*, Hls(U) *muusejummile* (*muuseumile*), KrlK *imetemme* (*imetama*), UrvVa *'hap-*

*namma* < \**happenema*-, KanK *kirotamma* (: *kirotadama*) (*kirjutama*), Rõu *kargamma* < \**karka<sub>t</sub>ama*-, PlvM *tülitsemä* (*tülitsema*), Räp *kirotamma*, VasO *parandamma* (~ *lugema*), Se Satseri *kõnçemma* (EMA MS). In SE gemination in the *ma*-inf. may also be caused by the loss of *h*: \**-mahçn* >> *-mmān* >> *-mma* (cf. p. 142-).

*n* > *nn*: PlvH *lat's umm är' heitünnü'* (*laps on ära heitunud*), *kõrahtunnu*, *nimitännü'* (*nimetanud*) (194).

*v* > *vv* in the 3rd p. pl.: RäpP *asotivva* '(they) founded'.

*s* > *ss* probably occurs on rhythmic grounds: MusI *tasapissi* (*tasapisi*), *vastamissi*. Cf., however, the *s* > *ss* tendency in Sa p. 155.

*j* > *ij* in *ma*-inf.: LügR *pitämäije* (*pidama*).

### 2.3.1.5. AFFECTIVE GEMINATION AND LENGTHENING

In E dialects we find a great many words in which the cause of the gemination of the consonant has most probably been affective articulation, e. g. MusT *taeva-issa* (*-isa*), Aud *jessuke* (*Jeesuke*), OtePü *käkistänü* (*kägistanud*). For the same reason we also find the lengthening of a short component or geminate, as VMr *ilma rahata* (*pro ilma*), *ma'ilma lõpp*, *ilma inimeste arvamine*, *pattu palk* (*patu*) (10). See further Saareste PALE 12 (all examples given there cannot be regarded as convincing) and EK 1927 173-. Akin to affective lengthening is also lengthening due to intellectual emphasis. Thus regarding KJnL it has been stated that generally there is *-lle* (*obeselle*) in the allative after a syllable with secondary stress; but if the word is stressed, we find *-lle* (*sig'a delle*). Likewise regarding Jõh it is said that in the 2nd p. pl. we have extra long, medium long, or short geminate *t*, depending on the stress.

In addition to the instances given in the papers by Saareste mentioned above, affective gemination may be assumed to occur also in other words. E. g. JaaH *immustama* (*himustama*), Vig- (SteLl) *immu*, *immustama*, Mär, Kõp *immu* ~ *imu*, Kan *käk'isti* (*kägistasin*), SJnP, KJnP *mõn'nitama*, Khk(T) *närragad* (*närakad*), cf. Wd. *närr*: *närred* 'überbleibsel', Khn *pissike* (*pisike*), VMr *pun'nik* (*punik*), cf. *punane*; c. l. *ramm*, cf. Jõh, IisO *ramu*, F *ramu* ~ *rammu*. For illustrations of affective gemination from

other languages see e. g. on Germanic languages A. Martinet, *La gémination consonantique d'origine expressive dans les langues germaniques* (Copenhagen-Paris 1937); Latin examples A. Graur, *Les consonnes géminées en latin* (Paris 1929); on Semitic languages M. Bravmann *MSL* 23 329-.

### 2.3.1.6. GEMINATION OF VOICED CONSONANTS

In E we find some words in which the original *m*, *n*, *l*, *r* that occur in other dialects, in some dialects appear as *mm*, *nn*, *ll*, *rr*. These cases cannot be separated from the opposite ones, i. e. cases in which the original geminate consonant alternates with a short consonant (see p. 31). Kettunen is right when he tries to explain this phenomenon partly with the very slight difference between the E short geminate and the short consonant (EKÄ 109), which has favoured their becoming mixed up. Especially as regards the sonorous consonants, such as liquids and nasals, there may be some shifting in articulation in one direction or the other. When a new word, especially a loan from a foreign language with a short consonant, invades a dialect, the short consonant may be perceived as a short geminate and be reproduced as such. It is remarkable that gemination of the sonorous *l* is to be found particularly often in loanwords. As regards foreign words there may also be other reasons for gemination. It may be a case of articulatory overexertion. For instance, the articulation of a trisyllabic word with a foreign phonemic structure demands special exertion on the part of the speaker, the result of which is the more intensive articulation of the consonant, which may lead to gemination. In some loanwords gemination can be the result of the stress being shifted to the first syllable, and here the lengthening of the consonant is analogous to the lengthening of the vowel of the first syllable (see p. 162). Alternation of short and geminate consonant is especially usual in the case of *m*. Ariste assumes that the articulation of labial consonants is not so intensive as that of the other consonants and thus allows certain fluctuations (ACUT B 47 : 1 238). But as regards *m* and *n* one must also take into account that the oral articulation of nasals is on the whole uncertain and thus favours fluctuation in quantity. It is also possible that

in the dialects we have partly a case of phonemic generalization, i. e. there is a tendency towards generalizing a certain type, either the short consonant or the geminate, in a certain class of words, a uniformity which, in fact, it has not been possible to record anywhere (an opinion voiced in Prof. Saareste's lectures on dialects). The possibility also remains that in some cases affective or other factors of that kind ought to be considered.

*l > ll.* E. g. in recent loanwords Mär, KeiH, *kallender*, SimE *kallender* ~ *kal'nder* ~ SimP *kaalender* — here it is interesting to observe how with the shifting of the stress to the first syllable the latter is also lengthened, in which case the lengthening may affect either the consonant or the vowel; San *kallendri*, Ote *kallendre*; Ote *kallituur* (*korridor*), AudK *kollee'ra*, RöpV *kol'lera*, Saa *tellevoon'* ~ *tellevuun'* (*telefon*), KeiH *tillehvon*, AmbN *tillevon'n'* ~ *tilevon'n'*, SimE *tellevonniga*, VaiJ *tellehvon*, HlsVK *tillevuni*, SeSa *tellehvon'*; AmbH *tillegramm* ~ *telegramm*, SimV *tillegram* ~ *tilegram*. It is more difficult to establish the causes of the gemination in the following indigenous words: SimE *tal'litab* ~ *tal'itab*, PltR *tal'lit'ama*, TrmT *tal'litatud*, UrvM *tal'litust* (perhaps a connection by popular etymology with the word *tal'l'* 'stable', which originates from the care of the cattle?); VaiJ *tallutan* (*talutan*); KeiK *ullu all* (*ulu all*) (in this word *l* between two *u*'s, is very close to the velar *x* [see Ariste ACUT B 47 : 1 223], which due to its sonorous timbre may easily give an impression of a short geminate consonant); Phl(A) *'vallhmp* (*valima*), San(W) *õl'li* (~ *õl'* ~ *el'i*) (*õli*), *õl'liteme* (*õlitama*), HarÄh *õl'li*.

*m > mm.* E. g. *kummardama*, cf. F *kumartua*; *kummuli*, cf. F *kumollaan*, Hää, Hls(U) *kumuli*, TrvP *kumali* (in this stem it is possible to assume affective or descriptive lengthening, since the long *mm* can here by sound symbolism express the act of bowing); *samm*, *sammuma*, cf. VaiI *samun*, TrvP *samu*, PlvK *samoga*, F *samota* (? descriptive-affective gemination); — recent loanwords: Vig(Ste) *timmuki* (*timuti*), KeiH *timmuti*, RisVi *kriminaalid*, San *seminar*. In the word *kommet*, *kommetijant* we most probably find a connection by popular etymology with the word *komme*, as the latter associates extremely well with the idea of comedy.

*n > nn*: E. g. Hls(K) *pannipaik*, Ote *manniski*, HMd *prännikud*, cf. Russ. пряник.

*r > rr*: *varrud* < *varu-* < \**varvo-* (see Kettunen EKirj. 1920 56–), SanO *lorri* (*lori*).

### 2.3.1.7. OTHER GEMINATIONS

*s > ss* in WE, especially in Sa and Lä, in a few words also farther east. E. g. in the word *käsib* in the islands, Lä, Pän, Ha, Jä, VIN, TaN, e. g. Juu *käs'sin* (in this word it may also be a question of the change  $s_k > ss$ , but this is less probable), RidT *küssib*, Mär *küssi* — in both these words there may also be an affective-voluntative gemination; JuuK *lus'sikas*, JuuKa *vas'sikas*, Mär *russik* (*rusikas*), MusI *vassagu*, MuhL *vassak*, JuuK *vassakud*; MusI *vassik*, Kse(Z) *vassikas*; Mär *vässib* (? affective gemination). The psychic factors and phonetic conditions of this gemination are not clear. It must be observed that in most of these words *s* precedes *i*. In a few words *ss* represents an original *z*, e. g. Hi(A) *pissukär*, g. *pissukrè* 'customs surveyor', cf. G *besucher*; *messan(-puri)*, cf. G *mesan(segel)* (cf. Ariste ACUT B 47 : 1 221); MusI, Sim *kassak*, VMr *kassakas*, cf. Russ. козак, KrjT *kassa'rm*, JuuK *'kassarm*, VMr *kassarmu*, Sim *kassarm*, cf. Russ. казарма; in one word *z* after an unstressed syllable has also been substituted by *ss*: Mär *magassinid*. Here we find words which in the original language have the stress on the second syllable, but in which the stress has been shifted to the first syllable when being borrowed into Estonian. It may be assumed that the lengthening of the consonant is connected with the shifting of the stress. *š* is represented by *ss* in the word: MusI *massin* (*masin*), PhlKu *massingid*, HarÄh *massinga*, LutM *massinaga*.

*j > ij* occurs sporadically here and there in WE and SEE. E. g. MusI *kaijudi* (*kajuti*), *maijak*, cf. *aul* (*ajul*), *vaub* (*vajub*), Hi(A) *kuiju* < *kuju* (*kuiv*); in Mär this phonetic change seems to be consistent in case of the survival of *j*: *aijo* (*aju*), *mõijo* (*mõju*), *uijo* 'bride kerchief', cf. *'vaoma* (*vajuma*); RapHK *paiju*, *aiju*, Rõu *oijuma* (*ujuma*), RõuS *kuijuma*, Räp *pai* < \**paiju* (*paju*), *ai* < \**aiju* (*aju*), LutSJa *muijal*, *aiju*, *oijuma* (*ujuma*), cf. *aa* (*ajan*); in the word *muijal* (*mujal*) gemination

is to be met with in the whole of SEE; see EMA 2 55. Cf. F dial. *paiju* (SM III B 248). Behind the gemination there is probably an effort to articulate *j* more intensively, since the usual articulation of intervocalic *j* is weak and *j* has a tendency to disappear or to become vocalized into *è*. The loss of *j* in words like *aju*, *mõju*, *uju*, *paju* would, however, result in such inexpressive and homonymous words as *au* ~ *ao*, *mõu* ~ *mõo*, *uu*, *pau* ~ *pao*. PA 57–.

### 2.3.1.8. LENGTHENING OF THE FINAL CONSONANT

#### 2.3.1.8.1. *-t̃* in the Partitive and Ablative.

*-t* (resp. *-D*) > *-t̃* after *n*, *l*, *r* in part. and abl. after a long vowel of the first syllable and after non-initial syllable. E. g. part. *soont*, *keelt*, *suurt*, *kannelt*, *südant*, *tütart*, abl *maalt*, *seinalt*, *madalalt*; *-D* occurs here and there in Sa; Hi, Hää, Saa, NEEC, SE, e. g. MusI *liigend* (*liiget*), Phl *südand* (~ *südad*), Hlj *suurd* (~ *suurt*), HlsPo *tüdürd*, SanN *seemend*, HarM *võtind*, Rõu *süänd* (*südant*), SeSa *tütrel'd* (~ *tütrel't*), LutKi *tütärd*. Cf. Lv. *k̃iell̃*, *t̃id̃arl̃*, WLv. *tag̃añl̃*, Vp. *sond* ~ *son'l̃*, *tütärd* ~ *tütärt*.

As in E the PF *t* in syllable-initial position after *n*, *l*, *r*, is generally represented by *D*, e. g. *keerd* (< *\*kërto*), *isand*, it has been tried to explain this exception by analogy. Kettunen, however, (EKÄ 27) regards this *t* as a result of a phonetic law, and assumes that the lengthening primarily took place only in a certain sentence-phonetic position. Collinder (Q 27–) here assumes compensatory lengthening due to apocope, and Posti (LL 217–) agrees. In regard to compensatory lengthening the question remains open why such compensatory lengthening has not taken place in the same dialects after a vowel, e.g. in such types of apocope as p. *maad*, in. *majas* (the development of *s* is otherwise parallel to that of the stops), p. pl. *madalaid*, etc.

It is probable that here the lengthening of the word-final *-D* has taken place in order to maintain it for morphological reasons, which has led to an overstrained articulation of *-D* and thus to its lengthening to half-long *-t̃*. It should be kept in mind that short word-final *-k*, *-p*, *-t* are alien to the phonemic system of the respective dialects; they only occur as sandhi allophones of *-G*, *-B*, *-D* before an unvoiced consonant. Of course, the other

partitive types in which there was a *-t* (< *-tt-*) before, such as *kastet* (< *kastetta*) have favoured the development of *-t* in the part. type *kannelt*. Perhaps the elative suffix *-st* has favoured the development of the abl. suf. *-tt*, cf. *seinast* — *seinallt*. The present case is perhaps one of those which stand on the boundary between phonetic and so-called analogical change and in which it is not easy to distinguish between the former and the latter.

It must be taken into account that the articulation of a lenis stop after a voiced homorganic consonant in word-final position and particularly after a long syllable and in the non-initial syllables requires a certain effort. For this reason the lenis in this position tends to disappear, thus in WE in the *nud*-participle *-nD* > *-n*, perhaps also in the comparative form *-mB* > *-m* (see Kettunen EKÄ 73). It should be kept in mind that also acoustically the lenis is very weak in this position. But in the cases in which it has had a morphological task to fulfil, it has survived and been lengthened due to more intense articulation, as we see in the partitive, which, if the stop has disappeared, would have coincided with the nominative, and in the ablative case, which would have coincided with the adessive (cf. Kettunen ACUT B 2 : 2 24—). In this connection the intermediate condition of the *nud*-participle is of interest. Here the task of *-D* is not so important as in the partitive case, since *-n*, too, belongs to the character of the *nud*-participle, but *-D* is still necessary, as in most dialects, in case the *-D* would disappear, the *nud*-participle would coincide with the first person. It is interesting that in most of these dialects in which *-D* has been lost in the *nud*-participle, the 1st p. sg. has lost *-n*, so there is no confusion between these forms. The main reasons, however, for the survival of *-D* after *n* are the following: (1) the combination *-nD* is a very recent one, the result of late syncope, (2) the function of the *nud*-participle is expressed by two phonemes *-nD* and therefore there is no need to articulate *-D* intensively, as in the partitive and ablative. For other explanations see Posti LL 214—.

*-t* (resp. *-D*) > *-l̥* after the vowel of a syllable with secondary stress, e. g. p. *jumalat*, *selget* < \**selke<sub>2</sub>ata*; cf. JämH *kuitsikad* (*kutsikat*), MusT *kopigud* (*kopikat*), Mih Nõmme *nädalid* (*nädalat*), Tõs(KM) *soldatid*, JuuT *'kamrid*, JMd(M) *tuhanded*, VJg(S) *'kiivitajad*, SimV *'valged*, VaiJ *jumalad*, SJnP *rumalad*, LaiM

*lähkrid*, Pal *vikatid*, KrlK *armsad*. This seeming exception from the phonetic transition  $t > D$  has been explained as due to analogy with the type *kastet* < *\*kastetta*, the need for analogy being that the partitive ending *-D* would otherwise coincide with the nom. pl. (cf. Kettunen EKÄ 26). But it is scarcely to be believed that the small group of the *kaste* type has become a source of analogy for the much larger *jumala* type, when there was already a *-D* in the partitive case. The influence of the *kastet* type can only be a favouring one. Probably the reason for the development of *-t* in this type is, on the whole, analogous to the above-mentioned type *kannelt*. In addition to the conditions which led to *-t* in the latter type the strengthening of articulation in the *jumalat* type has been favoured by secondary stress. PA 23.

### 2.3.1.8.2. *-t̃, -p̃, -s̃* in SE.

In some of the SE dialects *-t̃, -p̃, -s̃* correspond to the *-D, -B, -Z* of the other dialects. It might be assumed that in all those cases lengthening has started from the consonant after the third syllable, which was pronounced more intensively due to a strong secondary stress, a tendency which might be deduced from the occurrence in a few dialects (Puh). In all other positions it ought, in this case, to be assumed that there is an analogical generalization. This assumption, however, does not fit all corresponding cases, especially not that of *-s̃*. But still we can count the influence of the secondary stress as one of the factors in favour of the lengthening caused by other conditions. It seems to be easiest to explain the occurrence of *-s̃*.

In the dialects in which we find *-s̃* for *-Z*, the phonetic change  $ks > ss$  has taken place, on account of which *-s̃* occurs in word-final position in the translative and in the 3rd p. sg. cond. (which in some dialects has also been generalized in other persons), in most of these dialects also in the present of the passive form and in the 3rd p. sg. ind., such as HELL *eläss* '(he) lives' (: *elässe* '[they] live'). Besides these four morphemes the change  $ks > ss$  has taken place in another large group: in the *ks*-nouns, in which in word-final position *-s* is assumed to have occurred already in PF. It can be assumed that in SE long *s* was generalized



also in the nom. from the other cases: *vares* : *varesse* > *varess* : *varesse*. Thus -š occurred already in five large form groups. It is easy to understand that if -š occurred in so great a majority of the words ending in -s, it was generalized also in those words in which there was primarily an -s (resp. -Z), first of all in the other *s*-nouns. E. g. Trm *kärbäss* (*kärbes*), cf. Trm(MS) *õrassel* (*orasel*), MMgR *rahvass*, HelV *kolmass*, cf. HelP *naisess* (*naiseks*), Trv *kubijass*, cf. TrvP *‘pimmess* (*pimedaks*), KrlK *tõmmass* (*tõmbas*), cf. *varess* : *varesse*, *loess* (*loeks*) (: *loessi*), San *tsäärsipelgäss*, cf. SanN *palass* (*põleb*), Puh *makuss* (*magus*), cf. PuhV *sõrmuss*, Puh *müvväss*, Ote *kinnass*, cf. *olëss* (~ *olëssi*) (*oleks*), KamR *rikass*, cf. *satass* (*sajab*), Kan *hoobiss* (*hoopis*), cf. *hummoquuss* (*hommiukuks*), Rõu *‘valguss*, cf. *poisiss* (*poisiks*), Plv *süünäss* (*säinas*), cf. Plv(S) *Miiaste varëssëss* (*vareseks*), VasLa *kubijass* (*kubjas*), cf. *varess* : *varessë*?, 3rd p. *satass* : pl. *satassë* (*sada-*), SeNu *üless*, SeLi *kohess* (*kuhu*), SeVõ *kohUss* ‘court of justice’, Lei *rõngass*, Lut *rõemuss*.

The assumption mentioned above seems to be contradicted by the fact that in some dialect groups in which we find -š in word-final position, *s* ~ *Z* occurs in the same form in medial position. This seems to point towards the fact that primarily *-ks* > *ss* > *s* also occurred in word-final position and that only later -s was substituted by -š in word-final position. But the possibility remains that in word-final position -š (< *ks*) has survived, while in medial position the change *ss* > *s* > *Z* has taken place, analogically to the geminate stops, as *s* and the stops also elsewhere give evidence of a parallel development. For in the same dialects we find *k̄k*, *īt* > *G*, *D* in the weak grade after unstressed syllables and after syllables with secondary stress (see p. 29). E. g. SanN *eläse* ‘they live’, (but sg. *palass* : pl. *palasse* [*põle-*]), cf. SanLa *õdak* : *õdagu*; Plv 3rd p. pl. *hädäldäse*?, cf. PlvK *lepistigu*; SeSa cond. *olëss* : *olëzi*, cf. *unigu* (*hunniku*).

-*p̄* at present chiefly occurs in SE in two morphemes: in the comparative and in the 3rd p. sg. pr. The occurrence of the SE comparative is rather variegated; here and there in the same dialect we can find several types, the situation having been complicated by loans from other dialects, by analogical generalizations, and by contaminations, so that several explanations are possible, none of which can be irrefutably proved or disproved.

The incompleteness of the necessary data adds to the difficulty of clearing up this question. Only thorough special investigations could give a satisfactory result. In the comparative we chiefly find  $-\dot{p}$  (:  $-B-$ ) after a syllable with secondary stress in SEE, while after the second syllable we have  $mB$ . E. g. KrlK *madalep* (*madalam*) (: *madaleba* : p. *madalepa*) ( $\sim$  *vanēb*), Puh *ilusamp* ( $\sim$  *alamb*), HarM *ilusap* ( $\sim$  *vähämb*), Rõu *ilusap*, UrvO *ilusep* (: *ilusebe* : *iluseppe*), Vas Luhamaa *ilusap* (: *ilosaba* : *ilosappa*) ( $\sim$  *suuremb*), SePa *'võõrap* ( $\sim$  SeK *nooreb*), Lei(Vä) *vägeväp* ( $\sim$  Lei *pareb*), Lut *madalap* (: *madalaba*) ( $\sim$  *mustēmb*). It is easiest to assume that here  $-p$  has originated in the same way as  $-t$  in the type *jumalat*. On the other hand it might be a phonemic-analogical generalization of the type  $-\dot{k}$  :  $-G-$ ; cf. LutSJa *uman'ik* : *uman'igu* (see p. 29). This possibility is opposed by such forms, as KrlK *madalep* : g. *madaleba* : p. *madalepa*, but *võsastik* : *võsastiku* : *-kku*. Finally we should take into account the possibility that after the third syllable the phonetic change  $mp > pp$  might have taken place, and later in medial position the change  $\check{p}p > B$  analogically to  $\check{k}k$ ,  $\check{t}t > G, D$ . In favour of this assumption is the fact that in other similar clusters, viz.  $\eta k$  and  $nt$ , the nasal has disappeared after the second syllable, whereas in the SEE comparative we often find just after the second syllable  $mB \equiv$ , and the loss of  $m$  occurs after the third syllable. The same can be assumed in regard to the Hls occurrence after the second syllable; cf. e. g. Hls(K) *parep* : *parepe*; cf. Hls(V) *pöönik* : *pööniku* and after the third syllable e. g. Hls(R) *ilusamb* : *-mba* (cf. p. 51). PA 51—.

The  $-\dot{p}$  in the 3rd p. sg. pr., too, can be explained in the same way as the  $-\dot{l}$  in the type *jumalat*, in which case the lengthening could start in the syllable with secondary stress and later on become generalized in the other positions; cf. Puh(W) *kisendäp*  $\sim$  *kisab*. But this assumption is not indispensable. Since  $-p$  in 3rd p. sg. pr. in SE dialects is probably a later loan from NE dialects, we may assume that the NE  $-B$  was simply replaced by  $-\dot{p}$ , familiar to the phonemic system of SE, occurring in the comparative, whereas there was no word-final  $-B$  in the dialect. E. g. TrvVä *lüüp* (*lööb*), Trv(K) *'kargap*, KamK *tulep*, Puh(W) *kisendäp* ( $\sim$  *kisab*), PuhV *päep*.

$-t$  (resp.  $-D$ )  $>$   $-\dot{l}$  (partly  $t$ ) occurs chiefly in the 2nd p. sg. and in part. pl. E. g. KrkKa *'pastlit* (*pastlaid*), 2nd p. *käset*,

Trv(K) *sügavamit* (*sügavamaid*), *lavasit* (cf. *ärrad*, *ääld*, *kalald*), Krl (E 361) *jooset* (*jooksed*), *malgutēt* (*malgutad*), SanLa *mõistat*, San *'tihkit* (*tihkeid*), Puh *kisendät*, but *tuled*, *rikkit* (*rikkaid*), *'üüsit* (*öösid*), Ote *saat*, *olet*, *'tüüsit* (*töösid*), *tädisit* (~ *täte*), OteN *uulitsit*, OtePü *niit* (*nyūd*) KamR *tulet*, *rikkit* (*rikkaid*), Urv *näit* (*nägid*), KanK *kirotit* (*kirjutasid*), HarM *tulet*, RõuK *pümehit* (*pimedaid*), *jumalit* (*jumalaid*), *uubit*, PlvK *makat* (*magad*), *saat*, Plv *tal'Issit* (*talviseid*), Räp *parembet* ~ *parembit*, *'puutsit* (*puuseid*), RäpV 2nd p. sg. *võit*, VasLa *sait*, *'kangruisit* ~ *'kangrit* (*kangruid*), *perrit* (*peresid*), Vas *opattajit* (*õpetajaid*), SeSa *teēt* (*teed*), *makat*, SePa *kaet*, *tuūēt*, *kannahtat*, but *paūēd* (*palud*), *oherdit* (*oherdeid*), Lei *'v'ēnnit* (*venesid*), LutJ *elät*.

The causes of the occurrence of *-t* may be assumed to be the same factors which in the case of the 3rd p. *-p* and the part. *jumalat* led to the strengthening of the word-final stop. It must be taken into account that except in the 2nd p. the PF *-t* in these dialects either has disappeared or has been replaced by [ʔ]. In the 2nd p. there has probably been a reaction to the loss of the *-t* while the phonetic change *-t > 0* was still in progress, which resulted in an overexertion in its articulation and thus caused it to be lengthened. It is also possible that the development of *-l̥* was furthered or even occasioned by the fact that in genuine SE dialects there were no lenes at all in word-final position after a vowel, but only a half-long *-k*, *-p̥* as well as *-š* so that *-t* accomodated itself to this series.

## 2.3.2. Lengthening of Vowels.

### 2.3.2.1. AFFECTIVE LENGTHENING

Affective lengthening may be assumed in the following cases, besides the words *iialqi*, Khn *iinetu*, dial. *püigistama* mentioned by Saareste (EK 1927 177-): VaiM *kääkistama* (*kägistama*), VaiI *kuugistamma*, PärP, KeiH, VMr *pääratu*, KrkK *ei\_joole* (*ei ole*), Räp *roonimine*. See also Saareste ib. 172.

Affective-descriptive lengthening probably occurs also in the words *seni*, *kuni* in SE, e. g. HelL, PuhV, SanU, Rõu, Plv *seeni*, UrvO *kooni*, VasO *koonP*, SeLi *kooni*?. It is possible that *ē* and *ō* in these words have been influenced by the long vowel of the

second component in the syntagms as Rõu *seenimaani* 'up to now', Plv *seeni aani*' (*seni ajani*), UrvO *koonimaani*. Interesting is also AmbN, VMr Aburi *pikkamiisi*, *'aegamiisi*. As regards the AmbN occurrence it is said: "chiefly when the word is in an affective position" (60).

In Jäm we meet the particle *-GiD* (*-gi*), when particularly stressed in the form *-GeeD*, e. g. *maap tulegeed* (*ma ei tulegi*). Affective lengthening may also occur in the p. pl. of the *kene*-diminutives in Jäm, e. g. *pisigiisi* (*pisikesi*), *peenigiisi*. An individual affective lengthening probably occurs in: RõuH *eega kolme 'aestaga seehn* (*iga kolme aasta sees*), usually *ega* (MT 259 72 note).

### 2.3.2.2. RECENT LOANWORDS

In loanwords the open syllable with a long vowel is usually stressed in accordance with the pronunciation of the language from which or by way of which the loan has been made, such as German and Latin, e. g. *aadel*, *gümnaasium*. The same is the case with the vowel in the stressed syllables in Russian (as to vowel quantity in Russian see I. Mahnken and M. Braun, ZPh 5 265–, especially 281). Therefore in the dialects we also find a long vowel in the Russian loans which in the literary and common language occur with a short vowel, e. g. JuuK *miiniister*, PuhV *'ruublitükke*, Ote *'ruubli*, Räp *'ruuble*, SeSa *ruubli*, Lei *'ruubl'i* (*rubla*), cf. Russ. рубль, VaiI *vaabrika* ~ *vaaprik*, cf. Russ. фабрика, RäpV *peterpuur'ist*.

In those loans, too, in which in the common language and in the other dialects the primary stress has shifted from a non-initial syllable to the first syllable (in accordance with E phonemic structure), we find in some dialects in some words the main stress and the long vowel in the non-initial syllable, as in the original language. Sometimes the primary stress has been shifted to the first syllable, but the long vowel has remained on the non-initial syllable with secondary stress, e. g. Rõu *kapitaal'* (*kapital*), JämH *minuu'di* (*minuti*), LutSJA *minuu'ta*, RõuK *'miljuun*, KrkK *'nikruudi* (*nekrutid*), Aud *pa'taljoon*, RõuK *'pinsjuun* (*pension*), San *pinsioon'*, Hls(R) *'petrooli*, HarKa *'portsjooini*. Since the long vowel in loanwords is usually connected with the main stress, the idea has arisen that in loanwords there must always be a

long vowel in a stressed syllable and therefore in some dialects, partly also in the literary and common language, in some of the loanwords in which the main stress has been shifted from its original position in a non-initial syllable to the first syllable, the vowel of the first syllable has been lengthened, although it is short (and unstressed in the original language). E. g. *muuseum*, *uurali*, RapHK *aagent*, Sim *aagen't* ~ *agen't*, Hls *aagen't* ~ *agen't*, IisO *aagentuur*, PlvAl *'aapostli*, Jäm *aabril'l* (*april*), RapHK *'aaptek*, IisO *aaptek*, Hls *aaptiik*, PJg-Tor *aapteker*, Kod(KV) *eebistel*, *'eevangelium*, TMrKõ *teetsembri* ~ *te'tsembri*, Tor *tiivisjoo* (*divisjoo*), Phl(A) *kaalendr*, Var, PJgE, RapHK, ÄksV, Hls *kaalender*, Saa *kaalender* ~ *ka'lender*, Sim *kaalender* ~ *ka'lender*, SJnP *kaalen'der*, TMrKõ *kaalendri* ~ *ka'lendri*, RääP *kaalendri*, Jäm *kaabral* (*kapral*), Kod(KV) *kaat'ikismus*, Jõel *kiitar* (*gitarr*), Mär *laaber* (*klaver*), Hmd *klaaver*, HarM *klaaver*, RääP *klaaver* ~ *klaver*, KJnL *roogodil'* (*krokodill*), TrvM *roogudilli*, VaiI *kroovat* < Russ. *кровать*, VMr *Asamalla meetal*, JuuK *müniister*, PJgE *miinutit*, *'neekrut*, AmbN *niegrut'*, PlvAl *'neekrut'* ~ *'nekrut'*, RääP *'neekruut*, Saa, PärP, ÄksV, Kod(KV), Hls *noovember*, IisO *nuovember*, San *noo'vembri*, TMrKõ *noovembri* ~ *no'vembri* (the latter more frequent), Trm(T) *paalitu*, KeiK *paarun*, VaiI *paastriks* (*pastoriks*), Lai *piirakas* (~ *pirukas*), RapK *poolitseisse*, Trm(T) *pooleisei*, Kod(KV) *'reevident*, Kõp *tee(atert)*, PJgE *tuurak* < Russ. *дурак*, Aud *tuurakas*.

In some dialects the combination of vowel + long voiced consonant has been substituted by long vowel + short consonant. E. g. Hmd *aalbom* ~ *'album*, VasM *kaarmanIst*, cf. Russ. *карман*, Lüg *kittaared* (*gitarrid*), MMgR *laal'jaana* (*lauljanna*).

### 2.3.2.3. INDIGENOUS WORDS AND EARLY LOANS

The short vowel of the open first syllable has been lengthened in some words in some dialects, especially in NWE (decreasing towards the east), in a less degree also in SE. E. g. Rak *arakas* (*harakas*), Ann *aavan*, KeiH *'aavama* (*avama*), KeiH, SimE *aavaldama*, Hmd *aavalik*, KeiH, SimE *iisik*, Var *iivade*, JuuKa *iibike* (*ivake*), Pil *iivikese* 'a little' — in the last words we may have also affective-diminutive lengthening, Khn *kaarikas*, RääPHK *kaarikas*, Hmd *luukaarits*, RapHK *kaava*, RapHK

*kuura kätt* (LVEM 251–), VaiM *kuuristik* (? affective-descriptive), Mär *kõõrikad* (*kõrkjad*), HarM *küüsumä* (*küsimä*), SeU *küüsse'* (*küüsid*) (? affective-voluntative lengthening), SimE *laamakille*, *laamad*, Wd. *laamama* (? descriptive), SimV *liinik* ~ *linik*, IisO *liinik*, Jäm (E 529) *luunastama*, *luunastus*, EmmT *luusigat*, Krj (E 529) *luusikad*, Lih, Ris *lääv*, PjgE *lääb* (*lävi*) (LVEM 190), Var *lüülid* (*lülid*), Wd. *lüül* : *lüülu*, Mär *maaleva*, Rak *maan'itseb*, IisO *maanitseb* (? affective), Käi(A) *Luguse meeledab*, KeiH *määlestama*, Ann *määleta* (descriptive), SimE *määletseb* (? descriptive), MusI *määra*, SimE *määratseb* (? affective), Jäm, Phl *naaber* (*naber*), RapHK *nõõretama* (? affective), Avi *oorik* (*orikas*), RapHK *peeletama*, Mär (*linnu*) *peeletis* (? descriptive), Hi(A) *'põõdal* (*pudel*), HarM *püüsumä* (*püsimä*), SeKü *püüsumä* (? affect.-descript.), JjnLa, Sim *raavitse-*, PhaV *ruusikas* (? descriptive), Kod(KV) *Alatskivi süisalik*, VaiI *süüli* (*sülle*), RapHK *taalitaja*, Hmd *tiimukas* (? affective), Ris *tiimoti* (*ein*), Hmd *tiimutid*, JuuK *tiimut'*, cf. G *Timothy(gras)*; KeiH *uuv* (*huvi*), IisO *uuvitav*, VaiI *uuvisi*, JämH *vaabalt*, RapK *vaalima*, RapR *vaalitseda*, PärP, RapHK *vaaritse-*, KeiH *vaaritsema* (? descriptive), HarM *ääsä'* (*äsja*), VaiI Narva *ääri* (*äri*), Ann, SimV *Mariküla äävitama* (*hävitama*) (? affective).

As already indicated above, affective, or sound-symbolic descriptive lengthening might occur in many of the words given here. There remain, nevertheless, a large number of words in which we cannot assume this. There seems to be a connection between this group and the lengthening of the vowel in foreign words and recent loans. As regards RapK E. Tikk says: "Concerning new words that are used for the first time there is always the phenomenon that old people due to their linguistic instinct lengthen the first syllable: *kontor aavatud*, *pidu kaava*, *poolitika*, etc." (cf. also Kettunen KV 52 note 2). I have been able myself to observe the same thing in my mother, who came from Rap (she has also the analogous shifting of stress to the second syllable as in *maleeva*). It must be observed that in this word group we find many purely literary words and neologisms from the point of view of the respective dialect, such as *avama* (pro *lahti tegema*), *avalik*, *isik*, *kava*, *maleva*, or words that evidently have come from other dialects such as *kuura* in Rap, which is chiefly familiar in SE,

while in NE we find *pahem* and *vas(s)ak*. As regards Hls *läänik* it has been said that it occurs but seldom and is a word of Viljandi. We can assume that also in the case of other generally known words we meet such phonemic-analogical hypercorrection, in borrowing from another dialect. As this change is evidently a very recent one, it is possible that it has developed on the analogy of younger loanwords in which there is a long vowel. A more precise dialect geographical examination would give a more positive answer.

In the same dialects we also find a few vowel lengthenings in the closed syllable. Concerning this phenomenon we can offer no other explanation than that given for the two preceding groups. E. g. RapHK *kaaklema* — perhaps a contamination with the word *nääklema*; *kaapsas* (here and there in Sa; Hi, Läs, Rid, Pä, Rap), e. g. RapHK *'kaapsad*, Vig(Ste) *kaapsas*, HarM *'prüske*.

In his lectures Saareste has from the words with lengthening of the vowel in the open syllable separated those in which there was primarily a closed syllable, since the consonant at the beginning of the second syllable has been lost there, and therefore compensatory lengthening might be applied. Since these words occur in the same dialect area as the lengthening in the open syllable, and since such compensatory lengthening has not been established elsewhere, and as, moreover, this phenomenon occurs but in a few words, it is better not to separate these words from the open-syllable group and to assume that the lengthening of the vowel in these words has taken place after the loss of the consonant, thus in the open syllable. *kaasik* < *\*kas<sub>i</sub>ikko* (cf. *kask* : *kase*, Lüg *kasik*), which is to be found in almost the whole of the E area, likewise *vaarik* (cf. F *varvikko*) may have developed analogically to other words with the ending *-ik*, especially forest names, which mostly have a long first syllable, such as *haavik*, *kuusik*; *tuulik* (cf. Saareste, Vir. 1947 248). In a similar way *seelik* can be explained (see also Saareste LVEM 167).

The words in which the combination of short vowel + long voiced consonant is represented by the long vowel + short consonant must be observed apart. The variant *vaarud* (*varrud*) in Var has evidently been taken from the neighbouring parishes of Han and Kse, where we find the form *varud* (see LVEM 129). As

regards such words as PöiJ *muulikas*, VMr *iimitsema* (~ *immitsema*), Hls *kooruteb* (~ *koruteb*), läänik, VasO *aamedü* (*ameti*), it cannot, on the basis of the available data, be decided whether they start from the original geminate or from the later short consonant form. Cf. also the opposite phenomenon: *homme*, *hommik*, cf. WE (*h*)*oome*, e. g. SaaL *oomel*, KeiKrkj 'oome, EMA 2 51, dial. (here and there in Sa; Hää, Rap, KuuN, Vai coast) (*h*)*oomik*, F *huomen*, VtJ *õmæn*; *mullu*, cf. *muu*; HarM *kummalt* (*kuumalt*). The alternation of the combinations of long vowel + short voiced consonant and short vowel + long voiced consonant may be based on the acoustic proximity of these combinations, which is caused by the voiced consonant and the loose contact in Estonian, of which the latter particularly favours the lengthening of the vowel (cf. also p. 153). Cf. also Lv. *tõmõD* < \**tammet*.

A special group is constituted by the words in which alternation of length before a voiced consonant cluster occurs in BF languages, such as *kurn*, *kurnama* ~ KraO 'kuurna, F *kuurna*, *kuurnita*; *kärbes*, *kärblane* ~ KraO *käärbläze*, F *kärpänen*; *kärme* ~ F *käärme* ~ *kärme*; *narmad* ~ SeSa *naarmõ*, F *naarmu*; *parm* ~ JõeI 'paarmud, Jõh *paarm*, F *parma* ~ *parma*; *varn* ~ F *vaarna*; cf. also F *päärme* ~ *pärme*. Cf. also Itkonen FUF 29 269–, 334–; SMK 150. Here the vowel length is probably connected with *r*. As several measurements have shown, *r* has a lengthening affect on the preceding short vowel, particularly *r* + voiced consonant (see A. Maack ZPh 7 106–, 112–). Cf. also VaiI *saarnane* ~ *sarnane*, and on the other hand Kas(A) *sarmas* (*saarmas*), Jõh *sõrmed*, Vai *sormed* (KV 51) (*sõõrmed*), cf. F *sieramet*; also before *l*: Kod(KV) 'ilgab, VasM *hilgass* (*hiilgab*). Cf. also Vig(Ste) *paart* (*part*), Mär, RapHK 'kaaldu- (*kaldu-*), PJgE 'räändab ~ 'rändab, 'taandrek (*taldrek*); Lv. *jälga*, *võrna* (E õrn); Hung. dial. *kormos* > *kórmos*; Lett. dial. *vārna* (Endzeļin LGr 101–).

In Rõu we find an interesting lengthening of the vowel of the first open syllable when there is a glide vowel in the second syllable. E. g. Rõu *riudev'* (: *ridva* : 'ritva), *sõõgõl'* (*sõel*), *sõõgõl'ma* (*sõeluma*), RõuS *puudõr* (*puder*), *keesev* (*kesv*). Most probably it is a case of hypercorrection in taking over a phonetic change from the outside, i. e. when in place of the former forms *sõkL*,



*putr* (or *sõgl*, *puḍr*), *kesv* the forms *sõggl*, *puḍer*, *kesev* came from the neighbouring dialect.

#### 2.3.2.4. IN THE SECOND SYLLABLE

We shall not touch upon the causes of the origin of the half-long vowel in the second syllable in Estonian, e. g. *emà*, *linnà* (: *'linna*), as on this phenomenon unanimous views are still lacking, and it is a purely phonetic, non-phonemic feature. On the origin of the half-long vowel see Wiklund MO 9 224–, Collinder Q 78–, Ariste ACUT B 47 : 1 41, 146. On the precise quantity of the half-long vowel, see O. Sõster EK 1938 213–, Ariste ACUT B 49 : 5 53 (ib. 58 also bibliography).

In reality the so-called half-long vowel is in some dialects as long as and even longer than the so-called medium-long vowel. The vowel of the second syllable is longest in disyllabic words ending in a vowel, in which the consonant between the two syllables is short, e. g. according to Ariste in Kassari *kanà* 28,25. The average length of a so-called half-long vowel in Kassari in this position is 23,51, that of the so-called medium-long vowel 20! According to Ariste the half-long vowel is generally longer in WE. Cf. also as regards Kod, Kettunen K 34–.

Also in the SE dialectal area the vowel of the second syllable has in a few cases been recorded as long. E. g. OteN *talaa* (*tala*), *siss tulü 'ahju* (4), *siss 'ol'lit kuraadi ädän* (*siis olid kuradi hädas*) (22), *pää om vanää* (22), SeSe *ti olēḡḡe 'vaese'* (*te olete vaesed*) (103), SePa *makaa* (*magab*), *lugee* (*loeb*). Particularly often a long vowel in the second syllable is recorded in Lut, e. g. LutSJa (*kõlbama* :) *kõlbaada'*, *otav* : *odaava*, (*tubak* :) *tubaagu*, *oleḡḡma*, *sun'iima* (*sonima*), LutV *armaadza* (*armastan*), *paraan'di* (*parandas*), *võḡḡadass* (*võḡeldakse*), *aviida'* (*avita*), (*j*)*imneed'i* (*imestasin*), *kiuzaanu'*, *kazuuma* (*kasvama*). It is not evident which factors have given rise to the long vowel of the second syllable. One phonetic condition that has favoured the lengthening of the vowel is loose contact. It is possible that the psychic condition of such a lengthening is a certain slack drawling articulation (cf. Ariste *op. cit.* 54).

As regards other BF languages, the half-long vowel occurs in Lv., F dialects, e. g. SWF and FAS (SMK 198), in VpÄ, Ld. and Cr.-Ol. (see Tunkelo VKÄ 889–).

## 2.4. RISE OF VOWELS<sup>1</sup>

### 2.4.1. In the First Syllable.

#### 2.4.1.1. *o* > *õ*.

*o* > *õ* in the first syllable occurs in some of words in the greater part of the E area. E. g. *õpetama*, *sõda*, *jõud*, cf. F *oppia*, *sota*, *jouto*, MusI `noidus (nõidus), Hi(A) *louna*, JõeK *opetama*, VNgK *sodu*, San `korge, Ote `korge ~ `kõrge, HarKa *joud* (~ *põud*), KanK `op'seva' (*õppisid*), Plv(S) *opetajah*, Vas *opetajit*, Ráp `korgemp, VasO `korgemb, SePa `opma (*õppima*), LutSJa `korge. To a greater extent than in the other dialects *o* > *õ* occurs in NEE. E. g. SimV *õmmeti* (*ometi*), LügR *kõhe* (*kohe*), Jõh *kõht* (*koht*), VaiI `õskan, IisI *õlen*, *õled* (*olen*, *oled*) (: *on*), AviM *õmad* (*omad*), *kõlm* (*kolm*), Trm(T) *õtsast*, KsiL *õl'i* (*oli*), PalK *õllud* (*olnud*), MMgR *kõhalt* (*kohalt*), Kod(KV) `õskama (: *osav*), `õska (*ostke*), EMA 1 7 'ohakab', 2 31 'oder', 56 'ometi'; cf. Vt. *kõhta*, *õma*, *õssā* (E *osta*). Exceptionally *o* > *õ* occurs in the word *pole* : *polnud* : *polla* (<ep *ole*, *ol*-) in several places in NE, e. g. Khn *põlõgi*, LihP *põle*, MarHal *põllə*, JuuK, SimV *põle*, VaiI *põlegi* KJn, KsiJ *põle*, PltP, LaiM *põld*, PalK *põllutki*. *o* > *õ* occurred already in the beginning of the 13th century; cf. LCD *Jeeleth* 'Jõelähtme'. PA 9, 21, 30, 69, 110.

It is difficult to find any direct phonetic or phonemic-structural explanation of this change. Perhaps the development might be assumed to have taken place as follows. We may assume that the change *o* > *õ* started from the combinatory change *ou* > *õu*, which includes all words containing *ou*. The phonetic change *ou* > *õu* is to be regarded as a partial assimilation as to the place of articulation (on the phonetic explanation see also Posti LL 123-). A similar phonetic change has taken place in Livonian, e. g. *sõudə* (E *sõuda*). In addition the assimilation *oi* > *õi* has taken place, which may have developed independently, but also may have been favoured by the change *ou* > *õu*, but this change has not been concluded, as it does not include all words. It should also be noted that the language already previously had *õ* in the first syllable in such words as *põld*, *võrk*, *lõug*. We may

<sup>1</sup> In this chapter delabialization is included.

further assume that when the phonetic changes  $ou > \tilde{ou}$  and  $oi > \tilde{oi}$  were spreading, it is possible that  $\tilde{o}$  was substituted for  $o$  not only in the words containing  $ou$  or  $oi$ , but also in the words containing a simple  $o$ . Since in the dialect in which the changes  $ou > \tilde{ou}$  and  $oi > \tilde{oi}$  took place, the words with a simple  $o$  were not primarily included in that change, we can understand why the change  $o > \tilde{o}$  is limited to only some of the  $o$ - words. It must also be taken into account that under the influence of those words which had retained  $o$ , there could all the time be reactions to the change  $o > \tilde{o}$ . Finally the mixing up of dialects should be taken into consideration. All these factors assisted in producing a change  $o > \tilde{o}$  limited only to some of the words, including more words in some dialects than in others. That the change  $ou > \tilde{ou}$  is older than the changes  $oi > \tilde{oi}$  and  $o > \tilde{o}$  also appears from the fact that the former occurs in Estonian, Votian and Livonian, while  $oi > \tilde{oi}$  and  $o > \tilde{o}$  only occur in Estonian and Votian. That the similar phonetic changes that have taken place in these languages are genetically connected ought to be evident. Thus the change  $o > \tilde{o}$  is in reality a phonemic-analogical generalization or hypercorrection, as is also illustrated by such a recent loan as Trm(T) *kõhvi* (*kohv*). Cf. also Kettunen EKÄ 131–, Itkonen, Vir. 1945 181–.

## 2.4.1.2. LONG VOWELS

### 2.4.1.2.1. Medium-High Vowels.

The rise of  $\hat{o}$ ,  $\hat{ö}$ ,  $\hat{e}$  of the third degree of length chiefly occurs here and there in Sa; in SWE, SNE and SE. The corresponding sounds have been mostly recorded as  $\varphi$ ,  $\underline{u}$ ,  $u$ ;  $\tilde{\varphi}$ ,  $\underline{y}$ ,  $\tilde{y}$ ;  $\epsilon$ ,  $\underline{i}$ ,  $i$  respectively, but the real phonetic value of the sounds seems mostly to be a low  $u$ ,  $\tilde{u}$ ,  $i$ , which can be denoted as  $\underline{u}$ ,  $\underline{y}$ ,  $\underline{i}$ . In some dialects, especially in SEE they are rather close to the normal  $u$ ,  $\tilde{u}$ ,  $i$ , so that they have been recorded as  $u$ ,  $\tilde{u}$ ,  $i$ . But in reality probably in all respective dialects (this has been stated by Prof. A. Saareste, and by some informants from SWE and SEE whom I have checked), the  $\hat{u}$ ,  $\hat{ü}$ ,  $\hat{i}$  derived from  $\hat{o}$ ,  $\hat{ö}$ ,  $\hat{e}$  differ phonetically as well as phonemically from original  $\hat{u}$ ,  $\hat{ü}$ ,  $\hat{i}$ , so that words like *kool* and *kuul*, *söö* and *süü*, *seen* and *siin* have

been kept distinct. Kettunen in Kod(KV) records the corresponding sounds as `uu, `üü, `ii (< `oo, `öö, `ee) and `uü, `iï (: uu, ü), respectively, e. g. *tujur* : *tüura*, *püim* : *püimäss*, while original *ü* : *ü* is represented as *üi* : *ü*. In the following citations the original transcription of the sources has been transliterated unchanged.

`oo > `uü. E. g. AnsH `jõõnud, Var *kuuk* (: *koogu*), AudK *põõl*, Hää(N) (*oone* : ) `uune (*hoone*), Saa *ruub* (: *roobi*), RapHK *tõõma*, VilV *rüüp*, Kõp (*poole* : ) *püül*, KJnL `lүүmus, Lai(AT) *mүүn*, KsiL *puul*, ÄksV *tүүs*, PalK `puule, MMgR *nuur*, Kod(KV) *kuuk* (: *kuagu*), (*kook* : *koogu*), Hls *kuurmv*, PstHo *lүүm* (: *loomale*), KrkAi *kuurt*, Trv `kүүli, HelL *lүүst* (*loost*), Hel *rõõp*, KrlK *juu* (: *juova*'), SanN `õõtme (*ootama*), RanK `jүүma, Puh (*kogu* : ) *kuun* Ote *rүүg*, TMrKõ `suultumast, VõnK *kuur* (: *koore*), HarM *hүүg*, UrvVa *tүү*, Rõu `hүүlmalda (*hoolimata*), PlvK *kuuhn* (*koos*), Rãp *mүүd* (: *moodoga*'), VasO `үүta' (*oodata*), VasS *ruusk*, SeSa `kүүbale (*koomale*), Lei(V) *үүt* (*ootas*), (: *uoda*), Lei(O) *nүүr* (*noor*) ~ *nuur*', LutK(V) (*hobu* : ) *huu*, Lut *suum* (: *suome*) (*soomus*), Lut(V) *jүү* (: *juova*'), KraO *nuur*' (: *n<sup>u</sup>oremb*). Cf. IngS *nõõra*, Hung. *lú* < *ló* (Hörger MNY 54-).

`öö > `uü. E. g. AnsH `sõõkisisid, JãmH `põõrõs (: *põõra*), Var *süük* (: *sõõgid*), TõsE *tõõst*, AudE `sõõma (: *sõõvad*), Hää(V) *süü* (*sõõme*), Saa *püür* (: *põõrid*), RapHK *sõõk* (: *sõõgid*), VilV `lүүmä, KJnL *kuuk*, Kõp *sүүk* (: *sõõgi*), KrkAi `mүүdä, Hel `sõõmä (: *sõõdä*), TrvVä *lүүp* (*lõõb*), KsiL `üüs'i, ÄksR `mүүda, MMgR *tüü*, Kod(KV) `süümä (*süädä*), PstHo `rүүvli, KrlK `püürmä (: *põõrdä*'), San *lүү*, SanN `põõrdme, RanK *sүүt*, Puh *sүүk*, Ote `tүүsit, KamK `sүүssi (*sõõksin*), VõnV *süük*, HarM *põõrd* (*põõrab*), Urv *vүү* (: *võõni*), Kan `tүүhü (*tõõsse*), Rõu `hүүli (*hõõvel*), Plv *nüür*, Rãp `sүүdäv, VasVä *tүүd*, SeNu *üüd*, Lei *lüü* (: *lüöde*), Lut(V) *sүү* (: *süövä*'). Cf. IngS *õõ*, Hung. *tú* < *tó*.

`ee > `iï. E. g. VarH *kiil*, AnsH `võõga, Mih Nõmme `teõõnima (: *teenin*), HagL *mõõs*, TõsE *nõõd*, Hää *siin* (: *seene*), Saa (*regi* : ) *rii*, RapHK *sõõn* (*seened*), VilV *müül*', KJnL *süüst*, Kõp (*keele* : ) *küül*, Pltk (*regi* : ) *riid*, Lai(AT) `kõõgi, Trm(T) *tüü*, KsiL *miis*, ÄksR *viil*, PalK `vüüri (*veerde*), MMgR `riidisel (*reedesel*), Kod(KV) *liim* (*leem*) (: *liäme*), HlsA `rõõde, PstHo *püül* (: *peelege*), KrkK *nüü* (*need*), HelL *peremiis*, TrvVä `teõõnder, TrvP *iüst* (*eest*), KrlK `liidmä (*teadmä*) (: *teedä*'), RanK `süümned, SanU *iin* (*ees*), Puh(S) *milde*, Ote *süün*', KamU `küübä (*keeva*), TMrKõ *müü* (*mee*), HarM

*miist, tii pääl (tee pääl), but tiiivett (teevett),* UrvVa *tijn'* (*teenib*), RõuH *'riide (reede),* Plv(S) *kiiss (keeb),* RävV *iih (ees),* VasO *tiid (teab) (: ei teeda'),* SeKun *'kõetmä,* Lei(M) *l'iim (leem) (: l'ieme),* Lut (*sieme* :) *'siime (seeme),* KraO *kiilt (: k<sup>i</sup>elega).* Cf. IngS *peeni,* Hung. *mész < mész,* dial. *míz < mész.*

*'õõ > 'ü* in Krk and SEE. E. g. KrkA(W) (*rõõvass* :) *'rüva,* Ote *püin (: põõna),* Urv *müik (: mõõga),* *rüisk (: rõõsa),* Plv(U) (*jõgi* :) *jü,* PlvAl *rüim (: rõõmu),* Räv (*rõivass* :) *rüva,* VasO *müik (: mõõgaga)* SeKü *müik (: mõõga).*

It may be assumed that the rise has taken place through diphthongization and the assimilation of the second component by the first one which followed it, i. e. at first only the first part of the vowel rose, e. g. *seen > sjen.* Later on this intenser and higher articulation, which had come into being on account of articulatory overexertion spread to the whole vowel, thus assimilating also the second component so that it became a high vowel similar to the first one: *sjen > sijn.* This assumption seems to be proved by the variants in those dialects in which the diphthong has survived in the weak grade, i. e. in case of medium-long (second-degree) vowel, whereas in the strong grade the extra long vowel has risen, e. g. PalK *kuul : kuolis,* Kod(KV) *liim : liäme < lieme,* *kuuk (kook) : kuagu < kuogu,* *'süümä : süädä < süädä,* Lei *šiip (seep) : šiebi,* Lei(V) *'kuulma : kuolę (koolma),* Lei *lüü : lüöde,* Lut *müil : miele,* LutSJa *suun : suone,* Lut(V) *syü : süövä',* KraO *kiilt : k<sup>i</sup>elega.* The intermediate stage between the diphthongized vowel and the vowel risen throughout is also illustrated by such variants as MuhL *'l<sup>ü</sup>ööma,* KeiH *suoned.* Kettunen (EKÄ 138), Penttilä (AUA B 3 : 2 15–6) and Sovijärvi (SIM 111) as well are of opinion that the rise has taken place by way of a diphthong. The Paadene variant in Carelian, indeed, seems to prove this, since in it *õ < oa* corresponds to the *ā > oa, ua* of the other dialects, e. g. *mõ (E maa);* Ojansuu records *ã,* e. g. *š-ât'i (E saadik)* and Kettunen *oõ,* e. g. *moõ (Penttilä op. cit. 21).* Cf. also in non-initial syllable in the F dialect of South-Savo *sal'tiit < -iet < -eet,* *hakkuu < -uo < oo.* That diphthongization took its beginning and can be restricted to the extra long vowel only, we already saw in the chapter about diphthongization, cf. Muh(Ki) *liem : leeme.* The assumption of rise through diphthong also seems to be proved by dialect geography: the

areas with diphthongization and with variants of raised vowels are connected with each other, cf. Kse(Z) `puodi ~ Var kuuk (*kook*), MuhL `l<sup>ü</sup>ööma ~ Muh(Ki) tüü. Schneegans, too, believes that  $\bar{i}$ ,  $\bar{u}$ , which occur in the Sicilian dialect beside ( $e >$ )*ie*, ( $o >$ )*uo* have been arrived at through the diphthongal intermediate stages of *ie*, *uo* (Laute und Lautentwicklung des sizilianischen Dialektes, Strassburg 1888, 22), and likewise the Czech  $\bar{u}$  which occurs beside  $o > uo$  is usually explained as  $o > uo > \bar{u}$  (Schmitt AD 134).

Still Schmitt believes that the rise in the latter vowels may also have occurred directly without any intermediate diphthongal stage:  $o > \bar{o} > \bar{u}$ ,  $e > \bar{e} > \bar{i}$  on account of an increase in stress (AD 131, 134). We cannot either disregard this possibility in explaining the raising of the E `oo, `öo, `ee > `uu, `uu, `ii, i. e. the intenser articulation caused by articulatory overexertion has already in the beginning covered the whole vowel. Ariste believes the same (ACUT B 47 : 1 66). Thus it is quite possible that an articulatory overexertion of the same character in one case resulted only in the first part of a vowel being articulated with particular intensity producing the diphthong *uò*, while in the other case the rise in intensity was somewhat weaker but more prolonged, thus leading to `uu. This assumption, too, can explain the fact that geographically the areas for the occurrence of the *uo* and the `uu are often adjacent. E. g. Kse(Z) `puodi ~ KsePe jöönis, Khn(K) `süöma ~ pöönigilt, Var üö (vöö) ~ süük ~ TõsE tõõtst, HagKo ja tuöd ~ RapH `söõma, Jür sie ~ HagL mees, Sim liem ~ Lai(AT) `keegi.

In regard to Krl it is said: "Especially in stressed positions — particularly in questions —  $\hat{e}$  can rise to the height of the real  $\bar{i}$  as regards timbre: *missa sääl tiit*" (*mis sa sääl teed*), likewise *missa sääl tuut* (33). This quotation proves that in case of the rise of the medium-high vowels, we find the same articulatory overexertion as in the case of diphthongization.

Regardless of the way in which the raising of the medium-high vowels has taken place, whether through a diphthong or not, it is as to its character an overexertion of articulation, whether the more intensive articulation comprised the whole vowel at once or spread from its first part to the end. As the long, and in Estonian particularly the extra long vowels, are generally

articulated more intensively than short vowels, it is easy to understand that the articulatory overexertion has occurred here (cf. also P. Passy Ch 137, Ariste ACUT B 47 : 1 65).

It is interesting to compare the raising of E vowels with Horn's observations in regard to the rise of vowels in English (NWS 13–). H. shows e.g. how the English  $\bar{a}$  in words that are emphasized and thus have a higher pitch, is articulated as  $\bar{\phi}$ , e.g. in the word *large*; correspondingly  $\bar{\phi}$  is articulated  $\bar{\phi}$  in emphatic position, e.g. in the word *all*. In some dialects  $\bar{\phi}$  has three variants according to the pitch, which H. gives with the graphemes  $\bar{\phi}$ ,  $\bar{\phi}$ ,  $\bar{\phi}$ , while *a* is represented by *a*, *æ*, *ɛ*, *ɛ*, *ei*. Basing his assumptions on these facts from modern dialects, H. assumes that also the rise of vowels  $\bar{e} > \bar{i}$ ,  $\bar{e} > \bar{i}$ ,  $\bar{\phi} > \bar{u}$  (*deep*, *leap*, *moon*) that has taken place in Modern English started from emphatic words with a high pitch, from which later on the higher articulation of the vowel has passed on, by way of sound analogy, to all words.

The rise of medium-high vowels in the third as well as in the second degree of length occurs here and there in Sa, WE and CNE.

$\text{`oo} : oo > \text{`uū} : uū$ ;  $\text{`öö} : öö > \text{`uū} : uū$ ;  $\text{`ee} : ee > \text{`iī} : iī$ . E. g. MusI *tõõme*, *sõõme*, Vig(Ste), *juuma : juubad* (*joovad*), *tõõ ~ tüü : tõõle* (*óó*, *oo* also occur, see p. 27–) PJgE *siimed : siimes* (*seeme*), Tor (*siin* : ) *siine*, Mär *teñnis : teñnib*, *tõõma : tõõvad*, JuuK *veçerik*, *meeldimä*, Vän *keçdab*, *eest*, SJnP *siin : siined*, *suuk : suugi*, PilK *piinar*, *tiiner*, PilKa *nüür : nüüriga*. As such a rise occurs on the northern boundaries of the former rise (only in the third degree), it is most natural to assume that in these dialects, already when taking over the phonetic change  $\text{`oo} > \text{`uū}$ ,  $\text{`öö} > \text{`uū}$ ,  $\text{`ee} > \text{`iī}$ , this spread to the weak grade, too. Less probable, although also possible, is a later generalization from the strong grade.

Thus the diphthongization and the rises of the medium-high vowels in the E dialects, probably due to articulatory overexertion, and having started from the strong grade, appear in the following phases.

1.  $\text{`uo} : oo$  (e. g. Pöi *juotu : joodu*).
2.  $\text{`uo} : uo$  (e. g. KadT *luom : luõma*).
3.  $\text{`uū} : oo$  (e. g. PstHo *luum : loomale*).

4. `uɥ : uo (e. g. Lut(V) *juɥ : juova*’).  
 5. `uɥ : uɥ (e. g. Vig(Ste) *juuma : juubad*).

In Hi the rise of the medium-high vowels has taken place in the third as well as in the second degree, but differing from the SE, the rise in Hi is higher in the second degree,

`oo : oo > `oɔ : óó; `öö : öö > `öö̃ : ö̃ö̃; `ee : ee > `ẽẽ : ẽẽ. E.g. Rei(A) *lõom : lóoma*, Emm *neɣlg : nẽẽla*, Phl(A) *söö̃m̃p̃ : s̃ö̃m̃ad*; see further ACUT B 47 : 1 64–, 115–, 132–. This unexpected rise in the second degree is explained by Ariste by the extra long vowel in Hi having two peaks: “In articulating an extra long vowel there is a rise in the beginning, followed by an ebb, and in the end there is again a rise. Thus there is in reality some sort of a diphthong whose two parts consist of a sound of the same quality.” Thus “as a single sound the long vowel is still the longest” (*op. cit.* 65). We find an analogous phenomenon in Tor, where according to accessible data only the vowel of the second degree has risen:

`ee : ee > `ẽẽ : ẽẽ. E. g. Tor (*seen* :) *séene*, (*keel* :) *kéele*, *méeletu*.

#### 2.4.1.2.2. Low Vowels.

In Hi occur  $a > \hat{a}$ ,  $\text{ɔ}$ ,  $\varphi$ ;  $\hat{a} : \bar{a} > \hat{a} : \bar{\bar{a}}$ . E. g. Phl(A) *kâks*, Käi(A) *âis*, Phl(A) *âi kɔrdeda* (*ei kardeta*), Käi *elâma*; in Emm and Rei we do not find the labialization of the short  $a$ ; the occurrence and the degree of labialization of the short  $a$  are extremely varying and depend on the intensity of articulation (see further Ariste ACUT B 47 : 1 19–); Emm(A) *târ : târi*. The rise and labialization of  $a$  has probably taken its beginning in a similar articulatory overexertion as the rise of the medium-high vowels: “A more intensive action of the organs is also expressed by the fact that the lips are more rounded and that the tongue rises higher while articulating. In the case of the long  $\bar{a}$  the lips are still more rounded and the tongue has clearly risen and moved backwards” (Ariste *op. cit.* 52). It may be assumed that the labialization of  $a$  started in the long  $a$  and later on spread to the short  $a$ . In a less degree we find labialization of  $a$  in Sa, e. g. MusT *sâand*, Krj Leisi *vââtsé* (*vaatasin*) (*op. cit.* 56). Cf. Lv.



$s\bar{o}d\bar{q}$  (E *saada*), WLv.  $s\bar{i}B$ , F dial.  $t\bar{a}\bar{a}h < taas$ , Hung.  $f\bar{a} < fa$ , dial.  $h\bar{a}z < h\bar{a}z$ ; Cher.  $*a > *a > o$  (Itkonen FUF 31 250).

$\bar{a}\bar{a} > \varepsilon\varepsilon$ ,  $\bar{e}\bar{e}$  occurs in a few words in SaW and regularly in Hi (except Rei). E. g. KhkT  $\bar{p}\bar{e}e\bar{l}\bar{a}$ , MusT  $\bar{p}\bar{e}\bar{e}n\bar{a}i\bar{n}e$  (*päänaine*), Phl(A)  $\bar{r}\bar{e}\bar{e}g\bar{i}(n)$  (for other Sa and Hi examples see Ariste *op. cit.* 111–). Ariste assumes that here the vowel has risen for the same reasons as  $\bar{a} > \bar{a}$ . It is, however, possible that we here in part have Swedish influence (cf. Ariste *op. cit.* 113, EK 1931 79). Cf. F dial.  $\bar{t}\bar{e}e\bar{l}\bar{l}\bar{a} < \bar{t}\bar{a}\bar{a}\bar{l}\bar{l}\bar{a}$ .

## 2.4.2. In Non-Initial Syllables.

$o > u$ . E. g. *uskuma*, *palju*, *õnnetu*, *hõlbus*, *sõnu*, *lepiku*, cf. F *uskon*, *paljon*, *onneton*, *helppo*, *sanoja*, *lepikon*, MarO *kadovad*, Mär *pal'lo* (*palju*), Ris  $\bar{o}l\bar{p}os$ , JuuT *kodõ*, San *illoss*, KamReo *talõst*, Rõu *pal'lo*, Plv(S) *sõnnoga* (*sõnuga*), RápT *joodIkollõ*, SeV *kaarIkoga*, Lei(M) *illos's* (*ilus*), LutSJa *nägo* ~ *nägu*; Müller *Tännolaulut* (1) ~ *Laulo* (17). Cf. F Jällivaara *uskun*, IngR dial.  $o > \acute{o}$  particularly in the second syllable if the first syllable is long, e. g. *kannót*. The change is unfinished in Ris: “*o* of the non-initial syllable is clearly heard in the speech of only a few people. Among most people it is varying, sometimes it is *u*, sometimes *o*, most frequently something in between” (83). *o* has generally survived in Lå, here and there in Ha, Lüg, Vai and in SEE. The variegated occurrence and alternation of *o* and *u*, e. g. the occurrence of *o* instead of *u* and vice versa here and there in the E dialects and partly in the other BF languages (see Kettunen EKÄ 156–) can, besides phonetic changes have been caused by morphological and phonemic analogy. The acoustic vicinity of *o* and *u* must also be taken into account (cf. G. Pancicelli-Calzia EPh 125). As regards the Ind.-Eur. languages, cf. Lat.  $o > u$  in the unstressed syllable, e. g. *tempus* < *\*tempos*. PA 86.

$-e > -i$  in the suffixes *-ne*, *-lane*, *-kene*, *-line* in Krl, e. g. Krl *käpäkeñi* (*käpakene*),  $\bar{v}ar\bar{b}leñi$  (*varblane*),  $\bar{v}\bar{o}\bar{o}d\bar{i}leñi$ , KrlK *venelän'i* (: *venelåse*), KrlKi *tõni* (*teine*). Cf. PF  $*mere > meri$ ,  $*kuivute > *kuivuti > *-usi$  (> *-s*).

$a, \bar{a} > e, \bar{e}$ ,  $e$  in the third and the following syllables in WSE. E. g. Hls(U) *kumartε* (*kummarda*), Hel *jumalē*, *kübärē*, KrlK *kirjuteme*,  $\bar{m}\bar{o}\bar{i}\bar{s}\bar{e} < *moisia$ , Trv *lastege* (*lastega*),  $\bar{v}aate$  (*vaata*) <

*valata*, San *ilusambess*, *salatē* (*salata*), Krl (E 361) *vasarē*, Krl *käriseme* (*kärisema*), UrvO *kalagē*, HarM *odavelt*, *kübare* (~ *magusa*, *verevä*); Rossihnius ilma õppetajatte (155). Cf. Ld. *-a*, *-ä* > *-e* (> *ɤ*, *E*), e. g. *razve*, *žande*, *kagʷɤ*, *kazakkɤ*, *amustEpuud* (Penttilä AUA B 3 : 2 60), Votian dial. *a* > *ɤ*, *ä* > *e* in the second syllable after a long first syllable and farther on in the word e. g. *poikē* < *poika*, *itšäve* (E *igav*).

The rise of vowels in non-initial syllables is connected with the tendency towards the disappearance of high vowels (see p. 82–). Thus we have here a reduction caused by the unstressed state of the vowel. As regards the other BF languages we find, e. g. in Livonian *o*, *e* > *u*, e. g. *kädūd* < \**kä<sub>t</sub>et*, WLv. *ālgud* < \**hal<sub>k</sub>ot*; in Olonetsian the change *-a* > *-u*, *-ä* > *-ü* has taken place, e. g. *akku*, *harakku*, *pitkü*, *izändü*. It is remarkable that the conditions of these changes in Olonetsian are the same as those of apocope: the change has taken place in disyllabic words if the first syllable is long, and in multisyllabic words. The same condition applies to the phonetic change *a*, *ä* > *ɤ*, *e* in Votian. Later on *u*, *ü* has often disappeared in Olonetsian (KAÄ 131–). In regard to the PF *-a*, *-ä* > *i*, too, the same conditions as apply to apocope have been assumed (see Ojansuu JSFOu 30 : 17 13–; Ravila Vir. 1939 107–). In addition Ravila assumes in PF the phonetic change *-o* > *-u* (*-e* > *-i* as a parallel) (Vir. 1937 398–). The reductional character of the rise of the vowel in non-initial syllables is confirmed also by Latin *ě* > *i*, *a* > *e*, *o* > *u* in unstressed syllables (A. Sotavalta AASF B 43 : 2 124). Ravila, also, believes that PF *-a* > *-i* and the rising of the vowels in the non-initial syllable in the BF languages is a phenomenon of reduction caused by the unstressed state of the syllable.

On *ü* > *i* see p. 104–.

### 3. Dissimilation.

Dissimilation occurs but sporadically in Estonian, with some exceptions. In the following we shall give examples from dialects, on the whole according to the classification given by Grammont in the TPh.

### 3.1. INFLUENCE OF STRESS

(1) A stressed consonant in syllable-final position dissimilates an unstressed consonant in syllable-final position or an intervocalic consonant: the type *kortel* < *korter* (G's formula 2).

$r - r > r - l, r - n$ . E. g. Kan `härbän'n' (*häärber*); Saa(L) p. `korteld, VJgRü `kortel', VaiM, Hls(U) `kortel, SJnL `kortel ~ `korten, Trm(T) `korten (*viina*) ~ `kortel, Var, Aud, Kõp, KJnL `korten, Kod(K) *kor'tin*, Puh `kortin, Rõu *kortɛn* (~ `kortɛr), PlvH `kor'tinn, cf. F *korteli*; HagS `kärnal, PltP `kärnalid, VaiJ *kärnel* ~ *kärner*. SJnL `kärner ~ `kärnel; JuuK `marmoli (*marmori*), cf. Sp. *mármol*; VaiI *pärnalt* 'Bernhard'.

$l - l > l - r$ : AmbN `veltveeber.

$r - l > r - m$ : VNgmä *retemi* (*redeli*).

$n - n > l - n$ : Saa *tärbeltiin* (~ *tärbestiin*), PJgE *tärpeltiin*, AmbN *tärbeldiin* (~ *tärbendiin*), *tärgeldiin* (~ *tärgendiin*).

$n - n > 0 - n$ : Kan *komodan't'* (*komandant*).

(2) The second component of a stressed consonant cluster dissimilates the second component of an unstressed cluster (G's formula 3).

$r - l > r - n$ : Kod(K) *kresna* (~ *kresla*) < Russ. *кресло*.

(3) The second component of a stressed consonant cluster dissimilates an unstressed consonant in syllable-final or intervocalic position: the type *trahtel* < *trahter* (G's formula 4).

$r - r > r - l, r - n$ : Hmd `preestel, HlsM `prüjstel, KrKa `rijstel (*preester*); AnnO `trahteli; KadP `trestel < `trehtel, Sim `trehtel, VaiJ *trehtel* ~ *trehter*, cf. G *trichter*; KadP *treijal* < G *treier*; RápP *protokon* (*protokoll*). Cf. F *Kristeli*.

(4) The stressed consonant in syllable-final position dissimilates the second component of an unstressed consonant cluster: the type *sekletär* < *sekretär* (G's formula 5).

$r - r > l - r$ : SeSa *siklɛtar'*, LutSJa *sekletär* (*sekretär*).

### 3.2. INFLUENCE OF THE SYLLABIC POSITION OF THE PHONEME

(1) The second component of a consonant cluster dissimilates a consonant in intervocalic or word-initial position (G's formula 7).

$r - r > n - r$ : *nekrut* < Russ. *пекрут*.

$G - k, k - G > B - k, p - G$ : Khn(AS) *robuski* (~ *roguski*), cf. Russ. *рогужка*, F dial. *rokoska* ~ *roposka* (Vir. 1938 206-) — here the dissimilation has been favoured by the assimilating — labializing influence of the neighbouring vowels; Var `pringel (*kringel*).

$v - v > m - v$ : VarH `mehverments, cf. G *pfefferminze* — the dissimilation has been favoured by the dilative influence of *m* of the third syllable.

(2) The word-initial consonant dissimilates a consonant in syllable-final or intervocalic position: the type *rüütel* (cf. G's formula 8).

$r - r > r - l$ : *rüütel* < MLG *ruter*; *röövel*, cf. Müller *Ŕöwer* (233), MLG *rover*; Hls(K) *rokulüür* (*prokurör*). Cf. F *räätäli* < *-ri*, MHG *zeigel* < *zeiger* (TPh 292).

$l - l > l - n, l - r$ : IisO, SJnP, Köp, Trm(T) *lein*, TrvP, TMrKö *loun*, Lei *loun* (*leil*); TrmT *lin'ijan* < G *lineal*; VasO *liper* < *-el* (*lible*); Lih `leen'is, Vig(Ste) `liines, MarLō *leenis*, PJgE `leenis (*lehelis*).

$t - t, D > t - k, G$ : *telk* < MLG *telt*, cf. Rōu *tel't*, Verginius *Ťel'di* (VKVM 193 : 22); HarM *talq* (*tald*); Vig(Ste) *timmuki*, TōsE *timukas* (*timut*).

$v - v > v - m$ : JämJ `värmi (*värvi*), MuhL *värmitse* (*vär-vitakse*), TōsKM `värmima, Vig(Ste) *vär'm*, PJgE `värmida, Köp `värm'i, KamR *vär'm* ~ *vär'v*, PlvA `värmega *vär'mevä'* (*vär-videga värvivad*), Rap *vär'mipräm'* (*värviproov*).

(3) Two consonants of the same kind separated from the third (G's formula 9).

$DnD > nD$  dial. in the *nud*-participle. E. g. HagK, JōeR `sōund (*sōudnud*), HJnH *üünd* (*hüüdnud*), JJnK *oind* (~ *oidnud*), VJg *püünd* (*püüdnud*), SimV *tiand* (*teadnud*), VaiJ *leind*, KJnP *leind* (~ *leidnd*), see Toomse, *ta-*, *tä-*, 218, 228; cf. Emm *püüdnd*, RapR *leidnd*, *tiandnd* and *op. cit.* 221. Toomse derives these forms from a PF consonantal stem: *\*hoitnut* > *\*hoinnut* > *hoinud* > *oind* (*op. cit.* 233), but this is less probable. T.'s argumentation against the development *\*oidnud* > *oidnd* > *oind* (*op. cit.* 232) is not adequate. The position of *D* in the cluster *DnD* is quite different from that of *D* in the clusters *Dm* (e. g. in the word *'oidma*), *Dl* (e. g. in *'riiddlema*); it is difficult to articulate *DnD*, the other

two, on the other hand, show no difficulties at all, and there is no reason to connect the *D* in the *nud*-participles with the *G* in the sporadic words *`peimes*, etc. In places where the type *oind* occurs parallelly with the type *oidnd* (Kse, Tor, Vän, Var, Tös, Mär, Rap, Iis, Trm, Plt, KJn, Kõp) the development *oidnd* > *oind* has evidently taken place. T. considers the *oidnd* type in these dialects the more recent one, and a result of the spreading of that type, which is geographically unfounded, or of the influences of the literary and common languages, which is likewise unfounded, since the type *oidnd* neither belongs to the literary nor to the common language. In reality the forms of the *nud*-participle nowhere show special submission to the influence of the literary language. Moreover, although the consonant stem in these forms is to be found in some BF languages, it is in Estonian contradicted by the occurrence of the old literary language (see Toomse *op. cit.* 229–). Cf. also Posti, Vir. 1945 590. Thus also T's argument in favour of the derivation of the forms *annud*, *and* (*andnud*) from the PF consonant stem, falls short (*op. cit.* 259).

*lDr* > *Dr*: Kõp (*`taader* :) *`taadre* (~ *`taaler* : *`taaldre*), KJnL *`taadre* (~ *`taaldre*) (: *`taader* ~ *`taaler*); Tor(W) *tadrek* (*taldrek*), Wd. *tadrek*.

*sts* > *hts* in the word *vastne* in SEE. E. g. Ote *`vastne* : *`vahtsit*, VasO *`vahtsidē* (: *`vasnē*), SeSa, LutSJa (*`vastanē* :) *`vahtsē*, Lei(M) (*vastan* :) *`vahtsē*. Cf. Vt. *kahtši* < *kastši* (< *kaski*) (Mägiste ACUT B 12 : 2 21).

*lDr* > *nDr*, *Dr*: Tös(KM) *tandrek*, PJgE *`taandrek* — here the dissimilation has been favoured by the assimilative influence of *D* (cf. above p. 17); RapR, Rak, SimV *tadrek* (*taldrek*).

*lBl* > *nBl*: KamK *`assen* < *assenblatt* 'Hasselblatt'.

(4) The syllable-final or intervocalic consonant dissimilates an intervocalic or word-initial consonant: the type *kolidor* < *koridor* (cf. G's formula 10).

*r* — *r* > *l* — *r*: Saa *kal'itor*, KadL *kalidur*, VaiJ *kolidor* ~ *koridor*, ÄksV *kalidor* ~ *kaaledor*, Ote *kallituqr'*, SeSa *kalidor*; lõõr, cf. F *ryöri* ~ *lyöri* ~ *nyöri* < Swedish *rör* (Vir. 1938 201); *lehter* < *\*rehter*, cf. G *trichter*.

*m* — *n* > *m* — *l*: *kämmal*, Kod(K) *kämmel*, cf. F *kämmen*.

*m* — *B* > *n* — *B*: TMrKõ *`nüibli* (*mööbli*).

$p - p > k - p$ : Lei *kump* (pump).

$h - h > 0 - h$ : RöpT *ähen* < *hähnä* (*rähn*); usually *h* has survived, cf. *hobene*.

(5) The intervocalic or word-initial consonant dissimilates an (unstressed) consonant cluster (G's formula 12).

$r - r > r - l$ ,  $0 - r$ : AnnO *rihalt* 'Richard'; KsiJö *kikeber'i* (*tikerberi*).

$l - l > l - v$ : PärP *lidve* (~ *lible*) < \**lidle* < *lible*.

$m - n > m - l$ : Vig(SteLl) *tomilgas*, Mär *tommilgas* (~ *tomin-gas*), HMd *tumilgas* — the dissimilation has been favoured by association with the word *pihelgas*; KrkK *seemelt* (*seemet*); Mär *kamaldab* (*kamandab*).

$n - n > 0 - n$ : KrjT *kostati`noo`beli* (*Konstantinoopoli*).

$n - m > n - v$ : PltP *narvendavad*.

$v - v > v - m$ ,  $v - B$ : Saa *ri`volmer* ~ *ri`volver*, Sim, Kod(K) *`volmer*, ViV *`vol`mer* ~ *`vol`ver*, KJnLa *ri`volmrega*, Avi *re`volmer*, VMr *riivolber*, TMrKö *`volmri* (*revolver*).

$v - v > v - G$ : MuhLö *`värgel* (*värvel*).

$st - tt > ss - tt$  (resp.  $ss$  (<  $st$ )  $\Xi$ ): Lüg *issutamma* (cf. *istuma*), *össetu* (: *östada*) (*ostetud* : *osta*), Jöh *kussuta* (*kustuta*) (cf. *kustund*), *tössetasse* (: *töstas*) (*töstetakse* : [*töstis*]). It is possible that here we have a partial dissimilative survival of the ancient phonetic change  $st > ss$  which occurred in all positions (see Toomse EK 1938 54–). Cf. p. 15.

### 3.3. INFLUENCE OF THE WORD POSITION OF THE PHONEME

Of two phonemes with the same syllabic position the second dissimilates the first (G's formula 13).

(1) Two intervocalic consonants:

$tt - tt > 0 - tt$ : e. g. *jätetakse*, *kaetud*, *maeti*, *vöetud*, cf. dial. *-tet-* (in Mus, Rei, Emm, Lih, here and there in VI, TaN, SE), e. g. AviM *jätetasse*, Avi *kateti*, TrvP *katet* ~ *kaet*, TMrKö *katetu*, UrvVa *ketët*; Lih *matetud*, RöpP(R) *matëti*; Stahl *wottetud* (VKVM 37).

$D - tt > 0 - tt$ : UrvVa, RõuS *`keet'i* (*keedet*), LeiA(O) *niiti* (*niidet*) (12).

(2) Two consonants in syllable-final position.

$nD - nt > lD - nt$ : HJnH *vuldamen't*. PA 19.

(3) Two second components of a consonant cluster.

$tk - rG$  (resp.  $rk$ )  $> tt - rG$ : KodS *pitergune*, cf. *pitk* (*pikk*).

### 3.4. REVERSE AND PREVENTIVE DISSIMILATION, HAPLOLOGY

According to Grammont all dissimilation formulas given above can be reversed, in case some mechanic or psychic condition weakens the normally stronger phoneme, or strengthens the normally weaker phoneme. According to G. there is only one mechanic cause: the position of the phoneme at the end of a word before a pause. It is not possible to give sure cases from Estonian under this heading. But reverse dissimilation for other phonetic reasons can be assumed e. g. on the following occasions.

A dissimilation contrary to G's formula 4 has occurred in the following cases:

$tr - r, pr - r > t - r, p - r$ : JuuK, SimE *`tehter* (*lehter*), Lei *tehter* (cf. *triepp*); Khn(AS) *`piester* (*preester*), Hi(A) *`peęstär*, SanM *`peęstri* (*preestrid*); cf. Sim *`trehtel*, HMd *`preestel* (see p. 177). The dissimilation is here due to the phonemes *pr-*, *tr-* in word-initial position, which, in older loans, has been avoided all over the E area, and in recent loans in several dialects, cf. Khn(AS) *ries'* (*prees*) (see p. 188). Here also belongs KeiK *regis'tee'rimene*, in which *tr* in the beginning of a primary-stressed syllable is treated like a cluster in word-initial position. Cf. F *pakkari*  $<$  *prakkari* (Vir. 1933 464).

Reverse dissimilation for morphological reasons occurs in case of the adverb suffix *-ti*  $\sim$  *-te*. In some dialects the suffix is in general *-ti*, but in case it follows *i*, it becomes *-te*. E. g. Vig(Ste) *nuurite* (*nuriti*), cf. *vihuti*; Lih *külite*, cf. *paiguti*. Here we should on the basis of G's formula 1, according to which the stressed vowel dissimilates the unstressed one, expect: *nuureti*, *kületi*. The reverse dissimilation has taken place because the stem of the word thus remains unchanged (Grammont TPh 322). For the same reason we find in HlsM *`ren'tlik* (*rentnik*) pro *`rel'tnik*.

Reverse dissimilation has taken place also in the word JæL *ˈkolter* (*kortter*) (cf. p. 177 *kortel*).

As regards hapology, we shall mention but one sure case: Saa *tuhand* (*tuhandendat*).

For examples of dissimilation in Estonian see also J. Väinaste EK 1925 97–, on Estonian and Finnish, Airila Vir. 1933 463, 467–. See also Mägiste on haplogical-dissimilative syncope in BF languages EK 1934 4–.

## 4. Interversion and Metathesis.<sup>1</sup>

### 4.1. INTERVERSION

#### 4.1.1. Consonants Change Place.

##### 4.1.1.1. *h* AFTER NASAL AND AFTER LIQUID

*nh* > *hn* in SEE and in linguistic enclaves. E. g. Rõu(S) Haanja Plaksi *ˈvahnus* (*vanus*), cf. Rõu(S) S. Ruuga *ˈvanhus*, F *vanhuus*, SePa *ˈtehnämä* (*tänama*), Lei *t'ˈehN* (*tänu*), LutJ *ˈvahnu-zen̩i*, Kra(K) *vahneb* (*vanem*). Cf. Cr. *vahnu*, *tehno*.

*lh* > *hl* in SEE. E. g. San, KamR *võhlu* (*võlu*), Plv *võhli*? ~ *võhlu*?, SeSa *võhL* : *võhla*, Lei *võhL* (: *võhla*), cf. F *velho*. Cf. Cr. *jühhli*, F *jylhy*.

*rh* > *hr* in WSE and SEE. E. g. TrvP *tahra* (*tara*), cf. F *tarha*, Hel *kahre* (*kare*), KrlKä *nühr* (*nüri*), San *kahru* (*karu*), OteN *kahR* : *kahru*, KamR *vahru* (*võru*), HarM (*karh* :) *kahru*, (*kärh* 'badger' :) *kähri*, Urv *kahrę*?, RõuH *ˈpahrilla* < *parhilla* 'at present', PlvK *pahR* 'boar', RöpS(R) *kahru*, SeSa *kahR* : *kahru*?, Lei(M) *pahR* (: *paru*), LutSJa *vahR* (*võru*). Cf. Cr. *tahra*, LpL *kahr̥ite-* ~ *karh̥ite-* (Wiklund LFL 190).

Here interversion has resulted in a syllabic structure that is easier to articulate. This phonetic change is nowhere consistent. That in some places interversion has only taken place in the weak grade, can be explained by the fact that articulation there is slacker and therefore submits more easily to slips, whereas in

<sup>1</sup> As regards these terms, see Grammont TPh 239, 339.



the strong grade articulation is more intensive and precise, thus better protected against changes.

#### 4.1.1.2. SPORADIC INTERVERSIONS

The stop and the voiced consonant change place.

*Gn* > *ŋG*: Tõs *vaang* < *vaagn*, Tõs(KM) *vaangas* (*vaagen*) — after the syncope the strange cluster *gn* was replaced by *ŋg* — which was indigenous to the language.

*rD* > *Dr*: Lih *madrikad* (*mardikad*).

*rG* > *Gr*: UrvO *ʹviigruss* ~ *ʹviirguss* 'a certain kind of furrow'.

Other interversions.

*ts* > *st* in the passive character *-ste* in Jäm and Ans, e. g. *tuuwaste* (EMA 2 47) < *-tse* (*tuuakse*), cf. Tõs *tuuwaste* (ib.) (cf. Saareste EK 1922 130, Posti, Vir. 1948 116–).

(*n*)*st* > (*n*)*ts*: KhkT *kunʹtsiɣp*, Wd. *kunʹs*, *kunʹts*, *kunʹtslik* etc. < *kunst* — here the strange cluster *nst* has been replaced by *nts*, which is indigenous to the dialect.

### 4.1.2. Consonant and Vowel resp. Semivowel Change Places.

#### 4.1.2.1. *h*.

*ih*, *qh* > *hj*, *hv*. E. g. *kahju* < *kaiho*, *jahvatama* < *jauha*; RápT *kahʹo* < *kahjo* (: *kaiho*), SeKü (*kaihh*) *kahʹo*, Lut(V) (*jauhma* :) *jahva*, KraO (*jauh* :) *jahvetas*; cf. Rõu *kaiho*, Plv p. *jauhha* : *jauhaʹ* (~ *kehväʹ*), F *kaiho*, *jauhaa*. As is evident from the examples, interversion has in SEE only occurred in the weak grade. Because of interversion a stronger structure of the syllable has been achieved, since *h* with its weak articulation does not give a solid enough support to separate a long vowel from the following one. Cf. also the shortening of the long vowel before *h* and *uh* > *v* (p. 92 and 56).

*hi*, *hu* > *ih*, *qh*: SeKü *ruihh* < *ruhi* (: *rohe*), SeSa *roiht* < *rohist* (: *rohil*), Lut *ruihh* : *ruiht* (: *ruhiae*); Plv *ʹoʹhkɛɛɛ* (*õhukene*). Here the interversion has occurred because of the combinations *ih*, *qh*, which existed in the dialect; cf. SeKü *kaihʹh*, SeSa *vaihhɛl*, Plv *jauhaʹ*.

*he* > *eh*: TrvVä *ʹkoehkile* < *kohegile* (*kuhugi*).

4.1.2.2. *j*.

*j* interverson has taken place in the weak grade.

*lj* > *ɨl* (*ɛl*) in Sa, Läs, Pä, HaE, Jä, Vi, Vl. E. g. JaaH, PöiJ *pailu* (*palju*), Tös(KM), VänR *paclu*, Hää *kaelud* (*kaljud*), JMd(M) *näil'lane*, VMr (*nali* :) *naila*, SimV *neilas* (*neljas*), VJg(S) *seilas* (*seljas*), IisO *pailu*, *väilale*, *seilali*, but *neljabä*, *teljed*, VaiJ *seilas*, HlsM *pail'u*, TrvVä *pacl'u*, Pil *seilas* (*seljas*), *nailakas*, *pailu*. Cf. Cyprian *aĩlos* < *\*alyos* (TPh 245). PA 81, 86.

*sj* > *is* in VMr and Sim. E. g. VMr *koisa* (*kosja*), *aisad* (*asjad*); Cf. Hung. *ajszú* < *aszjú* (MNY 40 41).

*hj* (> *ih*) > *gh* in Läs and Pän. E. g. Tös(KM) *koehad* ~ *kohjad* < *\*koh<sub>t</sub>at* (*kohad*), PärP, PJg-Tor *aehu* (*ahju*), Vig(Ste) *kuehad* (*kuhjad*). PA 25.

*Dj* > *iD*: SeSa *loidapuu* (: *lodja*). Cf. Lv. *gj* > *ig*, e. g. *laĩgà* < *\*lagja*.

Posti connects the corresponding Livonian phenomenon with epenthesis of the *i* by the mediation of a palatalized consonant in such cases as *k<sup>u</sup>o'iG* < *\*kogi* (see p. 117, LL 103), and assumes here, following V. Thomsen (BFB 57) and Setälä (ÄH 154), the development: *\*lagja* > *\*lag'g'a* > *\*la<sup>i</sup>g'g'a* > *laĩgà* (LL 183). This assumption, though such a development might be possible, cannot be regarded as proved.

Grammont separates the interverson of a consonant and a vowel, especially that of the semivowel (*w*, *j*) and the vowel, from the interverson of two consonants. G. calls the latter interverson through transposition, the former interverson through penetration. In regard to the Ind.-Eur. *wr* > *rw*, *ru* Grammont says: "Ce n'est pas une transposition pure et simple; le *w* ne passe pas par dessus l'*r*, mais à travers. Il y a d'abord une assimilation de l'*r* au *w* sans qu'il soit nécessaire pour cela que l'*r* s'articule au point du *w*; il peut garder à peu près son point habituel, mais en prenant le timbre du *w*, c'est-à-dire qu'il s'articule avec le résonateur du *w*, relèvement du dos vers le voile, projection et arrondissement des lèvres. Une fois qu'il est ainsi imprègné de *w*, le *w* rejaillit sous forme de *w* ou d'*u* (suivant les cas) du côté où son apparition constitue le mieux la syllabe" (TPh 244). Thus it would really be a case of assimilation (cf. also Väinaste EK 1925 105). It is possible that E *pailu* < *palju*, too, has developed in a similar way.

If, in addition, we take into consideration experimental investigations on co-articulation, which show that even in normal articulation two sounds are articulated at the same time (see P. Menzerath — A. de Lacerda, *Koartikulation, Steuerung und Lautabgrenzung*, Berlin-Bonn 1933), a development similar to G's explanation of penetration seems to be very probable. At any rate, it is impossible to separate the cases of so-called epenthesis from the cases of apparently pure interverson. It is evident that they are related to one another. But for all that their development need not be the same. Whatever the phonetic development has been, psychically we find here in all cases the same phenomenon, i. e. anticipation: either the articulatory movements of the following vowel has been anticipated, regardless of the question whether the vowel itself has survived or disappeared, or the position of the following palatalized consonant has been anticipated. Of course, one must not assume that such penetration occurs in the case of all interversons of vowels and consonants. Väinaste believes that  $i_h, u_h > hj, hv$ , too, has developed by stages:  $*laiha > *la^h iha > *lahi^h a > lahja$  (EK 1925 106). Taking into account the uncertain articulation of  $h$ , it is not impossible, but such an assumption is not necessary.

#### 4.1.2.3. OTHER CONSONANTS

(Stop +)  $r$  + Vowel  $>$  (stop +) Vowel +  $r$ : MusI *kartsib* (*kratsib*), PärP MusI *ˈkürstus*, VilV, KJnL *ˈkōrstus*, Saa, PJgE *ˈkōrstus* (*Kristus*); Ote, HarM *ˈkaar'sma* (*kraasima*), PlvA *ˈkaars-sega* (*kraasidega*), SeSa *kaarsi* (*kraasid*); PJgE *sihkerdär ~ sekerdär*, Mär *sikerdär* (*sekretär*); KhkT *ˈpaerste ~ paerst* (*praegu*), JaaH, MuhLõ *ˈpaergus*, VarH *ˈpaergus ~ paes*, Aud *ˈpaergusi*, PärP *ˈpaergu ~ paragu ~ ˈpaargu*, PJgE *ˈpaergust, paraegust* Mär *ˈpaergu ~ ˈpaergust*, KeiH *ˈpaergu ~ ˈpraegu*, RapR *ˈpaergu ~ ˈpraergu ~ ˈpraegu, ˈpraegust ~ ˈpaergast*, VJgRü *ˈpaergusel*, AviP *ˈpaergastki*, SanLa *ˈpõrralt*, Ote *põrla ~ prõlla ~ põrella* 'at present', EMA 1 23 'praegu'; PJgE *ˈpirdani*, cf. Russ. приданое, Voty. *pirdan*; KeiH *pärlokk < prelokk*. Here the cluster stop +  $r$ , alien to the phonemic structure of the language, has chiefly in word-initial position been replaced by a cluster familiar to the language. Cf. F *kursata < Sw. krusa*, Osty. *kurpa < Russ. крупа*,

MdM *k̄rsa* < Russ. крыса. Exceptional case: TrvP *ajor* < *airo* (*aer*).

Vowel + *r* > *r* + Vowel: KeiH *`kraskus* (*karskus*), RapHK *kros'nas* (*korsten*), HarMō *pulgralane* (*bulgarlane*). These cases are the result of ordinary slips, perhaps also of mishearing or even that of hypercorrective use of the strange cluster *kr* in word-initial position.

Other cases.

(*t*)*ki* > (*t*)*ik* in the word *katki* in WSE, e. g. Hls(K) *katik*, Rossihnius *fatzič* (103).

## 4.2. METATHESIS

*l* - *r* > *r* - *l*, *r* - *l* > *l* - *r*: HarKa *kritseliin'*, Lei *gritsel'in* (*glütseriin*), *gl'in'g'er* (*kringel*); Lih *lemmergas* (*remmelgas*) — perhaps association with the word *lemme(s)*; Tor *vutlar* < G *futteral*;

*m* - *l* > *l* - *m*, *m* - *n* > *n* - *m*: TrmL *assalamma* 'Assamalla', Rōu *nimestümä* ~ *minestümä* (*minestama*). Here we have a tendency to place the phonemes in an expiratorily more convenient and economic succession: first the sound articulated farther back, then that formed in front (Grammont TPh 348).

*n* - *r* > *r* - *n*, *r* - *n* > *n* - *r*: VaiI *marengas*, cf. Russ. манерка Kod(K) *`vänter* (~ *`värten*).

*G* - *p* > *B* - *p*: Kod(KV) *kol'bisku* ~ *kol'gispu*.

Anticipation: Lih *pehletis* < *peleht*.

Vocalic metathesis.

*e* - *i* > *i* - *e* in the passive preterite: Kod(KV) *`vantite* ~ *vannutite* < *-teti* (*vannutati*), Hls Pera *kuivatit*, *varastit*, *parandit*, HlsM *jaotidä* (*jaotati*); Krka *muudsudidä* (*musutati*).

*i* - *e* > *e* - *i* in the word *ise* in SE, e. g. KrlÄ *es*, PuhV *esi*, UrvVa *es'ikina*, PlvA *es'im*, VasM *esI*, Sevō *ees'I*.

Metathesis is frequent in the Permic languages (see Uotila KPS 18, 47, 213, 215, 337, 346, 348, 351, 359). For Hungarian illustrations of interverson and metathesis see L. Deme MNy 40 33-.

## 5. Adaptations to the Phonemic System and Phonemic Analogies.

### 5.1. LOANS

If a language borrows a word from some other language or dialect in which there is another phonemic system, the alien phoneme or combination of phonemes is usually replaced by the indigenous phoneme nearest to it. This has also been the case with the older loans, and to a great extent with the recent ones, too, in E dialects. As regards recent loans, cf. e. g. KeiH *ahukat* (*advokaat*), Trm(T) *ahugat*, Kõp *kapedal* (see other examples LooRits ACUT B 45 : 3 95), PhaV *künu* (*kino*), JuuK *ʼsitverik* < Russ. четверик, RisVi *tilevunni*, Jõh *tilevonn*, SeSa *tellehvonn* (*telefon*), Sim *ʼtraktur* (*traktor*), TMrKõ *veijervärk* < G. *feuerwerk*.

To the E phonemic system as well as to that of the other BF languages a consonant cluster in word-initial position was originally unfamiliar. On loaning words clusters have been avoided so that only the last consonant of the cluster in the original language has been retained. In old loans this was the custom in the whole area, in recent ones it has occurred here and there in dialects (chiefly in Sa, Mnh, Läs, SWE, here and there in Ha, Vi). The same has been the case of descriptive words borrowed from other dialects. Thus in word-initial position the following substitutions have taken place. PA 49.

*kl- > l-*, *kr- > r-*. E. g. JämH (*joodi*)*laes* (*-klaas*), AnsH *limbu(suppi)* (*klimbi-*), Khk(T) *ruhv* (*krohv*), MusI *raed* (*kraed*), KrjT *reeka* (*kreeka*), VII *laver*, JaaH *raam* (*kraam*), KsePu *rantsi*, Var *riips*, Lih *raav*, Aud *riit'* (*kriit*), PJgE *rahv* (*krahv*), Hää *liinikus*, Saa *ʼrihvel*, Mär *repp* (*krepp*), Ris *ramahvonid* (*grammofonid*), KeiH *loppima* (*kloppima*), RapHK *rat't'* (*kraatt*), KuuV *ruogidu* (*kroogitud*) (among the older people), SJnLa *roonule*, PilKa *ʼruapima* (*kraapima*), KJnL *ʼraas'ma* (*kraasima*), LaiKa *rammavon* ~ *krammavon*, HlsVKa *rimmisõa* (*Krimmi sõja*). Among the older loans e. g. *rist*, cf. Russ. крестья. Cf. F *rinkeli* 'kringel' (SMK 1).

*kn-* > *n-*. E. g. HMdK *nihvid* cf. G *kniff*, VaiJ *niiska* < Russ. КНИЖКА.

*kv-* > *v-*. E. g. RapK `viitungidega, JInLä *vas's'*, cf. Russ. квас, KadP `viitung.

*tr-* > *r-*. E. g. Khk(T) `rakturitega (*traktoritega*), MusI *ruuks* (*truuks*), KrjT `rahteri (*trahteri*), VII `reima, JaaH `rahvima, Var *rumm* (*trumm*), Saa *rois* (*olema*), cf. Russ. строй, PJgE *rellid*, VigS `rahvi (*trahvi*), HagA `ramvaid 'tramways', RapR *repp* (*trepp*), SJnL *rambib* (*trambib*), KJnL `rehvab, SeSa *raad'i?* (*traadid*).

*ts-*, *tš-* > *s-*. E. g. HMd *sistaks*, cf. Russ. чисто, JürS *saari* (*tsaari*), JuuK *sekk* (*tšekk*), VMr *seme'n't*, Sim `sirkus, TrvVä `seitungi, cf. G *zeitung*.

*tv-* > *v-*. VaiJ *vorukas* ~ *vorungas*, cf. Russ. творог.

*pl-* > *l-*, *pr-* > *r-*. E. g. Khk(T) *langud* (*plangud*), MusI *lahvatab*, VII *lat's* (*plats*), JaaT *liidi*, MuhLõe *rügi*, Kse(Z) *leegitab* (*pleegitab*), Var *loomipuu*, Aud *lotski* (*plotski*), Lih *lomm*, PJgE `lastert, (p. *plaaster*), PärP *rokurör*, Saa *luuse* (*pluus*), Tor *reisi* (*preisi*), Vig(SteLl) *rees*, Mär *ruum* (*pruun*), RapHK `liiat's, Lüg *lehko* (*plehku*), KJnL *laan'*, PilKa *rin'ts*, VilV *rodukt*, SJnL *russak* ~ *russakas*, KrkK `riistel (*preester*), Hls *relli* (*prillid*).

*sk-* > *k-*, *st-*, *št-* > *t-*; *sp-*, *šp-* > *p-*. E. g. JämH *korpejoo'na* (*skorpion'i*), Khk(T) *koudid* (*skaudid*), JaaH *taherbärist*, cf. G *stachelbeere*, MuhLõe *tude'n't*, TõsV *tu'de:nti*, HääAr `kandali (*skandaali*, p.), VaiJ *pilkad*, cf. Russ. шпилька, SJnP `tihtid, cf. G *stift*. Among older loans e. g. *peegel* < LG *spiegel*, cf. Rossihnius Špegl'i (95); *tool* < LG *stól*; *tund*, cf. Müller Štunni (138); *kool* < LG *schole*, cf. Müller Ščolit (130) (Ariste ACUT B 46 : 1 13). Cf. SOsty. *torova* < Russ. здорово.

*šv-* > *v-*. E. g. KrjT *vunk*, cf. G *schwung*, PJgE *veits* (*Šveits*), Ris *varts* 'Schwarz', VaiJ *läpku*, cf. Russ. шляпка.

*vl-*, *fl-* > *l-*, *fr-* > *r-*. E. g. KrjT *ladisto'kki* (*Vladivostokki*), Kõp *lüt'* (*flööt*), HlsM *rakk* (*frakk*).

As regards the clusters of three consonants in word-initial position the first consonant has in some dialects been eliminated, in others the two first ones. Thus

*štr-* > *tr-*, *r-*. E. g. Khk(T) *ripp* (*tripp*) < G *strippe*, MarH `treekma (*streikima*), MärKa `reikima, VMr *treik*.

In clusters of two consonants, the second consonant has in some dialects been eliminated and the first has survived. Thus

*kl- > k-*, *kr- > k-*, *pr- > p-*. E. g. JämH, MusI, JaaH *pagu* (*pragu*), Tor *pikaa's* < Russ. приказ, PJgE *kiips* (*kriips*), KeiH *pommenaat* (*promenaad*), *kitseriin* (~ *kilseriin*) (*glütseriin*) — the loss of *l* is here probably due to the dissimilative influence of *r* (cf. KeiH *loppima*), VMr *pogra'mm*, VaiJ *kuasu* (*kroosu*), cf. G *gross(mutter)*. Another method to avoid a cluster in word-initial position is interverson (see p. 185).

As regards the Finnish occurrence see SMK 1.

## 5.2. DIPHTHONGS *ia*, *iu*, *ua*.

*ia*, *iä*, *iu*, *ua* pro *ea*, *eä*, *eo*, *oa*. E. g. KuuT (*vedämä* :) *vian* < \**veän*, cf. *siad* (pl. *sead*) (EK 1924 37), Sim *viab*, cf. *sia*, SJn (*vidama* :) *viab*, cf. (*viga* :) *via*, Lai *viab*, cf. *siad*, KraO (*v'id'ämä* :) *via(n)*, cf. (*viga* :) *via*, Kod(K) `siätä (~ *segädä*) 'kneten', cf. *siäl*, KrlKä `siätess (*segatakse*), cf. *tsiä* (*sea*, g.), VasO *siätäs* (*segatakse*), Sim (*tegu* :) *tiul*, cf. (*ligu* :) *liu*, Kod(KV) *tio* ~ *tiu* (~ *teo*), cf. *lion* ~ *liul* (< \**liko-*), KrlKä (*koda* :) *kua*, cf. Krl(W) *tua* (*toa*). Here the secondary diphthongs *ea*, *eo*, *oa*, occurring only in a few words, have been replaced by *ia*, *ua*, *iu*, which are more familiar to the respective dialect.

## 5.3. VOWEL ADJACENT TO *h* AND *j*.

The rising of the vowel before *h*, which occurs in E dialects, is a phonemic-analogical generalization that cannot be explained on a phonetic basis, i. e. cases like *kiha* < *keha*, (*koht* :) *kuha*, *niha* < *näha*. A probable explanation of the phenomenon has been given by Ariste, who explains the rise of *o* in Hi (*koht* :) > *koha* > *kôha* ~ *-å* as due to analogy of the diphthong *ôa* ~ *oå*. Since *h* has no oral articulation worth mentioning, the linguistic instinct has treated the combination *oha* as a diphthong and has adapted it to the phoneme *ôa* already present in the language (ACUT B 47 : 1 35). In E dialects we find the following cases of that change.

*eha, ehä* > *iha, ihä* widely in islands, WE, VI, SE; here and there in coastal NE, Jä, Vi. E. g. Jäm(P) *tiha, tihaste (tehakse)* (: *tehtud*), Khk(T) *kiha*, cf. *viad (vead)*, Hi(A) *kjhã*, cf. Phl(A) *sjad (sead)*, AnnN *tiha*, cf. *sial*, JõeI *iha (eha)*, cf. *siad*, ÄksV *kiha*, cf. *sia*, Hls *riha (reha)*, cf. Hls(W) *Abja via*, TrvP *riha*, cf. *piab*, Hel *kihä*, cf. *piä*, SanLa *kihä*, cf. *piät*, RanK *ihä (eha)*, cf. *piäb (peab)*, HarM *riha*, cf. *tsia (sea)*, KamR *kiha*, cf. *rian (reas)*, TMrKõ *liha (leha)*, cf. *sia*, Rõu *kihägä*, PlvAl *kihä*, cf. *iä*, SeSa *kihä*, cf. *viä*, KraO *rihaga, kihä*, cf. *tsia, jä (ea)*. PA 115.

*oha, öhä* > *uha, ühä*. E. g. Põik (koht:) *kuhad*, Emm(A) *kõha-*, cf. *toad*, Saa (koht:) *kuhad*, cf. *tuas (toas)*, HMD *luhakas*, KeiH (koht:) *kuhad*, cf. *sua (soa)*, JuuK *uhakas*, AnnO *kuha*, JõeI (koht:) *kuha*, Hlj (koht:) *kuhad*, cf. *nuad*, Hls *kühä* (: *kõhime*), cf. *süä (süda)*, San *uhak*, cf. *tua*, Krl *kühä*, cf. *rüä* 'g. rye', Puh (koht:) *kuha*, cf. (*uba* :) *ua*, TMrKõ *uhatama*, cf. *uad*, HarKa *uhass (ohakas)*, cf. *sua*, Rõu *kühä*, cf. *süä*, PlvAl *uhak* (: *ohtjass [ohakas]*), cf. *ua (oa)*.

*ehe* > *ihe*. E. g. KuuVi *mihe*, cf. *kiers (keeras)*, AnnS *mihel*, cf. *mies (mees)*, JõeI *liheline*, cf. *sienesse*, Hls *lihed, mihed, tihend (teind)*, cf. *mies*.

Probably the following changes belong here, too.

*äha* > *iha* here and there in Sa. E. g. Jäm(P) *l'ihab (läheb)* (: *l'ähtvad*), JämH *lihame (läheme)*, *niha (näha)* (: *nähtud*), *tiha* < *täha* 'hither', JämH *piha (pähe)*, cf. Jäm(W) *Mäebe vja*, AnsM *lihad (lähed)*, PhaV *piha (pähe)*, cf. *sia*, JaaHi *piha*, cf. Jaa (E 529) *pial (peal)*, Põij *tiha* 'hither', cf. MusI *tähä*. PA 71.

*ohe* > *uhe*: JõeI *kuhe (kohe)*, cf. *luet (loodet)*.

*uhi* > *uhe*: Tõs(KM) *vuheseb*, cf. *kuva (kuiva)*, Aud *kuhelas*, cf. *kuvad, luene (luine)*.

*oja* > *uja*. E. g. Ans *uja*, cf. *tua*, Plv(W) *Alaküla (poig:) puja*, cf. *sua (soa)*, Vas (*poig:*) *puja, uja (oja)*, cf. *lua (loa)*, SeKü *uja*, cf. *ua (oa)*, Lut (*poig:*) *pua*, cf. LutSJa *sua*. We can assume that *j* has here played the same part as *h* in the preceding cases, since *j*, too, has a slack articulation and as, in case of vowel dilation, it has partly created conditions similar to intervocalic *h* (see p. 112), cf. e. g. Ans *lojus* > *lujus*.



## 5.4. DIPHTHONGS *ue*, *üe*.

The diphthongs *uĩ*, *üĩ* occur in some dialects, chiefly in Khn, Pā, LāE, here and there in Ha; VIN, TaN, as *uě*, *üě*, which is probably due to the analogy of other *i*-diphthongs, the second component of which has been lowered to *e* in the weak grade as a result of assimilation, cf. (*aĩ*, *äĩ*, *oĩ*, *öĩ*, *õĩ* : ) *aě*, *äě*, *oě*, *öě*, *õě* (see p. 43). E. g. Khn(EK) (*suits* : ) *suetsu*, cf. Khn (*räim* : ) *räeme*, Tõs(KM) (*küin* : ) *küened*, cf. (*laisk* : ) *laesa*, Aud *tüegas* ( : *tüikad*), cf. (*poiss* : ) *poesi*, Hää (*kuiv* : ) *kujeva*, cf. (*sõĩ* : ) *sõeme*, PjgE (*püidma* : ) *püeda*, cf. (*vaip* : ) *vaeba*, Mär (*kuima* : ) *kujevavad*, cf. (*laisk* : ) *laesa*, KeiH *kujevad*, cf. (*naisi* : ) *naesed*, RapHK (*kuib* ~ *-v*) *koebad*, cf. *räeme*, JuuK (*kuiv* : ) *koeva* < *kujeva*, cf. *laesa*, Kõp (*tuiskab* : ) *tuésand* (~ *tuisud*), cf. *poésid*, SJnP (*tuim* : ) *tuemad*, cf. *aesad*, VilV (*kuju* : ) *kujeva*, KJnL (*tuim* : ) *tuemad*, cf. (*võim* : ) *võemu*, PilK (*küin* : ) *küened*, LaiM *kuévaks*, cf. Lai *laesad*, Trm(MS) *kujevab*, cf. *oeda* (*hoida*), ÄksV (*luik* : ) *luéged* (~ *luiged*), cf. (*koit* : ) *koedu*, Kod(KV) (*kuiv* : ) *koevad*, cf. (*lõim* : ) *lõeme*, TrvP (*luik* : ) *luéga*, Puh *luik* : *luéga*, cf. PuhV *õegati* (*hõigati*). PA 58.

The secondary diphthong *oe* due to the loss of consonant or to the < *oi(r)* is in some dialects, in Khn, Var, here and there in Ha, Jā, Vi, Avi, Trm, represented as *ue*, which is probably due to the analogy of the secondary diphthong *ue*. E. g. Khn(EK) *g. pue* (*poe*), Var *kuera*, JõeI *luet* (*loodet*), KadT *suendab*, Rak *sue*, AnnS *pueg*, VNgK (*jogi* : ) *jue* (*jõe*), SimV, Jõh, VaiI *kuer*, lisI *sue*, Avi *sue*, Trm(T) Kilbavere *kuer*; cf. Var *luen*, JõeI *lueta* (*loetakse*), KadT *puen*, Jõh *tuest*, Vai(W) *lu(en)*.

## 6. Unclassified Changes.

In Estonian there are few phonetic changes which cannot be classified according to the tendencies in the chapters above (and below).

-*k* > [-ʔ] in SEE. E. g. Kan *tegemälda*' (*tegemata*), PlvK *läte*', Rāp *mõtsani*' (*metsani*), VasO *ei mõista*', SePa ab. *kõigilda*', EMA 1 17 'lasta', 2 60 'koju'. Cf. the Finnish so-called end-

aspiration or close contact, e. g. *anna*<sup>ʔ</sup>. We do not know why this change has taken place. Perhaps it occurred while the change  $-k > 0$  was in progress. PA 102, 115.

In SEE  $-t$ , too, is represented by [<sup>ʔ</sup>], e. g. (after EMA) *Plv 'hiussę'* (*juksed*), *Räp lapulise*<sup>ʔ</sup>, *Se l'ännü*<sup>ʔ</sup> (*läinud*), EMA 1 2, 8; 2 37, 48 etc. It is possible that [<sup>ʔ</sup>] has been generalized for  $-t$  from the [<sup>ʔ</sup>]  $< -k$  words during the time the change  $-t > 0$  was spreading or after that. Kettunen assumes that in articulating  $-k$  as well as  $-t$  "the stop closure in the case of stops occurred at the same time in the oral organs and the vocal cords. The former stop articulation has gradually weakened out and the latter has survived, perhaps a little stronger than before" (EKÄ 54). Although this is phonetically possible, as such stops are known in Armenian and Caucasian languages (Ariste EK 1938 235), this assumption lacks every proof. On SEE [<sup>ʔ</sup>] and comparison of it with corresponding phenomena in other languages, cf. further Ariste EK 1938 233-. Cf. also the occurrence of glottal stop instead of  $-t$  in American English dialects (L. H. Herman — M. Sh. Herman, *Manual of American Dialects*, Chicago and New York 1947, 24, 28-). As to the nature of the SE glottal stop, Ariste compares it with corresponding Semitic ones. PA 6, 9, 21, 29.

Besides the sound mentioned above we have another glottal sound in the E area, viz. in *Lei*, the acoustic impression of which is by Ariste compared with Livonian and Lettish ones; e. g. *ma<sup>ʔ</sup>alę* (*maale*), *ra<sup>ʔ</sup>a* (*raha*), *aa<sup>ʔ</sup>gi<sup>ʔ</sup>* (*haagid*) (see Ariste *op. cit.* 237 and Niilus EK 1936 36-). This occurs chiefly instead of intervocalic *h*. The reasons for the origin of this glottal stop are not evident, either. Probably it developed after the loss of *h*, or during the spreading of the change  $h > 0$ . Cf. the Livonian glottal stop ("stossintonation") in case of  $h > 0$ , e. g. *rĕ<sup>ʔ</sup>*, WLv. *rĕ<sup>ʔ</sup>* (E *raha*); *rĕ<sup>ʔ</sup>*  $< *rihi$  (as regards its origin cf. Kettunen LW § 51, Posti LL 317-). Cf. also the corresponding occurrence in F dialects of Jällivara, Nattavaara, and other villages (Airila JKT II 66).

## 7. Alternations.

In the chapters above an attempt has been made at giving a phonetic, partly also phonemic and psychological explanation of all important and most less important phonological changes in almost all E dialects. While thus the more essential of the phonological aspects of the E dialects have been given a certain explanation, it still does not comprise all known phonological phenomena. Besides several phonetic changes that only apply to a small area or to a few words those phenomena have been left out, as to which it is not quite clear whether they are the result of purely phonological or morphological-analogical change. Of the sound alternations generally known in Estonian and other BF languages many have been left unexplained, since it is not certain which of two parallel variants is to be regarded as primary. Concerning others it has been impossible to ascertain to what factors the present occurrence is due, since the phenomenon allows of several explanations.

Here attention is drawn to only a few causes for phoneme alternation. A factor that occurs rather often is the substitution of one phoneme for another on account of acoustic similarity, in which case chiefly phonemes with a closely related or the same mode or place of articulation are confused. This well-known phenomenon may be applied to many phoneme alternations present in Estonian and the other BF languages. Thus we find a confusion of the following phonemes: two liquids, e. g. Hi(A) *aul* (*aur*), PJgEr *ingert* (*inglit*), Juu *kahver* (*kahvel*), Trm(T) *kemmelg* < *kemmerg*, Puh *kukur* (*kukal*), VMr *kuntull* (*kontor*), Kod(K) *mannerga* ~ *mannelga*, Põik *neel* (*neer*), PlvH *nulka* (*nurka*), cf. FT *nul<sup>u</sup>kka* (Vir. 1933 468), PstK *patarjon* (*pataljon*), Hls Polli *pügäle* ~ *pügäre*, Tõs(KM) *sinder* (*sindel*), Mär *tungarbea* ~ *tungalbea*, Khn(AS) *uulded* (~ *uurded*);<sup>1</sup> see also Kettunen KD 153, Ariste ACUT B 47 : 1 225, F examples Airila, Vir. 1933 468—; two stops, e. g. Khn(AS) *peikel* (*peitel*), PärP *riigiga* ~ *riidiga* (*kriidiga*), Mär *rooped* ~ *rooked*, HMd *kihu* ~ *pihu* (*läks piima sisse*), JürS *arkusi* (*arpusid*), SimV *tärgendiin*, Kod(K) *räbässik* (~ *rägässik*) (*rägastik*), Krl (E 361)

<sup>1</sup> *r* ~ *l* may partly be due to suffix generalization.

*lomp* ~ *lon't* 'pond', VasK `tsuklema (*suplema*), LutSJa `tohrama ~ `kohrama (cf. also Mägiste RMP 20); two nasals, e. g. *kiim* ~ *kiin*; stop and homorganic nasal, e. g. (*p* ~ *m*) VaiJ *putukas* ~ *mutukas*, JaaH *kärmes* (*kärbes*) cf. Lv. *kāfmi*, F *kärpänen*, (*t* ~ *n*) *tukkuma*, cf. F *nukkua*; nasal and homorganic liquid, e. g. (*n* ~ *l*) JaaHa *poogel* (*poogen*), Hls *nihvak* ~ *lihvak* 'coquettish girl', c. l. *pähkel* ~ JõeI *pähken*, Lei `pähken, F *pähkinä*; nasal and homorganic semivowel, e. g. (*m* ~ *v*) Vig(Ste) *meere* : `meerde (*veer*), Mär *urmad* (*urvad*), Sim *lõhverdama* ~ *lõhmerdama*, Lüg *riim* (*riiv*), Trm(T) *liim* (*liiv*) 'a certain fishing instrument', Kod(K) *ol'v* ~ Alatskivi *ol'm* (cf. Kettunen Vir. 1927 26); stop and homorganic semivowel, e. g. (*p* ~ *v*) PilM *pun'sid* (*vuntsid*).

Some of the quantitative alternations of consonants as well as vowels, especially the alternation of short vowel + long consonant with long vowel + short consonant (see p. 166) may be due to acoustic vicinity.

Vowels<sup>1</sup> have more alternations than consonants. Here it is very often impossible to ascertain whether we meet the assimilative influence of the neighbouring consonant or the dilative one of the vowel of the neighbouring syllable, or whether it is a phonemic-analogical or some other sort of generalization. Also in this case it is certain that many alternations of vowels are due to a confusion of phonemes due to vicinity of the articulation place (cf. Ariste ACUT B 47 : 1 32). Thus many cases in which a front vowel alternates with a back vowel might be explained. E. g. of the following alternations: (*a* ~ *ä*) KsiL *älvatust* (*halvatust*), Lüg *ärmuonik* (*harmoonik*), Krj *kahar* (*kähar*), c. l. *känd* ~ TMrKõ *kand*, Var *märu* (*maru*), HMD *nägu* (*nagu*), Kod(KV) *pälmik* (*palmik*), UrvVa *räbel'i* (*rabelesin*), Puh *räbä* (*raba*), IisO *särlad* ~ *sarlakid*, VarM *säksamaale*, PöiVK *tabar* (*täbar*) (? dilation), Hi(A) *tadi* ~ *tädi*, KraO *väderit* ~ *vaderi?*, Juu (older people) *valk* ~ (middle-aged) *välk*, LaiLõ `värblane (*varblane*), Vig(SteLI) `ärmini (*linn*) 'Harbin' (see also Ariste op. c. 32, Kettunen KV 3-); (*u* ~ *ü*) Hls(K) *rüüs* (*kruus*); c. l. *kühm* ~ F *kuhmu*, RapHK *lüht* (*luht*), VMr *pugalad* (~ *pügalad*), PltP *kü<sup>h</sup>narnukk* ~ *jalanükid*, SE *rügä* (*rukis*), Sim *sus'tik* ~ *süs'tik*, TrvK *tüme* (*tume*),

<sup>1</sup> As regards the numerous vowel alternations in the FU languages, cf. also Steinitz FUV. Regarding criticism, see Itkonen FUF 29 222-.

Mär *tülba* (*tulba*), c. l. *tuhm* ~ F *tyhmä* (see also Kettunen KV 15); (*o* ~ *ö*) *hoog* ~ F *hyöky*, KraO *östetas* (*ostetakse*) (29), c. l. *roopad* ~ *rööpad* (see Saareste EK 1924 182; Kettunen KV 9). Cf. also the F examples of the alternation of front and back vowel, V. Ruoppila, Vir. 1938 212. It would be possible in the same way to explain some of the *e* ~ *õ* cases in Estonian and the other BF languages, even some of those which Mägiste has explained as due to velarization, such as *mets* ~ SE *mõts* (see Suomi V : 10 244— and p. 106—).

Some alternations of two back vowels with neighbouring places of articulation as well as of two front vowels, may also be due to acoustic vicinity. E. g. (*o* ~ *u*) Hi(A) *lühki* (*lõhki*), *lühkump* (*lõhkuma*), Khk(T) *moigama* (*muigama*), RapHK *podel* (*pudel*), Hi(A) *podu* (*pudi*), JuuK *soplema* (*suplema*), HMd *turgid* (*torgid*) (63), Vail *ulle* ~ *olle* (*õlle*), RapHK, Vig(Ste) *omalad* (*humalad*) (see also Kettunen KV 9, cf. above p. 175); (*a* ~ *õ*) Ris *parand* (*põrand*), HarM *sõma* (*sama*), Kod(KV) *tõrandus* ~ Wd. *tarandus*, Lüg *varu* (*võru*). On phoneme alternations see also Ariste *op. cit.* 27—, 102; on Finnish, Ruoppila, Vir. 1938 195—.

Of course, all alternations that cannot be explained by other phonetic conditions, are not based on confusion on account of acoustic vicinity. Besides phonetic, combinatory factors not yet ascertained, we must particularly consider phonemic-analogical widening of a phonetic change during its spreading to words that originally did not belong to that phonetic change, likewise hyper-corrections in resisting a phonetic change coming from the outside.

The phonological factors described above should not be confused with the frequent vowel alternation in descriptive words of a sound-symbolic or onomatopoeic character, which alternation can be primary and due to semantic reasons, namely: (1) the same idea has by different speakers been symbolized in a phonemically different way, or (2) the same content has been conceived by different speakers in a different way and has thus also phonemically obtained different expression, or (3) the different vowels really or originally express different ideas, synonyms. That kind of vowel alternation occurs in the same dialect, too. E. g. *kahisema* ~ *kohisema* ~ *kihisema*, KadT *laker-*

*dab* ~ *lekerdab*, *laperdab* ~ *leperdab*, VMr *nägelema* (~ *nagelema*), *närakas* (~ *narakas*), Sim *˘kortsuma* ~ *˘körtsuma*, VaiI *sulistan* ~ *solistan*, SInL *logane* ~ *lögane*, Kod(KV) *˘lonkab* ~ *˘lönkäb*, His *lumpame* (Abja) ~ *lümpame* (*lonkama*); cf. also c.l. *kärin* ~ F *karina*, *suskama* ~ F *sysätä*, *pomin* ~ F *pöminä*. A treatment of such phonemic phenomena falls outside the boundaries of this work.

## 8. Hypercorrections.

If people consciously try to imitate some phonemic feature of the common language or of a neighbouring dialect, it may happen that the imitation only meets with partial success or, on the other hand, it may result in hypercorrection. Of the former case Ariste gives examples in his investigations into the Hi dialect. The articulation of *õ* is difficult to the Hi people, and in their attempt to imitate it, *e* in a few words is articulated instead of *õ*, which in Hi actually corresponds to *õ*, e. g. PhI *hehk* (*õhk*), i. e. in the attempt to imitate *õ* the rounding of the lips necessary for *õ* has been omitted, but the oral articulation still occurs in the place where *õ* is articulated (ACUT 47 : 1 93, 95–). In addition to *e* we find in Hi a labialized *e*, as a result of defective imitation of *õ*, e. g. Kas(A) *me<sub>o</sub>ni* (99), a labialized *õ*, e. g. PhI(A) *mõ<sub>o</sub>nest* (*mõnest*) (121, 124), and *õε* instead of *õe* (125).

A defective attempt at articulating *õ* also occurs in the Finnish-like NEEC, where *ε* is usually represented by *e* as in F, but in attempts at imitating the common language *õ* it has been replaced by *o*. E. g. JõeI *ohta* ~ *ehtu*, VNgK *tomman*, VaiI *torv* ~ *terva* ~ *törv*. The substitution of *õ* in these words by *o* has taken place on phonemic analogy of words like *kõrge*, *põlv*, in which *õ* of the common language represents *o* of NEEC (and of PF). The diphthong *õe* of the common language (*õõ* in Standard Estonian) has in the same places been replaced by the diphthongs *ue*, *oe* which are familiar to the dialect and acoustically most like the *õe*. E. g. JõeI *muet* ~ *miet* (*mõõt*), *ruemus* ~ *riemus*, VaiI *moek* ~ *miekka*, *roesk* ~ *ruesk*. As regards the defective imitation of the common language in F dialects, see Kettunen SM II 28 note; cf. ib. 53 note 1.

Phonemic-analogical hypercorrection also occurs in the case of  $\tilde{o}$  in those dialects in which it has previously been absent and in which it has developed of late under the influence of the common language. E. g. Emm(A)  $\text{'lõubʏ}$  (*laupäev*), Hi(A)  $\text{'kõis}$  (*kõis*) (see also ACUT B 47 : 1 39).

On the other hand, we can probably explain the following occurrences as due to a hypercorrection for the purpose of resisting the phonetic change  $o > \tilde{o}$ : *kollane*, *kord*, *hobune*, Tor  $\text{'kolvama}$ , Vig(Ste)  $\text{'kolbama}$  (*kõlbama*), where  $o$  represents PF  $e$ ; cf. F *keltainen*, *kerta*, *hevonen*, *kelpaamaan* (Kettunen EKÄ 132). PA 50, 56.

Avoidance of the phonetic change  $ua- > vua-$  (see p. 131) has, within the boundaries of that phonetic change resulted in such forms as JMd, Rak  $\text{'uarmarjad}$  (*vaarmarjad*), IisO  $\text{'aablane}$  (*vaablane*).

In trying to avoid the phonetic change  $au > ou$  (see p. 46) the young people in Hi have fallen into hypercorrection, as in Emm(A) Viiterna *lina laugutamine* (*lõugutamine*).

In an attempt to avoid the phonetic change  $ht > st$  in Kod the forms  $\text{'vähter}$  (*väster*),  $\text{'vahvla}$  (*vastla*) have come into being — "es wurde von einem alten manne mitgeteilt, sogar  $\text{'kõster}$  'küster' laute in der neueren sprache  $\text{'kõhter}$ " (Kettunen KD 138).

Avoidance of the phonetic change  $v > B$  is probably the reason why in the following words  $B$  has been replaced by  $v$ : Ris *vava-* (*vaba-*), *vavadikud* (*vabadikud*), RapHK (*toop* :) *toovi*, *saavas* (:  $\text{'saapad}$ ).

Particularly frequently we find in dialects a hypercorrection of consonant clusters in word-initial position. E. g. stop + liquid: Juu *kramas'sid* (*kamassid*), KeiS *kremmelguid* ( $<$  *kemmerg*), RapHK *kribemed*  $\sim$  *kibemed*, Kõp *klaube*  $<$  *G laube*, Räp  $\text{'kliimä}$  (*liimima*), Kod(K) *klima* ( $\sim$  *lima*), KrjT *klimu'naa'di* (*limonaad*), Ris *klink* (*link*), VJg *vieklomp* ( $\sim$  *lomp*), Lei *klouk* (*look*), VJg *pluht*  $<$  *G luft*, SeSa *klõks* (*lõks*), Saa *kraadigu* (*raadio*), Tor *kraamid* (*raamid*), Ris *kraejalad* (*raejalad*) 'fork like pedestal', (*rasva*) *krabid* (*rabid*), JuuKa *krapped* (*rapped*), Rõu  $\text{'kraspli}$  (*raspli*), KeiH *krehv* ( $\sim$  *rehv*), LaiKa *trehv* ( $\sim$  *rehv*), KrjT *treidüle* (*reidile*), Hää *krematismus* (*reumatism*), JJnLä *kribi* ( $\sim$  *ribi*), SJnP *triijul* (*riiul*), VaiM *kronk* (*ronk*), Räp *puukron't*, HarMõ *kruus's* (*roos*), LaiKa *trul'l'* ( $\sim$  *rul'l'*), KamK *kruudeline* (*ruuduline*),

VasLa *kruut*, Mär *truut* (*ruut*), Lüg *trosin* (*tosin*); cf. Ol. *gloodan* < Russ. ладан. Cf. also the confusion of *k* and *t* in these clusters, as in Pil *plaaś* (*klaas*), Khn(AS) *triegid* (*kreegid*), Tor *truus* (*kruus*), Vän (among a few old people) *ʔtriske* (*priske*), *traksub* (*praksub*), *trijus* (*priius*), KsePu *kraat* (*traat*), Pil *pragi* ~ *krabi* (*tragi*), KJnLa *kriibulene* (*triibuline*), KsePu *kruʔʔ* 'Trull' (surname). — *ts-*: KamR *ʔsaija* (*saija*), *tsalga* (*salga*), Krl *tsarapu*, SanU *tʔsʔiberi* (*Siberi*), PlvH *tʔsiht* (*siht*), Ote *tsireli*, RõuS *tʔsirbel* (*sirpidel*), Urv(V) *tsissʔ* (*sissid*), VõnK *tsitsi*, HarM *tʔsukur* (*suhkur*), LutSJa *tsilʔihoʔnn* (*telefon*), Lei *ʔʔšuklema* (*suplema*), OteN *tsõõr* (*sõõr*), LutSJa *tsilʔigramm*, *tsilʔifon*, KrlÄ *ʔsilka* (*tilka*). The same phenomenon occurs in Finnish dialects, e. g. *kraamit*, *kruutu*.

A hypercorrective *h-* in word-initial position also occurs in some dialects. E. g. RapR (among younger people a certain desire to seem distinguished) *himelikuna* (*imelik*), *hennem*, *hisikut*, ReiP *hameerikasse*, SeMa *ʔhinglit*, Phl(A) *huputasi* (*uputasin*), Plv *huulits*, SeSa *husʔsʔ*, HarM *hoonakęę* (*voonakene*), Rõu Roosa *hyy* (*võõ*), Urv Vaabina (E 369) *hopętaja* (*õpetaja*), PlvK *här-ritämä*.

The *i* > *ü*, which occurs here and there in WE in a few words in which it is not possible to find any combinatory phonetic conditions of it, is probably due to a phonemic-analogical extension of the phonetic change *mi* > *mü*, *pi* > *pü* (see p. 23–) beyond its original boundaries. E. g. Phl(A) *ʔKrištõs* (*Kristus*), MusI *nürʔk* (*nirk*), *rüstati* (*ristati*), Jäm(P) *süld*, PõiJ, Phl *süld* (*sild*), Hi(A) *sünu* (~ *sina*), Ris *süno* (among the older people) — in this word *ü* can be explained by analogy with the word *münu* (*minu*) and the dilative influence of *u* in the second syllable; Mär *süsalik*, Var *sütsikördid*; see also other examples ACUT B 47 : 1 128. Cf. Mägiste EK 1940 62. Ariste's assumption (*op. cit.* 128–) shared by Posti (FUFA 27 48), that in these words *ü* < *ĩ*, cannot be considered convincing.

As regards examples of hypercorrection in F dialects, see Kettunen SM II 29, 34 note 1, 66, 82, 86, 102, 129; as to Hung., Simonyi AH 7; for other languages see e. g. as to French dialects F. Schürr SZ 51–, F. Heussler HS 31–, as to several Ind.-Eur. languages E. Lerch AGPs 105 441–, 450–, Heusler HS 68–.



## 9. Foreign Influence.

In E dialects we find phonetic features which have been taken over from all neighbouring Ind.-Eur. languages, viz. Swedish, Russian, German and Lettish. It should, however, be taken into account that the adoption of many of the foreign phonetic features in question has been favoured by latent tendencies in the indigenous language which might have occasioned the same occurrences by ordinary phonetic changes without any outside influence. Therefore, in the case of the foreign phonetic features the question always arises: to what extent are they due to the foreign language and to what extent to genuine linguistic tendencies? In regard to a few there might be a doubt whether there is any foreign influence at all.

Here we shall not treat the influence of other BF languages on Estonian. It is for instance a well-known fact that the NEEC dialects (Kuu, Hlj, VNg, Lüg, Jõh, Vai) are strongly influenced by Finnish (cf. e. g. Mägiste, Vir. 1952 311-), although it is often difficult to ascertain which of the features common to Estonian and Finnish in these dialects are of common, early origin and which are recent phonetic, morphological or lexical loans. In the southern part of NEE (e. g. in North-Kod, partly in MMg, Trm, Iis, Lüg, Jõh, Vai) a strong Votian substratum is evident. Here we shall treat only the influence of Ind.-Eur. languages.

Influence of German is to be found in the language of town people (see Ariste EKH 20-). In the following we shall very briefly give a few examples of Swedish, Russian and Lettish phonetic influence apparent in E dialects.<sup>1</sup>

### 9.1. SWEDISH INFLUENCE

Swedish influence is to be found in the islands and in NVEC.

ö, ø instead of õ, which occurs in Sa, Hi and here and there in NVEC, is probably due to Swedish influence. E. g. Jäm *mõis*,

<sup>1</sup> Here we shall not touch on the theoretic possibility that also behind several other, genuine E phonetic changes there may be on old Baltic or Germanic substratum, which might already occur in PF (cf. Posti FUF 31 1-).

AnsM `volgu, KhkT *põledp̄t̄i* (*põletati*), MusI `mõttesi, Krj *kõrvad*, Vll *glut*, Jaa *õppes* (*õppis*), PõiP *lõuna*, Phl *tõru* (*tõrv*), RisVi *mõisa*, HMD *nõder* (see also Ariste EK 1931 77). Ariste refrains from explaining the Sa and Hi *õ* as due to Swedish influence, but connects this phenomenon together with  $\bar{a} > \bar{e}$  and *au* > *ou* with the assumed shifting of the basis of articulation towards the front in island dialects (ACUT B 47 : 1 122–). The geographic distribution of the phenomenon is, however, so clearly connected with the areas of Swedish colonization, that the connection of *õ* with a Swedish substratum seems most natural. It must be assumed that the Swedes, having settled in these regions, when adopting the Estonian language, substituted for *õ*, which was alien to Swedish, *ö*, the phoneme from their own tongue which was most similar to *õ*. From the Estonianized Swedes *ö* might also spread to genuine Estonians in these areas. PA 41.

A similar Swedish-like pronunciation occurs in the case of  $\varepsilon$ ,  $\bar{e}$  pro  $\bar{ä}$ ,  $\bar{a}$  in the dialects of Rei Rootsiküla and NVEC (see Ariste, *op. cit.* 113). Due to the influence of the Swedish substratum we find in Rei Rootsiküla also confusion of *e* and  $\bar{ä}$ ,  $\varepsilon$ , e. g. of *er* and *är*: *päres* (*peres*); *ei* and *äi*: *käi* ~ *kei* 'whetstone', *meil* (*meil*) (see Ariste *op. cit.* 79, 83, 88). See also about possible Swedish influence in the case of *e* >  $\varepsilon$  ib. 87. Cf. SWF  $\bar{ä} > \varepsilon$  on account of the Swedish substratum (Tunkelo Suomi 106 : 2 46).

The influence of the Estonian–Swedish dialects can probably explain the delabialization which occurs here and there in Sa and Hi: E. g. *i*, *ĩ* pro *ü*; *e* pro *ö*. E. g. JämH *nijid* (*nüüd*), MusI *itli* ~ *itlesi* (*ütlesin*), Krj *rüpan* (*rüüband*), JaaHa *nid* (*nüüd*), Phl(A) *lühinä* (*lühike*) (see Ariste *op. cit.* 131 and EK 1931 78); JämH *veti* (~ *võti*) (*võti*), PhaV *mened* ~ *mõned* (*mõned*).

On other Swedish phonetic influences in Estonian dialects see Ariste EK 1931 73–, as to Hi, ACUT B 47 : 1 269– and in the Index of that work under the item 'rootsi mõju'. Cf. the Swedish influence in F dialects, Kettunen SM II 15, 28, 96, 150–.

## 9.2. RUSSIAN INFLUENCE

The phonetic influence of Russian in Estonian is chiefly to be found in Se, Lut and Kra, to a slight extent also in the town

language. In the consonantism we find Russian influence first of all in the voiced lenes *g, d, b, z* pro *G, D, B, Z* after a vowel and a voiced consonant. E. g. SeSa *higi*, LutSJa *raba*; SeSa *azi* (: *ʼasja*), LutSJa *pezä*; SePa *kõigildaʼ* (*kõigita*), LutSJa *kärzä*; SeSa *ʼrõõmza*, Lut *ʼpõrza*. Phonetic change (*k, t, p* >) *G, D, B* > *g, d, b* can, of course, also take place without any foreign influence, since we here find a general-phonetic tendency towards the assimilation of the consonant by a neighbouring vowel or a voiced consonant, cf. e. g. Spanish *lobo* < *lupu* (TPh 201). But since in Estonian *g, d, b* occurs in the borders of a foreign language, and in the same dialects other foreign influences are also to be observed, it is evident that the change is due to outside influence. A similar phonetic change *k, t, p, s* (> *G, D, B, Z*) > *g, d, b, z*, has also taken place in the other BF languages which are directly under the influence of Russian, namely Vepsian, Carelian-Olonetsian and Ingrian, in which at least one of the factors has been the influence of the Russian language; e. g. SVp. *nado*, Cr. *vago*, Ing. *kezä*.

Another striking Russianism in the consonantism is *ʼ* pro *l* in the back-vowel words. E. g. SeSa *palama*, *лпум*, LutSJa *tagʼa*. The same phenomenon occurs in Vas (see e. g. AES 118 171). Cf. Vt. *kala*, Ol. *tagʼa*, SVp. *holʼtõ*, Ld. *kala*. The occurrence of *ʼ* in back-vowel words has, of course, been favoured by the assimilative influence of the back vowel (cf. Ariste ACUT B 47 : 1 223).

The palatalization of the consonants in front-vowel words can likewise be explained by Russian influence. E. g. Se *ʼöödʼmä* (*leidma*), *kʼeziv*, Kra *kʼezʼvʼ* (*kesv*), (all examples from EMA). Cf. Vp. dial. *mʼehen*.

In the vocalism we can observe the following more important Russian influences.

Most conspicuous is the diphthongization of short vowels.

*ʼe, ʼe* pro *e*, in word-initial position *je-* pro *e-*. E. g. SeSa *ʼnʼekrut* (: *ʼnʼekruta*), Lei(M) *vʼeñne*, Lei(V) *ʼela* (*elan*), Lut *ʼherne* (: *herneʼ*), KraO *ʼjèhM*; Lei(Vä) *jeza*, LutSJa *jezä*. Cf. Vp. dial. *ʼeglei* (E *eile*).

*i-* > *ʼi-*, *ji-* in Lut and Kra. E. g. LutSJa *ʼimändäʼ*, *jimä* < *imä* (*ema*), *jimetämä*, KraO *jistę* (*istusin*), *jimä* ~ *imä*.

The diphthongization of the short vowels given above may

also have been favoured by the same tendency towards articulatory overexertion which in these dialects has led to the rise of the long vowels (cf. p. 204). This must be taken into consideration particularly on account of the fact that a similar tendency towards the diphthongization of short vowels has been found also in those E dialects in which it is difficult to assume Russian influence, and in addition we find the same phenomenon as a consistent phonetic change in Livonian, the neighbouring BF language. Thus according to Ariste <sup>i</sup>e, <sup>u</sup>o occur among some persons also in Hi: <sup>l</sup>epp, <sup>s</sup>epp (see ACUT B 47 : 1 95); cf. Lv. <sup>l</sup>e<sup>p</sup>à (*lepp*).

*je-* pro *e-* is recorded besides Se and linguistic enclaves also in Aud Jõõpre and PstHo. E. g. Aud Jõõpre *jelu*, *jega*, *jema*, *jelama* (but *enam*, *elebil*). In Aud we find the phenomenon in 1930 only in Jõõpre, but, as old people state, it is of late origin and has been common in the parish of Aud from about 1890–1900 (76–); PstHo *jeinä* (*heinad*), *jenne*, *jeldeke* (*heldeke*), *jeidä* (*heidan*). *jemä*, PstHol *jeläjil*; in PstHol also *i-* > *ji-* occurs: *jinimese*, *jiir'* (*hiir*). It is possible that here, too, we have Russian influence. In the counties of Pärnumaa and Viljandimaa there were many Greek Orthodox congregations and schools. In Aud Jõõpre there is a Greek Orthodox church that in 1862 had about 1222 members (Eesti IV: Pärnumaa, Tartu 1930, 280), and in Holstre there was an Orthodox school. It is possible that the articulation of the *je-* (*ji-*) is due to the imitation of the Russian or of the Russianized Estonian pronunciation of the Russian priests, precentors, or teachers. This assumption is not contradicted by the fact that the number of Russians in the area was very small, for the reason for such an imitation can have been a single Russian, for instance a priest, who was a local authority. Of course it is also possible that we here find a genuine phonetic change.

Striking cases of Russian influence are the substitution of the sounds which in Standard Russian are recorded as *я*, *ю* for *ä* and *ü*, in which case there are a great number of stages, beginning with the simple coronalization of the consonant in word-initial position and ending in <sup>j</sup>a, <sup>j</sup>u. E. g. Se(Mg) Lepa *ma k'äz'i* (*käsin*), *k'<sup>j</sup>äsk* ~ Lõkova *k'äzu*, Lepa *k'app* ~ *k'<sup>i</sup>app*, *k'äppäkäne*, Herkova *n'ägo* ~ *n'ägo* ~ Lõkova *n'äkko* (*nägu*), SePa *k'juss* 'asks'

(: `küsse 'asked'), LutSJa *l'ask* (*lesk*) (: g. *läza*), Lut *k'uum* (*külm*) (: *külmä*), KraO *k'jago* (*kägu*), *k'uum*. See also Mägiste, Suomi V : 10 252. Cf. Vp. dial. *k'änd'ü*, *üuks'* ~ *juks'*.

Influence of Russian articulation can also be found in SeSa and KraO in the half-length of the first syllable before a voiced consonant. E. g. SeSa *òrg*, *sàrv*, *sól'g*, KraO *kàndma*, *vàage*, *làmbjät*, *pùder* (~ *puder*). Cf. Vp. and Ld. *àdr*.

As regards Russian influence in the common language, see Ariste EKH 31-. On Russian influence in Vp. dialects see Tunkelo VKÄ 911-, in Cr.-Ol., Ojansuu KAÄ 157-.

### 9.3. LETTISH INFLUENCE

The influence of Lettish is evident in the Estonian linguistic enclaves in Latvia, especially in Lei. The most important of the phonetic changes due to Lettish are the following:

*g, d, b, z* pro *G, D, B, Z* in Lei. E. g. Lei(V) *l'ijidävä?*, *kazvass*, Lei *k'ondza?*. Cf. Lv. *padā*, *izànd*.

Diphthongization of high vowels by lowering the initial part in Lei and Lut.

*ū > qu, uu, ou*. E. g. Lei(O) *pūu* ~ *puu*, *k'ouлма* (*kuulma*), LutSJa *kqu*, *tqu* : *tqule?*, *puu* : *puu?*. According to Mägiste *ū > ou* is also to be found in a narrow area in Se Vilo, e. g. *toul* (: *tuule*) (personal information).

*ū > öü*. E. g. Lei *möür* : *möürü* (*müür*), *k'öünär* : *köündre*, LutSJa *köüdz* : *küüdze* (*küüs*), *möür* : *müürü?*. *ū > öü* also occurs in TrvP, a most interesting phenomenon, which for the present remains unexplained, e. g. *söüdlane* (*süüdlane*), *söüdistama* *söütmä*, *möür*.

*ī > ei (> õi)*. E. g. LeiP(O) *veit'i* (*viidi*), *veina*, *nei*, Lei *meileidzema* 'to love', *zeid* (*siid*), *peim* (see also Niilus EK 1937 143); Lei(L) *võibuma* (*viibima*), *lõigutama* (*liigutama*), LutSJa *nji*. *ī > ei* rudiments are also found in Hi, e. g. *leisu* (*liisu*), *leikõ* (*liiku*), *nei* (*nii*) (see Ariste ACUT B 47 : 1 96).

The diphthongization of medium-high long vowels in the weak grade in the linguistic enclaves has probably taken place under the influence of Lettish or has been favoured by it, although

it may also be due to the same indigenous tendency which in the same dialects has led to the rise of the long medium-high vowels in the strong grade.

$\bar{o} > uo$ . E. g. Lei(V) *uoda* (*ootan*) (: *uut*), LeiA(O) *kodɛb<sup>u</sup>oɔɛ* ~ *bu<sup>o</sup>oɔɛ* (*kodu poole*), LutJ *t<sup>u</sup>on'i*, *uoda'*, Lut *huone'*, (: *'huune*); KraO *nuor'k* (*noorik*), *<sup>u</sup>oodat* (*ootad*).

$\bar{o} > \bar{üö}$ . E. g. Lei *lüöde* (: *lüü*) (*lööd* : [*lööñ*]), Lut(V) *müövä'* (: *mü*).

$\bar{e} > ie$ . E. g. Lei(M) *šieme* (: *'šimne*), LutSJa *siene* (: *siin*), KraO (*kiilt* :) *k'<sup>i</sup>elega*.

$o > <sup>u</sup>o$  (*õo*) in the linguistic enclaves is probably also, at least partly, due to Latvian influence. E. g. Lei *<sup>u</sup>opɛn* (*hobune*), *tuoe* (*toe*), *p<sup>u</sup>oiš* (*poiss*), *<sup>u</sup>orik*, Lei(M) *p<sup>u</sup>ojel* (: *'poige*), LutSJa *<sup>u</sup>oon'ass* (: *'oinaɛ*), *<sup>u</sup>ots'*, *<sup>u</sup>ol'l'*, KraO *<sup>u</sup>ot's'mah* (*otsimas*).

In Lut and Kra  $o > <sup>u</sup>o$  has also been favoured by the Russian influence. In regard to  $o > <sup>i</sup>e$  is valid. Cf. according to Ariste the occurrence of *<sup>u</sup>o* among a few people in Phl, when the syllable is extra long, e. g. *t<sup>u</sup>ont* (ACUT B 47 : 1 36). Cf. Lv. *k<sup>u</sup>odā*, *t<sup>u</sup>oi*, Vp. dial *k<sup>u</sup>ol'*.

$s, z > š, ž$  before *i, j* in Lei. E. g. Lei *aži* : *ašša* : *až'a'*, *kuož'a* (*kosjad*). Cf. Lv. *nažži*, *kaķš* (see also Setälä ÄH 263 note).

$l$  pro *l* in back-vowel words in Lei. E. g. Lei *šiltl* : *šiltlta*, Lei(V) *<sup>i</sup>elass* (*elab*), Lei(Ve) *'kuulka* (*koolge*).

$a > \bar{a}$ ,  $o, <sup>u</sup>o$  chiefly when adjacent to labial consonant in Lei. E. g. Lei(V) *p<sup>u</sup>onima* (*panema*), *l<sup>u</sup>ombass* (*lamp*), Lei(O) *mānu*.

The loss of the intervocalic *h* in Lei must also be considered due to Lettish influence (see Niilus EK 1936 40 and above p. 56). Cf. the corresponding Livonian phenomenon.

## Summary.

From the survey of phonological tendencies and changes in Estonian it is evident that the majority of the phonetic changes that have taken place in Estonian are due to tendencies towards assimilation and articulatory weakening, including reduction and disappearance of sounds, all based on a tendency towards ease. These tendencies are strong all over the E area. Of the phonetic changes that have taken place more or less in the whole of the E area the following are the most important: weakening of the

weak grade variants of the stops, including their disappearance, shortening of the geminate stops, loss of *h* in non-initial syllable, syncope and apocope, reduction of diphthongs and shortening of long vowels in non-initial syllable. In addition there have been numerous other assimilations and losses all over the E area. Besides we find several assimilations and disappearances that have chiefly occurred in NE. But the assimilations and disappearances are most vigorously manifested in SE and WE, including the islands. The most important of these tendencies common to SE and WE are shortening of the geminate stops in closed syllable after the second and the third syllable, assimilation of diphthong components in the weak grade, more extensive syncope and apocope together with vowel reduction and, as an old feature, vowel harmony. Besides there are many assimilations and losses that have only occurred in SE or on the WE mainland, or the islands. The tendency towards ease in SE and WE is most apparent in vocalism. Of the corresponding phonetic features in WE we may besides vowel harmony also mention other dilations, especially if the vocalic consonant is *h*, also epenthesis and metaphony. A number of consonant losses as well have chiefly taken place in WE.

As compared with assimilations we find but a small number of differentiation phenomena that have spread all over the E area, and these are for the most part glide sounds based on the tendency towards ease. The differentiation of two consonants or a consonant and a vowel occurs somewhat more frequently in WE than in the other E dialects, e. g. *-tv > -Du*, etc., *v > B*. As regards phenomena of articulatory strengthening, only gemination of stops to a very limited extent due to the loss of *h* in the types *vette*, *rikka*, has taken place almost all over the E area. This tendency towards gemination is somewhat more pronounced on the WE mainland, where it also comprises the types *sōke*, *p. jōke*, *maka (maga)* due to the loss of *\*t*. The same gemination is still more pronounced in the SE, where all consonants are subject to gemination, due to the loss of *h* as well as that of *\*t* (the types *˘tallu*, *g. ˘venne*, *˘ol'li*, *pimme*) and in addition the type *jummal*.

We see that in the same areas, viz. SE and WE, in which the tendencies towards assimilation and disappearance, i. e. towards articulatory weakening are strongest, the tendencies

towards articulatory strengthening are also most conspicuous. This shows that if phonological tendencies on the whole appear in a pronounced manner in a certain idiom, this applies to all phonological tendencies, which are always latently present in the language or, more correctly, in the human psyche. From a psychological point of view this is quite easy to understand.

Almost all over the E area the tendency towards articulatory strengthening is strongly manifested in vocalism, with the difference that in some dialects, viz. in the NE, they more frequently take the form of the diphthongization of the long vowels, in others, particularly in the SE, they appear as a rise; in principle we here meet the same phenomenon in both cases (see p. 172).

All the other phonological tendencies and phenomena, such as dissimilation, metathesis, special cases of phonemic analogy, hypercorrections, etc., occur, on the whole, to the same limited extent as in other languages and do not present any interesting aspects in regard to E dialects.

If we disregard gradation, Estonian among the BF languages, in respect of the pronounced occurrence of tendencies towards articulatory weakening, is most similar to Livonian and partly to Vepsian, where there has also been a shortening of the geminate continuants, syncope and apocope, and in Livonian, in addition, the reduction of diphthongs and the contraction of long vowels in non-initial syllable. Since in these BF languages syncope and apocope have occurred to a greater extent, the SE and WE are in this respect closer to them. In vocalism we find remarkable common features in Livonian and WE, especially in the insular dialects: *au* > *ou*, reduced vowels, epenthesis and metaphony, the rise of *a* and *ä*, etc. SE (and to a certain extent WE) shows relationship with Livonian and the eastern dialects of Votian in the gemination due to the loss of the consonant. As to vowel harmony SE and WE are similar to Finnish and Votian. The NE dialects show features similar to Livonian as well as Finnish, in the diphthongization of long vowels.

A survey of E phonological features, no doubt, reveals that the difference between NE and SE is Pre-Estonian, i. e. it goes back to PF. When we compare WE with NE and SE, we can scarcely avoid an impression that WE is to some extent due to a mixture of NE and SE.



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- See also under Abbreviations 1: Literature.

## Abbreviations.

### 1. LITERATURE

- AASF = Annales Academiae Scientiarum Fennicae.  
 ACUT = Acta et Commentationes Universitatis Tartuensis.  
 AFUF = Anzeiger der FUF.  
 AGPs = Archiv für die gesamte Psychologie.  
 AIHUH B = Acta Instituti Hungarici Universitatis Holmiensis, Series B. Linguistica.  
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 EK = Eesti Keel.  
 EKirj. = Eesti Kirjandus.  
 EKK = Eesti Keel ja Kirjandus.  
 EKÄ = Kettunen EKÄ.

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- Wiklund LFL = Wiklund, K. B., Laut- und Formenlehre der lulelappischen dialekte. Stockholm 1891.
- , UL = Entwurf einer urlappischen lautlehre. Helsingfors 1891.
- Vir. = Virittäjä.
- Virtaranta LYSÄH I = Virtaranta, Pertti, Länsiyläsatakuntalaisten murteiden äännehistoria. I: Konsonantit. Helsinki 1946.
- VKVM = Valik eesti kirjakeele vanemaid mälestisi. Tartus 1925—31.
- VKÄ = Kettunen VKÄ.
- Wundt S = Wundt, Wilhelm, Völkerpsychologie. Erster Band. Die Sprache. Erster Teil. Leipzig 1911<sup>3</sup>.
- ÄH = Setälä ÄH.
- Äimä PHI = Äimä, Frans, Phonetik und Lautlehre des Inari-lappischen (I—II). Helsinki 1918.
- Zolnai SzKH = Zolnai, Béla, Szóhangulat és kifejező hangváltozás. Szeged 1939.
- ZPh = Zeitschrift für Phonetik und allgemeine Sprachwissenschaft.

## 2. PLACE-NAMES, LANGUAGES, AND SOURCES OF LINGUISTIC CITATIONS

### 2.1. Place-names, Languages, and Symbols Used in 2.2.

AES = manuscript in the archives of the Academical Society for the Mother Tongue in Tartu	FCP = F dialect of Central-Pohjanmaa
Amb = Ambla	folkl. = folklore-language
Ann = Anna	Fr. = French
Ans = Anseküla	FSH = F dialect of South-Häme
Aud = Audru	FSP = F dialect of South-Pohjanmaa
BF = Baltic Finnic	FT = F dialect of Tornio
CE = Central-Estonian dialects	FU = Finno-Ugric
Cher. = Cheremis	FUS = F dialect of Upper-Satakunta
c. l. = common language	G = German
CNE = Central NE	Ha = Harjuma
Cr. = Carelian	Hag = Hageri
CrT = Cr. dialect of Tver	Har = Hargla
CSE = Central SE	Hel = Helme
E = (1) Estonian	Hi = Hiiumaa
(2) EKA	HJn = Harju-Jaani
(3) eastern part (at the end of a county-name abbreviation)	Hlj = Haljala
EE = East Estonian dialects	Hls = Halliste
EKA = manuscript in the Archives for the Estonian Language in Tartu	HMD = Harju-Madise
ELv. = East Livonian	Hung. = Hungarian
Emm = Emmaste	Hää = Häädemeeste
Engl. = English	HÜ = Phonological Survey of the Academic Society for the Mother Tongue, in manuscript
Evt. = East Votian	Iis = Iisaku
F = Finnish	Ind.-Eur. = Indo-European
FAS = F dialect of Ala-Satakunta	Ing. = Ingrian
	IngS = Ing. dialect of Soikola

It. = Italian  
 Jaa = Jaani  
 JJn = Järva-Jaani  
 JMd = Järva-Madise  
 Juu = Juuru  
 Jõe = Jöelähtme  
 Jõh = Jõhvi  
 Jä = Järvamaa  
 Jäm = Jämaja  
 Jür = Jüri  
 Kad = Kadrina  
 Kam = Kambja  
 Kan = Kanepi  
 Kas = Kassari  
 Kei = Keila  
 Khk = Kihelkonna  
 Khn = Kihnu  
 KJn = Kolga-Jaani  
 Kod = Kodavere  
 Koe = Koeru  
 Kos = Kose  
 Kra = Kraasna  
 Krj = Karja  
 Krk = Karksi  
 Krl = Karula  
 Kse = Karuse  
 Ksi = Kursi  
 Kul = Kullamaa  
 Kuu = Kuusalu  
 KuuN = Kuu capes  
 Kõp = Kõpu  
 Käi = Käina  
 Kär = Kärla  
 Lai = Laiuse  
 Lat. = Latin  
 Ld. = Lydian  
 Lett. = Lettish  
 Lei = Leivu  
 LG = Low German  
 Lih = Lihula  
 Lith. = Lithuanian  
 LNg = Lääne-Nigula  
 Lp. = Lapp  
 LpI = Inari-Lapp  
 LpK = Kola-Lapp  
 LpL = Lule-Lapp  
 LpN = Norwegian-Lapp  
 LpS = Swedish-Lapp

Lut = Lutsi  
 Lv. = Livonian  
 LvS = Lv. dialect of Salis  
 Lä = Läänemaa  
 Lüg = Lüganeuse  
 (M) = at the end of a place-name abbreviation means morphological record in the archives of the Academical Society for the Mother Tongue in Tartu, if no other meaning is given for the abbreviation as a whole  
 Mar = Martna  
 Md. = Mordvin  
 MdE = Er'z'a-Mordvin  
 MdM = Moksha-Mordvin  
 MHG = Middle High German  
 Mih = Mihkli  
 MLG = Middle Low German  
 MMg = Maarja-Magdaleena  
 MT = dialect text in manuscript in the archives of the Academic Society for the Mother Tongue in Tartu  
 Muh = Muhu  
 Mus = Mustjala  
 Mär = Märjamaa  
 MÜ = morphological survey of the Academic Society for the Mother Tongue, in manuscript  
 N = northern part (at the end of a county-name abbreviation)  
 NCr. = North Carelian  
 NE = (1) North Estonian dialects  
 (2) northern-eastern part (at the end of a county-name abbreviation)  
 NEE = North-East Estonian dialects  
 NEEC = NEE coast dialect  
 Nis = Nissi  
 NSE = northern part of the SE  
 NW = north-western part (at the end of county name)  
 NWE = North-West Estonian dialects  
 NWEC = NWE coast dialects

- Nõo = Nõo  
 OG = Old Germanic  
 OGr. = Old Greek  
 Ol. = Olonetsian  
 ON = Old Norse  
 Osty. = Ostyak  
 Ote = Otepää  
 Pai = Paide  
 Pal = Palamuse  
 PF = Proto-Finnic  
 Pha = Püha  
 Phl = Pühalepa  
 Pil = Pilstvere  
 PJg = Pärnu-Jaagupi  
 Plt = Põltsamaa  
 Plv = Põlva  
 Pst = Paistu  
 Puh = Puhja  
 Pä = Pärnumaa  
 Pär = Pärnu  
 Pöi = Pöide  
 Rak = Rakvere  
 Ran = Rannu  
 Rap = Rapla  
 Rei = Reigi  
 Rid = Ridala  
 Ris = Risti  
 Rum. = Rumanian  
 Russ. = Russian  
 Rõn = Rõngu  
 Rõu = Rõuge  
 Räp = Räpina  
 S = southern part (at the end of  
 of a county-name abbreviation)  
 (S) at the end of a place-name ab-  
 breviation means syntactic sur-  
 vey in the archives of the  
 Academic Society for the  
 Mother Tongue in Tartu, if no  
 other meaning is given for the  
 abbreviation as a whole  
 Sa = Saaremaa  
 Saa = Saarde  
 Sam. = Samoyed  
 San = Sangaste  
 Se = Setumaa  
 SE = (1) South Estonian dialects  
 (2) south-eastern part (at  
 the end of a county-  
 name abbreviation)  
 SEE = South-East Estonian  
 dialects  
 Sim = Simuna  
 SJn = Suure-Jaani  
 SNE = Southern NE  
 SOsty. = South-Ostyak  
 Sp. = Spanish  
 SVp. = South-Vepsian  
 Sw. = Swedish  
 SW = south-western part (at the  
 end of a county-name abbre-  
 viation)  
 SWE = South-West Estonian  
 dialects  
 SWF = South-West Finnish  
 dialects  
 Ta = Tartumaa  
 TMr = Tartu-Maarja  
 Tor = Tori  
 Trm = Torma  
 Trv = Tarvastu  
 Tõs = Tõstamaa  
 Tür = Türi  
 Urv = Urvaste  
 W = western part (at the end of  
 a county-name abbreviation)  
 (W) = at the end of a place-name  
 abbreviation refers to the so-  
 called Wiedemann Collection  
 (lexical records) in the archives  
 of the Academic Society for the  
 Mother Tongue in Tartu  
 Va = Valgamaa  
 Vai = Vaivara  
 Var = Varbla  
 Vas = Vastseliina  
 WE = West-Estonian dialects  
 Vi = Virumaa  
 ViC = the coastal dialect of  
 Virumaa  
 Vig = Vigala  
 Vil = Viljandi  
 VJg = Viru-Jaagupi  
 Vl = Viljandimaa



Vll = Valjala  
 VMr = Väike-Maarja  
 VNg = Viru-Nigula  
 Vog. = Vogul  
 Voty. = Votyak  
 Vp. = Vepsian  
 VpÄ = Äänis-Vepsian  
 WSE = western SE

Vt. = Votian  
 VtJ = Vt. dialect of Jõepära  
 WVt. = West Votian  
 Võ = Võrumaa  
 Võn = Võnnu  
 Vän = Vändra  
 Äks = Äksi  
 Zyr. = Zyrian

## 2.2. Sources of Linguistic Citations.

Abbreviations not to be found here and under 2.1. are to be sought under Literature Abbreviations. Citations from the FU languages, if no other source is given, are taken from the following works: F dialects — Kettunen SM II—III, Rapola SKÄ; Ing. — Porkka ID; IngR — Mägiste RMP; IngS — Sovijärvi SIM; Cr. and Ol. — Ojansuu KAÄ; Vp. — Tunkelo VKÄ, Kettunen ACUT B 2 : 2, 3 : 4; Ld. — Turunen MSFOu 89, 99; Lv. — Posti LL; Vt. — Kettunen VKÄ, Md. — Paa-sonen ML; Cher. — Beke CsNy; Osty. — Patkanow-Fuchs LFSO; Voty. — Emel'janov VGr; Hung. — Simonyi US, Horger MNy.

AmbL = MT 226 Saar V., Amb Lehtse. 1938.  
 AmbN = EKA 241 Dööring V., Ambla Nõmmküla murde häälikuloolisi erijooni. 1936.  
 Ann = EKA 2 Nurm E., Esimese silbi pikad vookalid Anna valla murdes. 1922.  
 AnnN = MT 25 Kruus A., Ann Nurmsi. 1926.  
 AnnNu = MT 129 Must G., Ann Nurmiku. 1933.  
 AnnO = MT 129 Ann Otiku.  
 AnnS = MT 25 Ann Sõmeru.  
 AnsH = MT 222 Kukk A., Ans Hindu. 1938.  
 AnsM = MT 222 Ans Metsalõuka.  
 AnsU = MT 222 Ans Uudispää.  
 AP = Agenda Parva.  
 Aud = AES 29 Bauer A., Aud HÜ 1930.  
 AudE = MT 187 Pöldre E., Aud Eassalu. 1937.  
 AudK = MT 187 Aud Kihelepa.  
 Avi = EKA 295 Aavik A., Häälikuloolisi, morfoloogilisi ja sõnavaralisi erijooni Avinurma murdes. 1933.  
 AviK = EKA 414 Aavik A., Murdetekste Avi Kõveriku. 1934.  
 AviM = EKA 414 Avi Mõisa.  
 AviMu = EKA 414 Avi Mustametsa.  
 AviP = EKA 414 Avi Peebussare.  
 Emm = AES 176 Palmeos P., Häälikuloolisi näiteid Emmastest. 1934.  
 — 163 Palmeos P., Morfoloogilisi näiteid nõne Emaste verbi kohta. 1934.

- Emm(A) = Emm from Ariste ACUT B 47 : 1.  
 EmmK = MT 161 Palmeos P., Emm Kuusiku. 1935.  
 EmmT = MT 161 Emm Tilga.  
 EmmV = MT 161 Emm Viiterna.  
 EmmVi = MT 134 Palmeos P., Emm Viiterna 1934.  
 HagA = MT 159 Sang A., Hag Adila. 1935.  
 HagK = AES 183 Laanes R., Hageri (Kohatu) verbi morfoloogiast. 1936.  
 HagKo = MT 169 Laanes R., Hag Kohatu.  
 HagL = MT 169 Hag Lohu.  
 HagM = EKA 362 Reisman H. (text from Hag Mäeküla).  
 HagS = MT 169 Hag Sipa.  
 HarK = MT 115 Tanning S., Har Koikküla. 1933.  
 HarKa = AES 35 Seim L., Har kaguosa vokalism. 1927.  
 HarLa = MT 115 Har Laanemetsa.  
 HarM = EKA 96 Paas E., Häälikulisi erijooni Hargla Mõniste murdest. 1930.  
 HarM(S) = MT 44 Seim L., Har Mõniste. 1927.  
 HarMõ = AES 36 Lõhmus S., Har Mõniste konsonantism.  
 HarMõn = AES 207 Niilus V., Mõniste-Hargla morfoloogilisi ja muid tähelepanekuid. 1937.  
 Hel = EKA 214 Sirk H., Hel vokalism. 1926.  
 HelH = MT 46 Müllerson L., Hel Hummuli. 1927.  
 HelJ = MT 176 Tanning S., Hel Jõgeveste. 1936.  
 HelK = MT 256 Tanning S., Hel Karjatnurme. 1938.  
 HelL = AES 154 Müllerson L., Morfoloogiline ülevaade (verb) Helme murde lõunaosast 1927.  
 MT 176 Hel Lõve.  
 HelL(K) = AES 37 Müllerson L., Konsonantism Helme khk. lõuna osas. 1927.  
 HelLo = MT 253 Tanning S., Hel Lõve. 1938.  
 HelP = MT 253 Hel Peebu.  
 HelPa = MT 46 Hel Patküla.  
 HelPo = MT 253 Hel Pori.  
 HelV = AES 132 Lillemägi K., Noomen. Helme Kärstna Vahekuru. 1932.  
 Hi(A) = Hi from Ariste ACUT B 47 : 1.  
 HJnH = MT 250 Must K., HJn Haljava. 1938.  
 HJnI = MT 250 HJn Igavere.  
 HJnP = MT 250 HJnP Perila.  
 HJnS = MT 250 HJn Silmsi.  
 Hlj = AES 30, 31 Klein K., Haljala rannamurde HÜ. 1926.  
 HljK = MT 260 Vebermann O., Ülestähendusi Haljala kihelkonna Karulast. 1938.  
 Hls = AES 34 Org I., Hls vokalism. 1931.  
 HlsA = MT 97 Tanning S., Hls (Abja alev). 1930.  
 HlsAb = MT 75 Soo-Puusepp M., Hls Abja. 1929.

- Hls(J) = Jakobsen H., Jooni Halliste murdest.
- Hls(K) = MT 14 Kask A., Hls 1925.  
EKA 48 Kask A., Klusiilide esindus Halliste murdes. 1926.
- HlsKu = MT 245 Tanning S., Hls Kulla. 1938.
- HlsM = MT 256 Tanning S., Hls Metsküla. 1939.
- HlsMe = MT 245 Hls Metsa.
- HlsP = MT 75 Hls Pornuse.
- HlsPo = MT 45 Raudsepp A., Hls (Pornuse). 1927.
- Hls(R) = AES 133 Raudsepp A., Hls MÜ.
- Hls(U) = AES 32 Univer A., Hls konsonantism. 1924.
- HlsUK = MT 75 Hls Uue-Kariste.
- HlsVK = MT 245 Hls Vana-Kariste.
- HlsVKA = EKA 225 Org. I., Murdetekste. Hls V.-Kariste. 1930.
- HlsVKV = MT 75 Hls Vana-Kariste vaestemaja.
- HMd = EKA 473 Randmäe M., Harju-Madise khk., Leetse, Pakri,  
Kersalu külade häälikulooline ülevaade.
- HMdK = EKA 94 Reisman H., Kuuldeline tekst Kirnalü külast  
Kloostri vallas H.-Madise khk. 1933.
- Hää = AES 39, 38 Soosaar S., Hää HÜ 1926.
- HääA = MT 65 Soosaar S., Hää (Alevi) 1929.
- HääAl = MT 43 Soosaar S., Hää Alevi. 1926.
- HääAr = MT 46 Hää Arumetsa.
- HääK = MT 80 Lepp L., Hää (Kabli) 1930.
- Hää(N) = AES 134 Soosaar S., Noomen Häädemeeste khk. Kolbergi,  
Laulaste, Urisaare, Tahku, Suur- ja Ojasoo külas. 1929.
- HääP = MT 43 Hää Piknurme.
- Hää(S) = Soosaar S., Kuuldeline tekst Hää Alevi külast. EK 1931 14-.
- Hää(V) = AES 139 Soosaar S., Hää MÜ. Verb. 1927.
- Iis = AES 136 Blum M., MÜ. Verb. 1927.  
— 137 Blum M., -nud partitsiip Iisaku kihelkonna murdes. 1927.
- IisI = EKA 322 Uustalu L., Häälikuloolisi ja sõnavaralisi erijooni  
Iisaku khk-s Imatu külas (idas). 1933.
- IisO = MT 193 Maalma L., Iis Oonurme. 1937.  
EKA 519 Maalma L., Häälikulisi erijooni Oonurme külas,  
Iisaku khk-s (läänes). 1938.
- IisT = MT 238 Koppel M., Iis Tudulinna.
- IisU = EKA 157 Juulmann H., Morfoloogilisi erijooni Uhe külast. 1939.
- JaaH = MT 281 Vinkel A., Jaa Hindu. 1940.
- JaaHa = MT 281 Jaa Haapu.
- JaaHi(J) = Jõgever J., Kuuldeline tekst Jaa Hindu külast. EK 1925  
132-.
- Jaa(J) = C 20 Jõgever J., Vokaalid Saaremaal (Jaa).
- JaaK = MT 281 Jaa Kavandi.
- JaaT = MT 281 Jaa Tagavere.
- Jaa(V) = Vahi S., Pikkade vokaalide diftongeerumise piirjoon Jaani  
ja Pöide kihelkondades Saaremaal.
- JMd = AES 49, 50 Klein H. — Kruus A., JMd HÜ. 1923—1926.

- JMdKa = MT 60 Soosaar M., JMd Kaalepi. 1928.  
 JMdKi = MT 25 JMd Kihnu.  
 JMd(M) = AES 138 Priideman, JMd MÜ. 1927.  
 JMdOrg = MT 49 Priideman, JMd (Albu Orgmetsa). 1927.  
 JMdSa = MT 60 JMd Saare.  
 JMdSo = MT JMd Soosalu.  
 Juu = AES 45 Mihkla K., Juuru vokalism. 1926.  
 JuuH = MT 23 Mihkla K., Juu Härkula. 1926.  
 JuuJu = AES 44 Juu Juuru v.  
 JuuK = EKA 309 Hammerman L., Murdejooni Kaiu vallast. 1929.  
 JuuK = MT 192 Tooms M., Juu Kerimetsa. 1927.  
 JuuKa = AES 44 Juu Kaiu.  
 JuuKu = AES 44 Juu Kuimetsa.  
 JuuS = Palmeos P., Kuuldeline tekst Juu Salutaguse külast. EK 1933 55–.  
 JuuT = MT 93 Palmeos P., Juu Kaiu Toomja. 1932.  
 JuuV = MT 192 Juu Vaopere.  
 JõeI = EKA Jõe Ihasalu.  
 JõeK = AES 59, 60 Pärt L., Jõe Kaaberneeme. 1922—26 (see KuuH).  
 JõeN = AES 59, 60 Jõe Neeme.  
 JõeRo = AES 59, 50 Jõe Rohuneeme.  
 JõeRa = AES 59, 60 Jõe Rammusaar.  
 Jõh = AES 46, 47 Blum M., Jõh HÜ. 1929.  
 JõhP = MT 173 Maalman L., Jõh Pühajõe. 1936.  
 Jäm = AES 48 Kurgvel, Jäm HÜ. 1923.  
 JämH = MT 204 Kukk A., Jäm Hänga 1937.  
           MT 221 — — — 1938.  
 JämJ = MT 221 Jäm Jämaja.  
           MT 204 — — —  
 Jäm(K) = EKA 39 Kaljo T., Mitmuse partitiiv Jämaja kihelkonnas 1925.  
           EKA 56 Kaljo T., Häälikumuutuste levinemine Jämaja ja  
           Anseküla kihelkonnas.  
 Jäm(P) = EKA 441 Peters O., Esimese silbi vokalism Jämaja murdes.  
           1926.  
 JürS = MT 204 Must K., Jür Selimäe. 1938.  
 KadL = EKA 129 Bachman H., Lõuna-Karksi murde konsonantism.  
           1927.  
 KadP = EKA 450 Sõster Joh., Kadrina-Ilumäe kihelkonna (Kadrina  
           põhjaosa) murrete häälikulooline ülevaade. 1935.  
 KadPa = MT 244 Vebermann O., Kad Palamuse. 1938.  
 KadT = EKA 238 Tammar E., Murdelisi erinevusi Kadrina kihelkonna  
           loodeosa vokalismis (Tõdva-Kõnnu). 1929.  
 KamK = MT 130 Tamm A., Kam Kärevere. 1934.  
 KamR = EKA 196 Palk P., Häälikulisi murdejooni Kambja valla  
           lõunaosast (Raavitsa). 1932.  
 KamRe = EKA 374 Kukas L., Murdetekste (Kambja Reola). 1935.  
 KamReo = EKA 266 Sõster O., Kambja (V.-Kuuste Reola) mur-  
           desugemeid. 1935.

- KamR(S) = EKA 364 Sang A., Reola murdetekste. 1935.  
 KamU = MT 130 Kam Uniküla.  
 KamVK = EKA 365 Hagar H., Kambja (Vana-Kuuste) morfoloogiast. 1935.  
 Kan = MT 210 Keem H., Kan 1937.  
 KanK = AES 166 Kooraste pöördtüüpe. 1931.  
 Kas(A) = Kas from Ariste ACUT B 47:1.  
 KeiH = EKA 313 Palisoo M. H., Murdejooni Keila kihelkonna idast (Harku). 1929.  
 KeiJ = MT 158 Sang A., Kei Ilmandu. 1935.  
 KeiK = EKA 464 Reisman H., Keila murde erijooni. 1937.  
 KeiKl = EKA 464 Kei Klooga.  
 KeiKrkj = EKA 464 Kei Karja.  
 KeiN = MT 158 Kei Nahkjala.  
 KeiR = MT 158 Kei Ranna.  
 KeiS = MT 158 Kei Sassi.  
 Khk = EKA 89 Peters O., Kaasusmorfeemid Kihelkonna murdes. 1927.  
 KhkKo = Toomss M., Kuuldeline tekst Khk Koimla külast. EK 1927 219–.  
 KhkT = MT 261 Kukk A., Khk Tagamõisa. 1939.  
 Khk(T) = AES 55, 56, 58 Tooms M., Khk HÜ 1926.  
 Khn = AES 131 Kask A., Noomeni ja verbi morfoloogiline ülevaade Kihnus. 1927.  
 Khn(AS) = EKA 3 Saarberk A., Häälikajalooline uurimus Kihnu murdest. Konsonandid. 1920.  
 Khn(EK) = Kask A., Khn fonograafiline tekst. EK 1926 122–.  
 Khn(K) = MT 28 Kask A., Khn. 1926.  
 Khn(Ka) = MT 105b Kask A., 1926.  
 Khn(TS) = AES 159 Saar T., Ülevaade kihnu murdest. 1934.  
 KJn = MT 163 Must K., KJn 1935.  
 KJnL = EKA 6 Anni A., KJn (Leie).  
 KJnLa = MT 30 Kinger E., KJn Lalsi. 1926.  
 KJnLe(A) = MT 104 Anni A., KJn Leie (phonograph record).  
 KJnL(M) = MT 171 Must K., KJn (Lalsi).  
 KJnLä(A) = MT 104 KJn Lätkalu.  
 KJnO(A) = MT 104 KJnO Odiste.  
 KJnOt(A) = MT 104 KJn Otiküla.  
 KJnP = EKA 321 Käosaar J., Häälikuloolisi, morfoloogilisi ja sõnavaralisi erijooni Kolga-Jaani kihelkonna põhja osast.  
 KodA = MT 284 Univere A., Kod Assikvere. 1940.  
 KodAs = MT 234 Univere A., Kod Assikvere.  
 KodAss = MT 206 Univere A., Kod Assikvere.  
 Kod(K) = Kettunen K.  
 KodL = MT 206 Lümati.  
 Kod(KV) = Kettunen KV.  
 KodRa = MT 283 Kod Raatvere.

- KodS = MT 282 Tanning S., Kod Sassukvere. 1940.  
 KodSa = MT 283 Tanning S., Kod Sassukvere.  
 KodSä = MT 283 Kod Sääritsa.  
 KodT = MT 88 Tamm. A., Kod (Tossumetsa Ranna).  
 KodTo = Tamm A., Kuuldeline tekst Kod Tossumetsa külast. EK  
 1933 96-.  
 Koe = EKA 333 Riisberg A., Koeru murde lahkuminekuid kirjakeelest.  
 Koe(P) = AES 15 Priidemann M., Mõned süntaktilised vahekorrad  
 (Koerus).  
 KoeR = MT 194 Toona R., Koe Rõhu.  
 Koe(Ü) = AES 195 Üksikuid häälikumuutusi Koeru khk. põhja, kagu  
 ja ida osas.  
 KosA = MT 116 Must G., Kos Aardu. 1933.  
 KosK = MT 116 Kos Kiruvere.  
 KosN = MT 116 Kos Nõmme.  
 KosP = MT 116 Kos Paunküla.  
 KraK = Kallas O., Kraasna maarahvas. Helsingis 1903 (Suomi 4:10:1).  
 KraO = MT 224 Kraasna murdetekste ja muid märkmeid. Kopeeritud  
 H. Ojasuu 1911. või 1912. a. reisu ülestähendustest.  
 Krj = C 20 Jõgever J., Vokaalid Saaremaal (Krj Leisi).  
 KrjT = MT 148 Kindlam M., Krj 1935.  
 Krk = AES 208 Natuke Karksi keelemurdest.  
 KrkA = MT 245 Tanning S., Krk Ainja. 1938.  
 KrkAi = MT 200 Tanning S., Krk Ainja vanadekodu. 1937.  
 KrkK = MT 258 Tanning S., Krk (Karksi vald).  
 KrkKa = MT 254 Krk Karu.  
 KrkP = MT 200 Krk Polli.  
 Krk(T) = MT 239 Tõrvand P., Krk Karksi v. 1938.  
 Krl = AES 52 Sirk, H., Karula vokalism. 1926.  
 Krl (E 361) = EKA 361 Koemets E., Murdepiir Karula ja Hargla  
 vahel ning Karula Ähejärve murde erinevusi naabrusest. 1935.  
 KrlK = AES 135 Jaska E., Krl (Karula vald).  
 KrlKi = MT 26 Sirk H., Krl (Kirikumõisa).  
 KrlKä = AES 51 Jaska E., Krl (Käärikmäe). 1927.  
 KrlKä(J) = 50 Jaska E., Krl Käärikmäe. 1927.  
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### 3. Other Abbreviations.

ab. = abessive  
abl. = ablative  
ad. = adessive  
all. = allative  
com. = comitative  
cond. = conditional  
dial. = in (some) dialects  
el. = elative  
ess. = essive  
g. = genitive  
gen. = genitive  
ill. = illative  
in. = inessive  
ind. = indicative

inf. = infinitive  
MS = manuscript  
n. = nominative  
nom. = nominative  
p. = (1) partitive  
(2) person  
part. = (1) partitive  
(2) participle  
pass. = passive  
pl. = plural  
pr. = present tense  
sg. = singular  
spor. = sporadically  
tr. = translative







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