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Jost Gippert, Frankfurt 2011

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Towards An Electronic Analysis of Svan Dialectal Divergences

- 1. In comparison with the other Kartvelian languages, the most striking feature of Svan consists not in the abundance of formal categories characteristic for its verbal paradigms, but in the diversity of its dialects which has to be considered as the result of a long-lasting historical process of disintegration of a formerly homogeneous proto-language. Although we are still far from being able to establish the features of Proto-Svan in all details, we dispose of a large set of historical developments that can be held responsible for the divergences met with in today's dialects, viz. processes such as apocopy, syncopy, vowel assimilations ("umlaut"), consonant assimilations, and metatheses, the conditions and effects of which were studied in detail by A. ŠANIZE, V. TOPURIA, M. KALDANI, A. ONIANI and other scholars.
- 1.1. A few examples from verbal morphology may suffice to show in which way the processes in question took effect in the development of the four main dialects of Svan¹:

Meaning	UBal.	LBal.	Lšx.	Lenţ.	Proto-Svan	Process(es)
he began	änbine	änbine	enbine	änbine	*an-i-bin-e-	Ü, S
he prepared us	ogwmāre	ogmare	ogmāre	agwamare	*an-gw-a-mār-e-	(U,) L, S
I annoyed him	otorm	otorm	otərm	aturm	*ad-x=w=o-rm-	(U,) C, A
I burnt myself	ätwšixän	otšixen	otšixen	ätwšixen	*ad-xw-i-šixen-	Ü/U, C, S, A
he is going	esġri	esġri	esġri	asxri	*es-ġər-i-	S, (C, Ä)
we are going	elġrid	elġrid	elġrid	alsxrid	*es-l-ġər-i-d-	S, L/M, (Ä)

- 1.2. Considering the diversity thus illustrated, two questions arise immediately, viz. to what extent can the relationship between the present dialects be regarded as regular, and how can the divergences be accounted for in a historical perspective both with respect to the relative chronology of the changes that are involved in the emergence of the individual Svan dialects² and with respect to the relationship of Svan with the other Kartvelian languages?
- 2. The "shewa" phoneme ∂ (2), which appears in all Svan dialects, is a good example to illustrate the problems indicated above.
- 2.1. It is well known that for the Svan ϑ vowel, several historical sources have to be assumed, which may still manifest themselves in innerparadigmatic alternations with other vowels. Such an alternation is, e.g., met with in the case of the Svan verb meaning "to look, check, regard, consider", the infinitive (masdar) of which is given as $lisin\check{\jmath}\ddot{a}wi$ besides

¹ In this treatise, the following dialects will be considered: Upper Svan: Upper Bal (UBal.), Lower Bal (LBal.); Lower Svan: Lāšx (Lšx.), Lenṭex (Lenṭ.); the question whether it is necessary to presume a fifth dialect is open to discussion. Symbols used for historical processes: Ü = palatal umlaut, U = labial umlaut, Ä = "back umlaut", S = syncopy, A = apocopy; M = consonant metathesis, C = consonant assimilation, L = consonant loss. — Unless otherwise indicated, the following examples are taken from V. TOPURIA's treatment of the Svan verb (Svanuri ena, I: Zmna; = Šromebi, I, Tbilisi 1967; herafter: VT).

² For a first attempt to elucidate the relative chronology of the changes involved, cf. B.G. HEWITT, Bedi Kartlisa 40, 1982, 330 sqq.

lisən ğäwi for UBal.³. In the prose texts of this dialect published in the 1978 chrestomathy⁴, we find the finite form čvadsinžwi "he looks down" (83,16) and the derivative lasənžäwte "to the look-out" (169,24) side by side, the former showing -i- instead of -a-. In the LBal. texts of the same collection, only forms with -\partial- are met with, viz. ats\rightarrow n\frac{z}{awex} "they looked at it" (233,13), asənǯäwi "he is looking" (225,13), and lasənǯäwid "to the look-out" (203,7). In the Lent. texts of SC, however, only forms with -i- seem to occur; cf. atasin jäwi "he is looking at it" (295,37), adasin žavex "they looked" (311,33), and läsin žäwid "to the look-out" (336,9). Yet another picture is provided by the Lāšx dialect where a long $\bar{\iota}$ appears in all forms; cp. čuv otsīnžaw / č'otsīnžaw "I looked down at it" (252,32/33; similarly otsīnžaw 256,21; 23; 262,22), lamsīnžwe "he looked at me" (254,17), laxsīnžwe "he looked at them" (288,21; 289,34), loxsīnǯaw "I looked at it" (255,37; 256,6) čvadsīnǯwe "he looked down" (258,9), ču .. ogsīnžwix " they are looking at us" (260,43), and lasīnžawte "to the look-out" (252,33). 2.1.1. Considering the presumable prehistory of the word-forms in question, we first have to state that Svan -si/ən xav- must be a borrowing of the Georgian verb (ga-, da-, mo-)sin xa "to check, to control, to try"⁵, which was borrowed from Persian san j-īdan, sin j-īdan "to weigh, to consider" itself⁶. To be more precise, the source of the Svan verb must have been the Georgian present stem, -sinž-av-, since -av- is a present stem suffix of Georgian only. Within Svan, this suffix was reinterpreted as an integral part of a pseudo-root -sin žav- and was thus extended to the whole paradigm; furthermore, the verb received the neutral version vowel, -a-, which is usual with secondary (derived or borrowed) verbs in Svan. A similar case is the Svan pseudo-root -xataw- ("to paint, draw") which reflects the Georgian present stem -xat-av-7.

2.1.2. On this basis we may propose that the vowel alternation of UBal. might be a secondary effect of syncopy. Let us first consider the finite form, $\check{c}v$ -adsin $\check{g}wi$, in which syncopy affected the two "even" syllables of the underlying form, i.e., the syllable represented by the version vowel and the second "root" syllable, $-\check{g}av$ -, while the first "root" syllable (being in an "odd" position) remained unaltered ($< *\check{c}u + ad$ - \underline{a} - $sin\check{g}\underline{a}w$ -i- 8). In contrast to this, we should expect syncopy to have affected the first "root syllable" in the derivative, $las \partial n\check{g}\ddot{a}w$ -te (< *la- $sin\check{g}aw$ -i-te), as well as the masdar form, $lis \partial n\check{g}\ddot{a}wi$ (< *li- $sin\check{g}aw$ -i-). The ∂ vowel we do find in this position might then be due to a process of resyllabification, the expected forms, $^{\dagger}la$ - $sn\check{g}\ddot{a}w$ - and $^{\dagger}li$ - $sn\check{g}\ddot{a}w$ -i, implying a phonotactically impossible consonant cluster, $-sn\check{g}$ -. The shewa vowel must in this case be regarded as anaptyctical, not as the immediate reflex of a reduction -i- $> -\partial$ -; the condition of its appearance must have been the given

³ Thus according to the Svan-English Dictionary, compiled by Ch. Gudjedjiani and L. PALMAITIS, edited, with a Preface and Index by B.G. HEWITT, Delmar / N.Y. 1985 (hereafter: GP), 167 / 169; the meaning "to taste smth." given there hardly agrees with the use of the word in the text passages quoted below. The UBal. word list compiled by M. ZAVADSKIJ in cooperation with Iv. NIŽARA3E (in: SMOMPK 10/1, 1890, LII-LXXIV; herafter: MZ) contains but the form <code>lisənǯavi</code> (лісунџаві), with the meaning "посмотрѣть, узнать" (LXIV). In the glossary which accompanies the Svan tales published in SMOMPK 10/2 (196-241; hereafter: ING), Iv. NIŽARA3E mentions <code>lisənǯavi</code> (лісунџаві) as the infinitive of <code>loxvsinǯav</code> (лохвсінџав) with the meaning "я посмотрѣть". In the same author's Russian-Svan dictionary (Russko-svanskij slovar', in: SMOMPK 41, 1919; herafter: INR), the infinitive form <code>lisənǯavi</code> is given as an equivalent of "попробовать".

⁴ Svanuri enis krestomatia. Ţekstebi šeķribes A. ŠANIZEM, M. KALDANMA da Z. ČUMBURIZEM A. ŠANIZISA da M. KALDANis redakciit, Tbilisi 1978 (Zveli kartuli enis ķatedris šromebi, 21); hereafter: SC.

[్] Cf. V. TOPURIA, IKE 1, 1946, 84: "სინჯვა — ლი-სგნჯაუ-ი 'დახედვა'". Note that gasinžva was first given as the equivalent of lisənҳavi (and попробовать) in Nižaraҳɛ's dictionary (INR, 323).

⁶ Cf. Iust. ABULAZE's glossary provided for the 2nd vol. of the edition of the Georgian derivatives of Firdowsī's Šāhnāme (Abu-l Qasim Pirdowsi, Šahname, kartuli versiebi, t. 2, Ṭpilisi 1934, 565-636), s.v. *sinǯva* (614).

⁷ This and other examples were dealt with by V. TOPURIA (VT, 72).

⁸ Here and in the following examples, vowels in syncopy position are underlined. — It must be kept in mind that the four separable (or secondary) preverbs, $\check{c}u$ - "down", $\check{z}i$ - "up", sga- "in(to)", and ka- "out, away" do not count when the syncopy rule has to be applied; this means that they were not integrated in the verbal body at the time when the process of syncopy emerged.

constellation of consonants which emerged by syncopy, with a nasal standing between (at least) two other consonants. By extending it to liquids⁹, this rule can be held responsible for all the cases of "reduction of $(u \rightarrow) i$ and a) in words of two and more syllables" as compiled by V. TOPURIA¹⁰, viz. UBal. $l\ddot{a}$ - $mar\check{c}il$ (vs. $mer\check{c}$), li- \check{s} -ald- $\ddot{a}ni$ (vs. \check{s} -ald), li- \check{c} -ang-ald (vs. \check{c} ang), li-ang-ald (vs. ang). In all these cases, ang-

- 2.1.3. The rule of "shewa anaptyxis" thus established seems to be restricted to UBal., however. We need not discuss the Lent. case here because in this dialect, syncopy never applied so that -sinž- remained unaltered in all environments; cf. esp. läsinžäwid "to the look-out" < *la-sinžaw-i-d (SC 336,9). As against this, Lšx. -sīnž- and LBal. -sənž- require different explanations. As to the Lāšx case, it seems as if the long vowel was here introduced just to avoid the effects of syncopy, given the rule that long vowels were not affectable by any type of reduction. In the present example, this might well have been due to a steady influence of Georgian, i.e., -sīnǯaw- was continuously "restituted" by Georgian -sinǯav-. The case of LBal. is more difficult to account for. If it is true that in this dialect, the first "root" vowel is ∂ both in "syncopated" position ($as\partial n\check{z}\ddot{a}wi < *a-s\underline{i}n\check{z}aw-i-$, $las\partial n\check{z}\ddot{a}wid < *la-s\underline{i}n\check{z}aw-i$ *i-d*) and in "unsyncopated" position $(ats \ni n \check{a}wex < *ad-x = \underline{a}-sin \check{a}\underline{a}w-e-x)^{11}$, we might propose that in LBal., a secondary levelling might have taken place after the effects of syncopy and anaptyxis had applied in the same way as in UBal. In other words, we might assume that after the emergence of -2- in "syncopated" position, this spread analogically to those forms where -i- should have survived. We could then suppose a reverse analogy to be responsible for the unexpected infinitive form of UBal., lisinžäwi, as against "regular" lisənžäwi.
- 2.1.4. All this would presuppose that the two Upper Svan dialects once shared the anaptyxis rule as a common feature. Unfortunately, the archaic texts of folk poetry as collected in Svanuri Poezia¹² do not give any hints as to this question because here, only forms with -i-unsyncopated in "odd" position are found, viz. ansinžwe "she looked out" (SP 57:46) < *an-a-sinžaw-e-, loxvsinžäw "I looked" (32:29 a.o.) < *la-xv-a-sinžaw-e, lamsinžäw "look at me!" (41b:47) < *la-m=a-sinžaw-e, and also laxasinžwe "he looked" (41b:41) < *la-x=a-sinžaw-e- as a hybrid form where the second syllable vowel (i.e. the version vowel, -a-) was not syncopated while the fourth syllable vowel (-a- in -žav-) was.
- 2.2. A different case is provided by the Svan verb meaning "to lock, to close". This verb is also well attested in the poetic texts where we find the present forms *micġanali / micġanā-lix* "he / they close (them) for me" (SP 54b:17 / 54a:45; 54b:35) and *xocġanālix / xocġanalix* "they close (them) for him" (61:49; 52:10; 63:74) as well as the participle *ləcġane* "closed" (62b:6) and the derivative noun *lacġāns* (dat.) "on the bolt" (41b:31). By contrasting the 3rd sg. perfect *otcəġnala* "he is said to have closed" which appears in the proverb *kor mekvšango ġorar otcəġnala* "after the house is broken, somebody must have slammed the door" well as the proverb *kor mekvšango ġorar otcəġnala* "after the house is broken, somebody must have slammed the door" the said to have closed" which appears in the proverb *kor mekvšango ġorar otcəġnala* "after the house is broken, somebody must have slammed the door" the said to have closed the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door the said to have closed the said to have slammed the door" the said to have closed the said to have slammed the door the said to have closed the said to have slammed the door the said to have closed the said to have slammed the said to have s

⁹ Note that exactly the same kind of anaptyxis refilling syllables lost by syncopy must have occurred in Old Irish; cf. R. Thurneysen, A Grammar of Old Irish, Dublin ²1946, 70, § 112 with examples such as *immainse* "bound" < **immnse* < **immnse* < **immnse* < **imm-nasse* etc.

¹⁰ IKE 1, 1946, 84-85.

¹¹ To the examples given above, we may add *asənǯävida* "he used to look" (impf.) < **a-sinǯav-i-da* and *laysənǯavex* "they looked" (aor.) < **la-a-sinǯav-e-x* from the collection Svanuri prozauli tekstebi II: Balszemouri kilo, tekstebi šekribes A. DAVITIANma, V. TOPURIAM da M. KALDANma, Tbilisi 1957 (hereafter: SPT 2), 65, 3 / 13.

¹² Svanuri Poezia, I, simģerebi šeķribes da kartulad targmnes A. ŠANIZEM, V. TOPURIAM, M. GUŽEŽIANMA, Tbilisi 1939 (hereafter: SP).

¹³ Thus according to V. Nižaraʒe's collection edited in SMOMPK X/2, 1 (no. 3: Қор меквшанго, qopap отцуqнала); a slightly different version was published by the same author (under his pseudonym, Tavisupali Svani) in Zveli Sakartvelo 2/2, 1913, 98 (no. 6): kora meķvšanģo, ġorar eser erees otcəġnala.

arrive at a basic root structure $-c\partial\dot{q}an$ - the two vowels of which were alternately affectable by syncopy, cp. $xoc\dot{q}an\ddot{a}lix < *x=o-c\underline{\partial}\dot{q}an-\ddot{a}l-i-x$ - and $otc\partial\dot{q}nala < *ad-x=\underline{o}-c\partial\dot{q}\underline{a}n-\bar{a}l-a$ -. The same analysis is possible for the impf. $xoc\dot{q}an\ddot{a}ldax$ "they used to close" (< $*x=o-c\underline{\partial}\dot{q}an-\ddot{a}l-\underline{i}-da-x$ -) and the simple derivative $lac\dot{q}anre$ "of the bolts" (< $*la-c\underline{\partial}\dot{q}an-\underline{a}r-e$ -), appearing in UBal. prose texts (SC 30,15; 110,35) alongside $lalc\partial\dot{q}n\ddot{a}ls$ (dat.) "the bolt" and the present form $\check{g}ilc\partial\dot{q}n\ddot{a}li$ "he holds closed for you" (SC 110,35 / SC 56,13) which are secondary derivations from an underlying deverbal noun, $*la-c\partial\dot{q}an-\bar{a}l-i$ - ($*la-l\underline{a}=c\partial\dot{q}\underline{a}n-\bar{a}l-i$ --i-s-, with a "double" noun prefix, and $< *\check{g}=i-l\underline{a}=c\partial\dot{q}\underline{a}n-\bar{a}l-i$).

2.2.1. On the basis of this evidence, there is good reason to distrust the masdar forms *licqəne* (ліцqvне) and *licqənä/ali* (ліцqvна/алі) appearing in older glossaries ("MZ" = SMOMPK X/1, LXV and "ING"= X/2,8, s.v. *xocq̇analix*) with the meaning "запереть", for they cannot be motivated by reference to the normal rules of syncopy. We should expect **licq̇ane* and **licq̇anāli* instead, < **li-cəq̇an-e-* and **li-cəq̇an-āl-i-*. As the verb in question seems not to be mentioned in later dictionaries, it remains unclear whether the given masdar forms are at all reliable.

2.2.2. If we are right, then, to posit $-c\partial \dot{q}an$ - as the basic form of the root, the question arises how to account for its -a-. As it cannot be anaptyctic in the given constellation 14, we are left with a two syllable root which must be regarded as secondary. And indeed, we can identify the -an-element contained in this "root" with the causative marker which is represented, e.g., in Old Georgian -3guan- "to send" as a derivative of -3gu- "to go ahead, proceed"; the Svan equivalent of this is the root *-žegw-15 (thus in xožegw, "he goes ahead, leads", SP 52:19; the later pronunciation 16 is -zog(w) as in xozog 61:45) with its derivative *-zegwan- (cp. the forms xozgwane "he sends", $< *x=o-\underline{z}egw-an-e-$, and otzogwane "he sent", < *ad-x=o-e- $\check{z}e\dot{g}w-\bar{a}n-e)^{17}$. But what, then, is the basic root contained in $-c\partial\dot{q}-an-?$ As a root $\dot{}^{\dagger}-c\partial\dot{q}-$ seems not to exist as such in Svan, we may propose to take this as a variant of the root -ciqmeaning "to be stuck, fixed" 18; cp., e.g., the Lāšx sentence berži ket lok xacią i ečeži ču lok $x\bar{a}b$ amiran¹⁹ "a copper bolt is said to be fixed (there) and with this Amiran is said to be bound", where xaci\(\hat{q}\) is used in connection with ket "bolt" (< Georg. ketva "locking"?), thus indicating how the causative $-c\partial\dot{q}$ -an- could have received its meaning. If this analysis is right, we have to deal with a vowel alternation of -i- vs. -a- again, but as was stated above, this cannot be due to anaptyxis as in the case of -sin \(\)\(aw \)-. It seems not probable either to assume original ablaut here, for there is no indication of ablaut in any other form of the root $-ci\dot{q}^{-20}$. It is therefore necessary to look for a different source of the $-\partial$ - in $-c\partial\dot{q}an$ -. This might be found in the constellation of vowels in the given two-syllable "root": If the causative was originally derived from -ciq- as *-ciqan-, the substitution of -i- by -\pa- might have been caused by the -a- of the following syllable.

¹⁴ Note that -cq- cannot represent a primary consonant cluster.

¹⁵ Cf., e.g., G.A. KLIMOV, Etimologičeskij slovar' kartvel'skix jazykov, Moskva 1964, 240-241 s.vv. $g_1 \gamma w$ - and $g_1 \gamma w$ -an-, and H. FÄHNRICH (PENRIXI) / Z. SARŽVELAZE, Kartvelur enata etimologiuri leksikoni, Tbilisi 1990, 432 s.v. * $d_1 g_2 \hat{g}_1$ -/ $d_1 g_2 \hat{g}_1$ -.

¹⁶ From the archaic form $xo\check{z}e\check{g}w$, it is clear that -o- in - $\check{z}o\check{g}w$ - is due to a secondary umlaut process, not to a special ablaut formation (cf. KLIMOV, l.c.: "огласовка").

 $^{^{17}}$ Cf. T. Gamqrelize / G. Mačavariani, Sonanta sistema da ablauti kartvelur enebši, Tbilisi 1965, 250 n. 3.

¹⁸ KLIMOV, o.c., 224 identifies this with Megr. cik- and Laz. cig- meaning "to push into".

¹⁹ Svanuri prozauli tekstebi IV: Lašxuri ķilo, tekstebi šeķribes Arsena ONIANma, Maksime KALDANma da Aleksandre ONIANma, redakcia gauketes Maksime KALDANma da Aleksandre ONIANma, Tbilisi 1979 (hereafter: SPT 4), 46,4. The same content is reported in the Lāšx text no. 279 of SC where the form *xociq* is used (257,17).

 $^{^{20}}$ KLIMOV's proposal to see a zero grade in the Svan infinitive form li- $c\dot{q}$ -e ("в сван. форем налицо чередование ступеней огласовки") is misleading; instead we have to assume syncopy (<*li- $ci\dot{q}$ -e-) as in the aor. form $xoc\dot{q}e$ (SC 257,21; <*x=o- $ci\dot{q}$ -e-).

2.3. There are indeed many other words which show that the assumption of a substitution of -i- by -a- caused by a following -a- is justified. One of these is the adjective meaning "red" which appears as corni (nom.sg.) in the Upper Svan dialects (UBal., e.g., SC 43,25; LBal., 187,6) and Lāšx (247,35). While c∂rni is also the form met with in the archaic poetic texts (e.g., SP 32:15; adv. cernid 6:13 a.o.), the fourth Svan dialect, Lentex, which is peculiar by not showing the effects of syncopy, proves that the bisyllabic form emerged from an original trisyllabic one: here we find the unsyncopated nom.sg. cəräni (SC 290,13 a.o.). The assumption that the underlying form contained an a vowel in its middle syllable (*cərani-) is further supported by various derivatives of the word appearing in other dialects; cf., e.g., the adjective məcran "reddish" (UBal.: SC 135,29; Lšx.: 267,38), < *mə-cəran-a, or the many forms of the UBal. verb "to become / make red" such as the presents ču icränix "they become red" (SC 134,36; < *ču + i-coran-i-x-) and ču xecrani "it becomes red to him", $(142,20; < *\check{c}u + x = e - \check{c}\underline{a}ran - i -)$, the imperfects $\check{c}vacr\ddot{a}nda$ "he used to make red" (138,1, < e) $*\check{c} + a-c\underline{\partial}ran-\underline{i}-d-a-$) and $xecran\bar{o}lda$ "he used to become red" (145,10, $< *x=e-c\underline{\partial}ran-\bar{o}l-d-a-$), the aorist $\check{c}u$ $xocr\ddot{a}n(e)$ "it made him sth. red" (156,21, $<*\check{c}u + x = o-c\underline{\partial}ran-e-$) or the parti--a-) "having become red". Of course, forms showing syncopation of the -a- vowel occur as well in the paradigm of this verb; cp. čvalcərnēli "is said to have become red" (< *ču + ad $l\underline{\partial}$ -cər \underline{a} n- \overline{e} -l=i, SPT 1,2,13) or $\check{z}i$ $l\ddot{a}$ mcərne "he made red for me" ($<*\check{z}i+la-m=\underline{i}$ -cər \underline{a} n-e-, SP 102a:71).

2.3.1. *cərani can thus be established with certainty as the underlying form of cərni. At the same time, it enables us to trace cognates of the word outside Svan. It has for long been proposed that Svan. cərni might be historically identical with the Armenian adjective meaning "purple red", cirani²². This identification is now strongly supported by the fact that the Svan word must once have had a third vowel, -a-, in its middle. Although the etymology of Armenian cirani is far from being clear itself, it is hardly possible that it might have been borrowed from some kind of Proto-Svan; the opposite case, however, may well be true, all the more since this would easily explain the peculiar structure of the Svan word²³. In this connection it may be interesting to note that a homophonous word ciran-i is attested for Georgian as well, as the name of a "sort of apricot"²⁴; this may as well be a borrowing from Armenian, but of the noun ciran denoting prunus armeniaca rather than the adjective cirani. 2.3.2. By deducing Svan. *cərani- from an older *cirani-, we may indeed take this word as another example of the rule proposed above, according to which the shewa vowel must have

²¹ Svanuri prozauli ţeksţebi, I: Balszemouri kilo, ţeksţebi šekribes A. ŠANIZEM da V. TOPURIAM, Tbilisi 1939 (hereafter: PUB).

²² Cf. N.Ja. MARR, IAN 6/9, 1915, 778-779; Hr. AČARYAN, Hayeren armatakan bararan, B, Erevan ²1973, 460; K.H. SCHMIDT, Studien zur Rekonstruktion des Lautsystems der südkaukasischen Grundsprache, Wiesbaden 1962, 38. It is by no means certain that the meaning 'Purpur' given here is primary as against the adjectival usage. And as the nom.sg. form of the word ends in -i in all Svan dialects, SCHMIDT was not justified to posit "cəran" as its basic form; cf. also case forms such as the dat.sg. cərnis (UBal.: SC 44,7; LBal.: 213,35) or the dat.pl. cərniärs (UBal.: SC 44,31). A stem cəran- can only be assumed as the basis of derivatives (cf. the examples given above).

²³ As to the word-final non-apocopated -*i* cf. E. OSIZE, IKEÇ 9, 1982, 47 according to whom this is frequently met with in adjectives. In the present case, however, it might be an immediate reflex of the word-final -*i* of the Armenian word, all the more since this bears the accent. — A root etymology connecting Svan *cərni*- with Georgian *citel-i* "red" and other Caucasian words meaning "fire" or "blood" or the like such as Avar. *c̄ar*, Axvax. *c̄ari*, Chechen. *ce* or, within Kartvelian, Georgian *cida* "menstrual blood", as proposed by N. ARDOŢELI on the occasion of the present paper during the Kutaisi conference, has nothing in its favour if the structure of the Svan word is considered.

²⁴ Cf. D. Čubinašvilli, Kartul-rusuli leksikoni, Sanktpeterburg 1887 / Tbilisi 1984, 1687 who refers to დარანდო as to its meaning. Ačaryan (l.c.) proposed that Georg. *ciran-i* might be homonymous (and historically identical with) *čeram-i*, a more usual name of the apricot *armeniaca vulgaris* or *prunus vulgaris*; this identification is also suggested by Sulxan-Saba Orbeliani who referred to დარანდო for *čeram-i* in his dictionary (Txzulebani, t. IV/2, Tbilisi 1966, 399).

replaced a former -i- in the position before a following -a-. Additionally, it makes it possible to determine the position of the rule within the relative chronology of the vocalic changes of Svan. Given that the -a- occurs in all varieties of Svan, it must have been a feature of the Svan protolanguage rather than the individual dialects; in this respect, it is diametrically opposed to most of the other vocalic changes, especially the various types of palatal "umlaut". The rule has a striking resemblance, however, with the so-called "back umlaut" of $-e->-\ddot{a}-$ (> -a-) caused by a following -a- as established by M. KALDANI²⁵, and it was in fact envisaged in this sense by E. OSIZE in an article about the Svan auslaut²⁶. Astonishingly enough, the possibility of establishing a rule $-i - > -\partial - / -a$ - seems to have escaped KALDANI's notice although he had to deal with alternances of the type i/a as appearing in words like šdik "tooth" with dat. šdək or čišx "foot" with dat. čəšx. While KALDANI himself attributed the emergence of shewa in these forms to the influence of a former word-final -w, he also considered G. Mačavariani's proposal²⁷ to regard ∂ as primary here, i being a variant caused by palatal umlaut (according to a proportion pl. qanär : qän "ox" ≈ pl. šdəkär : šdik). It goes without saying that these explanations are mutually contradictory, at least for parts of the material involved, and that further investigation is necessary before the "back umlaut" process $i > \partial / a$ can be taken for granted. Let me discuss just one more example which is crucial in this respect.

- 2.4. As was noted above, the Svan word meaning "foot" belongs to the nouns that show the alternation of i and o in their stem. Different from the cases discussed so far, the forms met with in the published texts give a rather chaotical impression.
- 2.4.1. In UBal., e.g., we find -i- in the nom.sg čišx (SPT 1, 67,1 a.o.), the dat.sg. čišxs (62,9), the gen. čišxi (SC 33,10 a.o.), and the erg. čišxd (92,25), while ə is met with in the instr.sg. čəšxšw (SC 120,12 a.o.), the postpositional dat. (?) čəšx-žīn (SC 57,27) and the plural forms nom. čəšxär (SPT 1, 1,11 a.o.), dat. čəšxärs (61,8 a.o.), erg. čəšxärd (36,34), instr. čəšxaršw (SC 129,37 a.o.), and gen. čəšxre (33,13 a.o.). In quite the same way, LBal. has the nom.sg. čišx (SC 174,19 a.o.) and the gen.sg. čišxmiš (216,30) besides the gen.sg. čəšxæ (176,22), the instr.sg. čəšxšw (224,39), the dat.sg. (?) čəšx (227,18), and the nom.pl. čəšxär (SC 210,35 a.o.). In Lent., we note i in most singular and plural case forms such as the nom.sg. čišx (SC 296,6 a.o.), the dat.sg. čišxa (332,13), the gen.sg. čišxæ (295,35 a.o.), the instr.sg. čišxšw (334,31 a.o.) and the nom.pl. čišxär (307,38 a.o.), but also a dat.pl. čəšxärs (345,35 a.o.) with shewa. Only Lāšx seems to be consistent in that all case forms show i; cp. the nom.sg. čišx (SC 249,30 a.o.), the gen.sg. čišxæ (259,3 a.o.) besides čišxi (262,23 a.o.), but also the nom.pl. čišxar (240,35 a.o.), the dat.pl. čišxars (240,27) and the gen.sg. čišxare (251,10 a.o.).
- 2.4.2. A similar picture is provided by the archaic poetic texts. Here we have i in most singular forms such as the nom. $\check{c}i\check{s}x$ (SP 14:72 a.o.) with its archaic variant $\check{c}i\check{s}xi$ (10:25), the dat. $\check{c}i\check{s}xs$ (14:60 a.o.), the gen. forms $\check{c}i\check{s}xi$ (94a:9), $\check{c}i\check{s}xi\check{s}$ (32:32 a.o.), $\check{c}i\check{s}xmi\check{s}$ (8:8 a.o.) and (arch.) $\check{c}i\check{s}xi\check{s}e$ (97a:61), but also \flat in the (arch.) dat. $\check{c}\flat\check{s}xas$ (1a:8 a.o.), the postpositional dat. (?) $\check{c}\flat\check{s}x-\check{s}i$ (67:6), and the instr. $\check{c}\flat\check{s}x\check{s}w$ (94b:20). In the plural forms, however, \flat prevails as in the nom. $\check{c}\flat\check{s}x\ddot{a}r$ (8:207 a.o.), the dat. forms $\check{c}\flat\check{s}x\ddot{a}rs$ (41b:16) and $\check{c}\flat\check{s}xars$ (65:59), the instr. $\check{c}\flat\check{s}xar\check{s}w$ (27a:63), and the gen. $\check{c}\flat\check{s}xr\ddot{a}\check{s}$ (51: 164,61 a.o.), but a nom.pl. $\check{c}i\check{s}x\ddot{a}r$ occurs as well (63b:145).
- 2.4.3. The off-hand impression that there are no rules involved seems to be further supported if we look at derivatives of the word. Among them, we find i in the UBal. diminutive

²⁵ M. KALDANI, Svanuri enis ponețika, 1: Umlauțis sisțema svanurši, Tbilisi 1969, 25 ff.: "უკანა მიმართუ—ლების უმლაუტი".

²⁶ IKEC 9, 1982, 43: "разновидность регрессивно-направленного умлаута". The same author's paper "Чередование гласных і/ә в сванском языке" ("доклад прочитан на научной сессии Тбилисского гос. университета 30 мая 1977 года": ib. n. 14) was not accessible to me.

²⁷ G. MAČAVARIANI, TGU Šromebi 96, 1963, 148.

čišxīlar-ži (SC 243,2) "on the little feet" and the adjective ləčišx "having ... feet" met with in identical form in UBal. (SC 158,23 a.o.), Lšx. (SC 243,5 a.o.), and Lent. (SC 314,28). Both the diminutive and the adjective occur in the poetic texts as well; cp. nom.sg. čišxild (SP 46:33), nom.pl. čišxildär (8:162), and ləčišx (62c:20 a.o.). As against this, ə is characteristic for čəšxäš "square dance" as appearing in UBal. (SC 59,11 a.o.) and the poetic texts (nom. čəšxäš: SP 30:25; dat. čəšxašs: 52:19 a.o.; erg. čəšxšed: 30:29); in this word, it is only Lāšx again which has i (čišxaš: SC 260,15 a.o.).

2.4.4. Nevertheless, this latter word may conceal a clue to the problem. We first have to assume that it is derived from čišx not with a plain suffix but as a hypostatic paradigm built upon a genitive case form, just as perx-isa which we find as a synonym of Georgian perx-uli in the Pshav and Khevsurian dialects²⁸; its basic meaning can thus be established as "that (sc. dance) of the foot". Contrasting it with the actual genitive forms of čišx as appearing in the Svan dialects (e.g., UBal. and Lšx. čišxi, LBal. čišxmiš and čošxe, Lšx. čišxe, Lent. čišxe and čišxi, as well as the forms čišxi, čišxiš, čišxmiš and čišxiše of the poetic texts), we may further state that as against these forms, čəšxäš- has to be considered as more archaic because its second vowel cannot be due to an analogical levelling while all the genitive forms can²⁹. The question then remains what to posit as the basic shape of the derivative. There seem to be two possibilities: Either we have to deal with an underlying *čišxeša-, with an "emphatic" genitive case ending as in Georgian perxisa, or čəšxäš- goes back to an older *čišxaš-i, with a non-extended ending as in Megrelian kučxiši, a derivative of kučx-i "foot" used in the word pair kučxiši obireši "dancing place"³⁰. In the former case, the -ä- would have emerged from a stem-final -e- via KALDANI's "back umlaut", in the latter, by palatal umlaut of a stem-final -a-. In this case, we would have the constellation of -i- followed by -a- again, which in its turn might be responsible for the shewa appearing in the (poetic and modern) UBal. forms³¹. 2.4.5. To a certain degree, the assumption that the rule $i > \partial /a$ plays a rôle in the emergence of shewa in the paradigm of Svan čišx is also supported by the case forms proper of this word. According to the examples listed above, ∂ is most frequently met with in plural forms such as $\check{c} \partial \check{s} x \ddot{a} r$, the basic element of which is the suffix $-\ddot{a} r$ (< *-are). If we accept that this suffix was always added to the last consonant of a given noun stem, irrespective of stem final vowels appearing elsewhere in the paradigm, the underlying form must have been * $\check{c}i\check{s}x$ -are in any case; here, again, we find -i- followed by -a-32.

2.4.6. It is true, of course, that Lāšx where we find -i- in the root syllable throughout seems to speak against the assumption of shewa resulting from "back umlaut". For this dialect, however, we may claim a peculiar tendency towards a levelling of vowel alternations within paradigms, just as in the case of the verb -sīnǯaw- which was dealt with above. The tendency towards levelling is not restricted to Lāšx, though; it is more or less characteristic for all modern dialects of Svan, as the competing case forms show right from the beginning. Given this overall tendency, the question arises whether we can at all expect to prove or disprove a sound change the conditions of which could be obscured in certain environments by the

²⁸ Cf. Kartuli enis ganmartebiti leksikoni, t. VII, Tbilisi 1962, 78.

 $^{^{29}}$ This view was first expressed by N.Ja. MARR (IAN 6/6, 1912, 1094): "судя по Р. ുറ്റ് 865- $^{\circ}$, основа слова гласная — tiшqа ... В сванскомъ Р. падежъ კიშხა- $^{\circ}$ tiшqаш (у, ин კგ მხამ təшqаш, тр ლაკგ მხამ la-təшqаш) значить хороводъ ..."

³⁰ Cf. MARR, l.c., and I. KIPŠIDZE, Grammatika mingrel'skago (iverskago) jazyka s xrestomatieju i slovarem, S.-Peterburg 1914, 263 / 324.

³¹ Since MARR's times, several authors have adopted the view that Svan *čišx* might be a borrowing of the Zan word (cf., e.g., V. TOPURIA, TUM 8, 1928, 342; GAMQRELIZE / MAČAVARIANI, o.c., 49). If the stem final -a- concealed in the derivative is primary, this is hardly plausible, however, for neither Megrelian *kučxi* nor Laz *kučxe* show a stem-final -a. FÄHNRICH / SARŽVELAZE (o.c., 195) now regard Svan *čišx* as inherited.

 $^{^{32}}$ Even if the verbal form $\check{\it z}$ ačə $\check{\it x}$ ex we meet in SP (7:53) with the meaning "they knocked (or trod?) you down" ($\check{\it z}$ iw $\check{\it z}$ ačə $\check{\it x}$ ex gimasugwi გაგაკრეს მიწაზე) is derived from $\check{\it c}$ i $\check{\it x}$ -, it cannot prove that i was "umlauted" to ${\it a}$ before e as well; for in the given constellation, ${\it a}$ might be anaptyctical again (in "syncopy" position: $<\check{\it z}$ -a- $\check{\it c}$ i $\check{\it x}$ x-e-x).

effects of innerparadigmatic analogy. It seems a necessary conclusion indeed that we should rely upon such cases first where secondary levelling can be excluded. The adjective *corni* may be a good example of this principle — note that it is here that the result of the assumed "back umlaut" is found in Lāšx as well.

- 2.5. The same principle must be kept in mind with a view to another possible source of shewa in Svan. This can be seen in the case of the word meaning "saddle", which appears as həngir in UBal. Besides this nom.sg. (SC 156,32; SP 1c:17 a.o.), we find a dat. həngirs and an adv. həngird in prose as well as poetic texts (SC 156,33 / 156,18; 102a:16 / 77c:17), contrasting with the gen.sg. həngri (SC 156,34) and plural forms such as dat.pl. həngrärs (SP 74:20), but also derivatives of the type həngril (dim.; SP 1a:11). Taking all these forms together, we should arrive at an underlying *həngir-i or the like (with normal syncopy leading from *həngirär- to həngrär- etc.).
- 2.5.1. This assumption, however, does not agree with what we have in the Lentex dialect. Here, the nom.sg. is $un\ddot{a}gir$ (SC 320,4.7.8), which immediately recalls Georgian unagir-i. The question arises whether the Svan word is a borrowing from Georgian and whether *unagir-i might be the underlying form of the UBal. word as well. In this case, we should have to assume, on the one hand, that the word received a prothetic h- in UBal. in the other hand, forms such as the dat.pl. $h \rightarrow ngr\ddot{a}rs$ would have to be regarded as secondary because they would presuppose a "double syncopy", starting from an underlying *(h) $\rightarrow nagir\ddot{a}rs$. It is well conceivable, however, that such an irregular "double syncopy" could easily emerge on the basis of the internal morphological rules of Upper Svan, given that a nom.sg. $h \rightarrow ngir$, even if it represented a tetrasyllabic * $h \rightarrow ngir-i$ originally, could be taken as representing a trisyllabic * $h \rightarrow ngir-i$ right from the beginning. In this way, an analogical pl. * $h \rightarrow ngr-\ddot{a}r$ could develop alongside the regularly expected † $h \rightarrow ngir-\ddot{a}r$ ($< *h \rightarrow ngir-\ddot{a}r$ -).
- 2.5.2. If the Svan forms can represent Georg. unagir-i, then, the proposal suggests itself that the shewa vowel appearing in UBal. might represent a former u, derounded by influence of the following -a-. If this is right, we arrive at a third variant of "back umlaut" ($u > \partial /_a$), and indeed, both "new" types thus established support each other in that they can be described as reflecting the same phonetic principle, viz. centralization. And in the sense of an assimilation caused by the central vowel -a-, this process seems much more plausible off-hand than, e.g., KALDANI's assumption of a change $i > \partial /_w^{34}$.
- 3. It goes without saying that the assumption of "umlauts" and similar changes requires a verification on the basis of as much linguistic material of Svan as possible. Considering the dialectal divergences as noted above and the possibility of secondary levelling characteristic for all spoken varieties of the language, we are forced to look for heuristic procedures that permit to establish a reliable basis of argumentation whenever different explanations are feasible. In my view, such a basis can only be built upon an exhaustive computational analysis of the Svan language material, and there are at least two distinct approaches that must be envisaged in this connection.
- 3.1. A first approach of preparing a computational analysis of Svan consists in establishing a plain lexicographical data base. As we are dealing with questions of historical change, it will not suffice in this respect to collect and classify the lexical material of today's usage; instead, all the older material available since GÜLDENSTÄDT's enquiries of the 1790ies has as

³³ Alternatively, Georgian *unagir-i* could have had an initial *h*- itself originally; in this case, we might presume a relationship with Old Georg. *hune*- "horse". We have to consider, however, that the Old Georgian sources suggest a meaning "draught horse" rather than "riding horse" for *hune*- (as against *cxen-i*; cf. J. GIPPERT, *Hippologica caucasica*, in: Man and the Animal World, Budapest 1998, 613-622) so that a derivation of the word meaning "saddle" becomes less probable.

³⁴ M. KALDANI, o.c., 114.

well to be taken into account. It is a pity that among the dictionaries and glossaries published so far³⁵, most are concerned with the UBal. dialect only; it is to be hoped that lexical material of the other dialects will be published soon³⁶.

3.1.1. Of course, the building of a lexical data base of Svan requires several important preconsiderations. First, we need a clear separation of "source" and "target" languages, with a unique treatment of different graphic properties. The impact of this requirement may well be illustrated by looking at the Svan primer, Lušnu Anban, as an example. Here we find Svan words contrasted with their Georgian and Russian equivalents, Svan (i.e., UBal.) being written in Cyrillic letters (with additional marks); cp. the reproduction of p. 85:

<i>Бербе</i> т	ღმერთი	Богъ
<i>ਊqіліан</i>	წმინდა	Святой
англоз	ანგელოზი	Ангелъ
сгуебнавмеқвісг	წინასწარ–მეტყველი	Пророкъ
қађ, hopia	ეშმაკი	Дьяволъ
<i>ђрвіл</i>	სარწმუნოება	Вѣра
лоц	ლოცვა	Молитва
<i>ђвар</i>	ჯვარი	Крестъ
ла \dot{x} уам (в) 37 ла \dot{x} ум i (к) 37	ეკკლესია	Церковь христіанск.
бап $(B)^{37}$ nan $(K)^{37}$	მღვდელი	Священникъ христіан.

For being usable in a data base, the information contained in this list must be interpreted in terms of modern linguistics; cp the following renderings:

ġerbet	ღმერთი	Бог
çqilian	წმინდა	Святой
angloz	ანგელოზი	Ангел
sgwebnawmekvisg	წინასწარმეტყველი	Пророк
kaž, horia	ეშმაკი	Дьявол
žrvil	სარწმუნოება	Bepa
loc	ლოცვა	Молитва
žvar	ჯვარი	Крест
laqwam (v) ³⁷ laqwmi (k) ³⁷	ეკკლესია	Церковь христианская
$ba\dot{p} (v)^{37} \dot{p}a\dot{p} (k)^{37}$	მღვდელი	Священник христианский

³⁵ Cf. B. Outtier, Bedi Kartlisa 40, 1982, 200-211 for a survey of Svan dictionaries and glossaries, where the "Сборникъ слов" (Svan-Georgian-Russian) contained in the first Svan primer, Lušnu Anban / Сванетская Азбука (Tiflis 1864), pp. 85-147 was omitted though (ca. 1350 words). The most comprehensive collections that have been published so far are the Сването-русскій сборникъ словъ ("MZ", cf. above; ca. 1200 words), the Русско-сванскій словарь ("INR", cf. above; ca. 15000 words), the index of word forms contained in V. Topuria's სვანური ენა, 295-375 ("VT", ca. 12000 word forms) and the Svan-English Dictionary compiled by Ch. Gudjedjiani and L. Palmaitis ("GP", ca. 10000 word forms).

³⁶ Hitherto unpublished lexical sources I know of are: a complete computer index of word forms as appearing in Svanuri Poezia, compiled by J. GIPPERT (1st edition Berlin 1988, 2nd revised edition Frankfurt 1995), a Svan-Georgian-Russian Dictionary compiled by Karpez Dondua (ca. 2700 words) and an extensive dictionary of Svan to be published by the Linguistics Institute of the Georgian Academy of Sciences. The latter has not been accessible to me so far.

^{37 (}в) = "Вольная или Верхне-Ингурская Сванетія", (к) = "Княжеская Сванетія".

3.1.2. Second, there must be a clear distinction of linguistic material and elements of grammatical analysis as the ones we find in GUDJEDJIANI's and PALMAITIS's UBal. dictionary; cp. the following list of entries:

a	(dem.ptc.): <u>ž'ankid</u> <u>a qän i adje</u>	abēla	vid. libēle t, 2
	"he-took this ox and took-it-away"		
-a, a	(ptc.irg.): <u>aγerā ser</u> ? "hast thou	abērga	vid. libērge, 2
	already come?"		
abāba	vid. libābe t, 2	abečķws	viä libečkw 1v, 12
ababāj	woe!	abwra	vid. libwre t, 2
ababaja	(LB.) vid. ababāj	äbza	vid. libze t, 2
abāluni	vid. libēle t, 4	abid	vid. libde 2v, 11 ³
abämda	vid. libem, 2	abīds	vid. libīd, 12
abānda	vid. libānde, 2	abičkw	vid. libčkwe 2v, 11 ³
abāka	vid. libāke t, 2	abiqw	vid. libqw, 11 ³
abäčķw	vid. libečkw 1v. 11 ³	abmuni	vid. libem, 4
abga 7	knapsack, saddle-bag	abžura	vid. libžura, 2
abga	vid. libge t, 2	abrālda	vid. librāli, 2
abge	vid. libge t, 1	äbreg 6	bandit
äbde	vid. libde 2v, 5	äbregob 7	banditry

3.1.3. Third, the data base must be designed to contain not only lemmatic entries (nominatives, masdars) but also all kinds of inflected word forms as these are a most important factor of historical-comparative analyses of the kind illustrated above. In fact, the dictionaries and glossaries published so far contain lots of inflectional variants, but it is not always easy to find out according to what criteria these were selected; cp., e.g., the following list of verbal forms pertaining to UBal. *libqwe* "to cleave smth. in two parts" as appearing in GUDJE-DJIANI's and PALMAITIS's dictionary again:

```
vid. libqw, 11:3
                                                                               [i.e. aor.act., 3.ps.sg.subj.]
abigw
abugw
                  vid. libqwe, 2v, 11:2
                                                                               [i.e. aor.act., 2.ps.sg.subj.]
äbqwe
                  vid. libqwe, 2v, 5
                                                                          [i.e. fut.pfv.act. (3.ps.sg.subj.)]
biqwa
                  vid. libqwe, 2
                                                                                [i.e. impf. (3.ps.sg.subj.)]
bigwe
                  vid. libqwe, 1
                                                                                 [i.e. pres. (3.ps.sg.subj.)]
libqwe
                  (m.) t, 2v: to cleave smth. (Od) in two parts
                                                                                                   [masd.]
mebqwe 3
                  (n.r.) cleft in two parts vid. libqwe
                                                                                                [nom.res.]
otbīqwa
                  vid. libqwe, 13
                                                                                   [i.e. perf. (3.ps.subj.)]
```

For the data base to be exhaustive, it will be desirable, of course, to collect complete paradigms of given words, not only what is represented in the published lexical material, and it may well be necessary to provide a more detailed subdivision of dialects according to the linguistic differences met with in them.

3.2. Alternatively, the lexical material of Svan can be digitised directly on the basis of published texts. The first step to be undertaken in this direction consists in mere data entry which can be done in two ways, either manually or by using an optical scanner. The latter case presupposes the adaptation of so-called "OCR" (Optical character recognition) programs to the special requirements of Svan, and its results depend a lot on the printing quality of the original. It may be sufficient here to contrast a few plain images of printed texts and the result of their automatical "recognition" to show what problems are involved in this task.

მ. ხვნლმი ი ლეღვი აღაბ

ხვალმი ლადაღ ნამპარვი ჯგმალადაღ ლი ი ეჯ ლადაღ ლიმზგრ ხარხ ჩიაა ქორისგა. ხვალმი მეგემ ღვებრა ლექვანჩუნ ლგგ. ხოშა გგგიბ ლი ი ამის ხემზირხ, ესვაა გვაშ ხარ. ხოლამ მუჭვდი პატრონს ი გვეშაას ამ ლადღიშდ ერს მამილვ ხორი ნამზურუნდ ი ერს—ლგგრალ. ალ ნამზურუნ მოჯლაი ნათორ ხარხ. ხვალმი ლადაღ ქა ნარბიალუნლო ლემზგრარს ანყალის. ეჩქანლო ესვაა ხვალმი მამილვ ი ედ ლგგრალ ხაგად, ეჯაარს მგმზგრი ჟი ხამზგრი ი ხაბიც ხვალმის, ერე "მიჩა მეფშვდე მაზიგ ათქაბვნას ამი მუძღვნის, ხოლა მუკვარაულ, გვაშ ი მუჭვდი მათლა ქა ათქაბვნას ი ანსიპვნას ამ სგვებდ ი ლერსგვანთე ალ მამვლიშ ი ედ ლგგრალს კა აგაბს ი ჩუ იდაარალს. მოგდანს მამვილ ი ედ ლგგრალ ლეთხუმდ ხარ ლეყდი ი მუზვებ მაგ ლი ქორისგა. ეჩქანლო კაკინ მგჩხიმისგა გიცი კურპილარს ამის ამ. ეჯაარს შამფვირს ხაცვეს ი ქამ გვილას ხაჩხინეს. ალ კურპილარს მარე დემ იზბი ი მუკგვარილარს ხულ-ვეს ლეზობდ ი ლეკრენტალდ.

ლეღვი აღაბ ლუთ მანკვი ლეღვს ხაგემხ მაგ ი ეჩნოვშ ჩუ იდაარალხ. ჯიჯვარს ი გალმოზარს ნანკთ' ადუსგიხ გელვე ლაგაფიაქდ. ნადაარობენ ფეტვრაშ ი ჭყანი ცვრცმას იჩობ ი ეჩას ხოგალიხ ჩი თვით ფაკანს. ჟი ხებზიხ, ერხი ლვფშირ მეზ-გაისგა ღვაჟარ ი ზურალარ ცვრცმა ნაპუვარს ხაფშვდებ უშხვარ ი ჟი ხოთულვაფიხ ლერქვარს ი ნიჩვარს მგჩხმარ ცვრცმოვშ. ეჩქანღო ეშბუ მარე ჟი ღვრი დუფნი ყორთეჟინ, ჯიჯვარს ი გალმოზარს ქა შიდე ი ტული: "ოო უ გელო, ელოს აჯზგზე გელოდ. ამზავ ალა ჯაც ი ზავდ ბარჯს აჯკვანე".

ლენჯპრ

Svanuri enis krestomatia, p. 9, Text 3 (plain image)

3. xvÄlmi i leGvi aGab

xvÄlmi ladäG namParvi %ëmaladäG li i e% ladäG limzër xÄrx CIyä korisba. xvÄlmI megem Gvebra lekvÄnC~n lëb. xoSa gëgib li i amis xemzirx, esvÄy qväS xAr. xolAm muÇvdi PaTrons i qveSäys am ladGiSd ers mamilv xori nämzurund i ers lëgrÄl. al nämzurun mo%läi nator xArx. xvÄlmi ladäG ka närbiAlunGo lemzërärs anQÄlix. eCkanGo esvÄy xvÄlmI mamilv i ed lëgrÄl xagäd, e%yärs mëmzëri Zi xämzëri i xabic xvÄlmis, ere "miCa mepSvde mäzig atkAbvnas amI mu&Gvnis, xola mEKvÄryEl, qväS i muÇvdi mätla k' AtkAbvnas i ansiPvnas aS sgvebd i lersgvante al mamvliS i ed lëgrAle mu&Gvni" eC kanGo mamiles Cväysenix. eCis ilëgrÄls Z' a%äbx i Cu idyarÄlx. mogdÄns mamvil i ed lëgrÄl letxumd xAr leQdi i muzeeb mäg li ki~risga. eCkanGo KAZIn mëCximisga qici KUrPIlärs äÇix sam. e%yärs Sampvirs xacvex i kÄm qvilas xäCxinex. al KUrPIlärs mAre dEm izbi i muZqvärIlärs xuGvex lezobd i leKrEnTAld.

leGvi aGab lEt mÄnKvi leGvs xagemx mäg i eCnovS Cu idyarÄlx. %i%värs i gälmozärs nänKt' AdEsbix gelve lagäpiAkd. nädyaroben peTvräS i ÇQäni cërcmas iCox i eCas xogÄlix CI tvit paKäns. Zi xebzix, erxi lëpSir mezgaisga GvaZär i zuralÄr cërcmÄ nAPuvärs xäpSvdex uSxvAr i Zi xotulväpix lerkvärs i niCvärs mëCxmÄr cërcmovS. eckanGo eSxu mAre Z~ Gëri dEpni QOrteZIn, %i%värs i gälmozärs ka Side i TUli: "oo u gelo, elos ä%zëze gelod. amzav ala %Äc i zavd bar%s ä%KvAne"

3. xvālmi i leģvi aġab

xvālmi ladāģ namparvi žəmaladāģ li i ež ladāģ limzər xārx čīyā korisga. xvālmī megem ģvebra lekvānčūn ləg. xoša gəgib li i amis xemzirx, esvāy qväš xār. xolām mučvdi patrons i qvešäys am ladģišd ers mamilv xori nāmzurund i ers_ləgrāl. al nāmzurun možlāi nator xārx. xvālmi ladāģ ka nārbiālunģo lemzərārs anḍālix. ečkanģo esvāy xvālmī mamilv i ed ləgrāl xagād, ežyārs məmzəri ži xāmzəri i xabic xvālmis, ere "miča mepšvde māzig atkābvnas amī muzģvnis, xola mēķvāryēl, qväš i mučvdi mātla k' ātkābvnas i ansipvnas aš sgvebd i lersgvante al mamvliš i ed ləgrāle muzdvni" ečkanģo mamilvs čväysenix. ečis iləgrāls ž' ažābx i ču idyarālx. mogdāns mamvil i ed ləgrāl letxumd xār le~di i muzeeb māg li korisga. ečkanģo ķāžīn məčximisga qici ķūrpīlārs äčix sam. ežyārs šampvirs xacvex i kām qvilas xāčxinex. al ķūrpīlārs māre dēm izbi i mužqvārīlārs xuģvex lezobd i lekrēntāld.

leģvi aġab lēt mānķvi leģvs xagemx mäg i ečnovš ču idyarālx. ǯiǯvärs i gälmozārs nānķt' ādēsgix gelve lagāpiākd. nādyaroben peṭvrāš i čḍāni cərṭmas ičox i ečas xogālix čī tvit paķāns. ži xebzix, erxi ləpšir mezgaisga ġvažār i zuralār cərcmv nāpuvārs xäpšvdex ušxvār i ži xotulvb.pix lerkvārs i ničvārs məčxmār cərcmovš. ečkanģo ešxu māre žs ģəri dēpni ġōrtežīn, ǯiǯvārs i gälmozārs ka šide i ṭūli. "oo u gelo, elos äǯzəze gelod. amzav ala ǯāc i zavd barǯs äǯkvāne::

Same text converted into standard transcription, with adaptation of line format

გადმოცემანი, ამბ<mark>ები</mark>

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29. ძალუშერ ქორა ლიყდი

აღეშურ ნახეშტუნლო ეჯიარე ქორს ნუსგაშარ ესფუსნუნახ. ძალეშა ეჯიარე მგბგერი ლემპრლიხ. ნუსგაშარს ქაუშურდ ოთყიდახ. ლა ნიმგვეი სოშპლს ათხვრუნახ. აშხე ლადალ ესნარ ანკადხ, ეშხუ სირეგ ბექ სუნდაეს ქორთე ძალუშურ, ლანნუნალჟი ნაგჩულ ჩუქვან თონმენ ი გრასბილნენ. ემქანლი ალ ქორ ლელგვამდ ამსიდული.

ლალვაზინ ამსე ჩიქქა ე წაძე ლასვ, პირისდავ თენვის ოთარშა. იცა მშ ესერდ მაშყიდ. ანხვ ლაღალ ანნაზობანს ბაპარ, ლაღვაჩინ ი დანები სეა სორგერდას. მანქვი აშირ ი უსგვამ თვიმენდ ათვეიდდ აკი ბამნქა ქარ. მარე ენქანდო თამანიშერემ ანბინეს ლიტორკოვალ. ამცან უსევის ი უსგვამ თვიმენთეჟინ აჩად ფას. თამანიშერემ დამ მდეთებ ი სერ ნაა მდ ალ ფას ლევდე. ემდემსუ გან ანქვად, კარფლის. აორი სომა ოთფარ, ნაქალი ი იშგენ განა. ქორს დორილეთ, იენვაბს ათისთავდ განარისვი, ლასგიედა ნიშგვებ დვაქარს:

Svanuri prozauli tekstebi I: Balszemouri kilo, p. 27, text 29 (plain image)

```
"' katušē~i korā liģdi
a ~~-mē~~ naxvāt~~~ao eǯy~v kors nēsgāšär espusnēnax. ma~-
~~a eǯy ~e məbgeri ~~mārlix. nēsgāšärs kaušērd otģidax,
..~a n ~evva xoš~ls atx~rēnax ašxv ladāģ eänār angādx ešxu
x.~~~ ze]. ~-ā~~;x ~o~ a~v ķaģušēr , länn~nxlei näqčul čukvān
~-y~xx i ~. .;~i~-i~ e~~a~go al kor ~elqvqmd äms tēli
~-. .v~ ~ ~xv ~,i~k~a vacame lä'sv, p r sd.āv tengi~x i tarša.
i~.a m~ v vr~ eašvi~. anxv la~äġ äxnäz~ränx baġär, laġv~~čin
i -.- ~~ i ;~, x~a~~.e~~~ ax, m'~~kvi ašir i usgvām tvimend ätvģidd
~'--~.;i~~. e ~ k eika~ti tamänišērvm änbinex litorķievā~. aa~,~~
~~~a ,~e ~i~ i ~~~; -~v~v ovimentežīn ačäd p;~s. tamänišērem
'i .a '., ~,~; i x~r n~~ ~.d .l p-;s l'e~de. ešdešx~ qän ankväd,
             ~ äč~l i išgen gänz. kor s yor
~~.~ ~,.~, n~...d qanā,~ ~..~l~venid tečgiz i bapar läsvx yori~.~~
~.-ə. ~ - s~,it ~.~,~ svī~. l~~x~
                                   nišgvey ġvažärs.
```

Same text scanned with OCR program, converted into standard transcription

29. ʒaġušēr korā liḍdī

ʒaġušēr naxvātunģo eǯyare kors nēsgāšār espusnēnax. ʒaġuša
eǯyare məbgeri ləmärlix. nēsgāšārs kaušērd otḍidax,
ala nišgvey xošāls atxērēnax. ašxv ladāģ esnār anqādx, ešxu
xorev zek sgādyex korte ʒaġušēr, lännūnālži näqčul čukvān
otnāxx i ž'asbidnex. ečkanģo al kor lelqvemd āmsedēli.
laġvāčin ašxv čikka vacaʒe läsv, pirisdāv tengiz i otarša.
eǯa mī ezerd mašqid. ašxv ladāģ äxnāzērānx bapār, laģvāčin
i tengizi sga xonqerdax. mānķvi ašir i usgvām tvimend ātvqidd
eǯyärxänka kor. mare ečkanģo tamänišērem ānbinex litorkovāl.
amežīn usgvām ašir i usgvām tvimentežīn ačād päs. tamänišērem
deš ādḍidx i ser nāy nād al pās leqde. ešdešxu qān ankvād,
kardlār. yori xoča topār, nāčāl i išgen gānz. kors yori
ūgva gar ensād qanār. mulgvenid tengiz i bapār läsvx yoriģet.
tengizs ātistavd qān atxvīd. läxčvedda nišgvey ģvažārs:

Same text manually restored (underlined: letters correctly recognized by OCR)

3.2.1. It goes without saying that an electronic text thus achieved requires further treatment before the lexical material contained in it can be used for any kind of linguistic analysis. First, it will need manual correction which can only partially be supported by an automatical process, viz. the so-called "spell-checking". Second, the digital text will have to be structured so that it can be used for retrieval; cp. the following example from Svanuri Poezia which shows a minimum of "markup" consisting in the indication of page numbers, line numbers, and text numbers (with a variant containing a German translation which was added manually):

```
|bSP52/Kal:_Nuarsala
|P(166a)
|11
        vož ġal sabirelo Nuarsala!
    Mušvraši tubas esģəri,
|13
    sgobin lažxvidax Čolšare,
|14
    min žixaldax si moktare,
115
    esran irix min amxvare.
116
        ka lažšodax ečxän-amxän,
117
   meqrär šəqasugv eğlağix,
18 ču lažtəxix Mušvra tubas.
119
        Davberxo lekva esġadäs,
|110 Davbrar qorars xocqanalix:
|111 ləmšare sgožix mušgvriša.
|112 Lalxorte lekva amiex,
113 Lalxor mulxorin gošia.
|114 Mukvdarte žibav loxvsinžav,
|115 mešxe murqvam šxepenila.
116 Iprarte žiben loxysinžav,
|P(168a)|117 Butil lamtils sgveženila.
118 Qete lekva-lekva ogver,
|119 Ivan ġvarkla čəšxašs xožeġv.
|120 Vičnašxo lekva esģuri,
```

```
|bSP52/Kal:_Nuarsala
P(166a)
111
        vož ġal sabirelo Nuarsala!
     {Oh, unglücklicher Nuarsala!}
|12 Mušvraši tubas esģəri,
     {Du gehst in der Mušur-Schlucht hin,}
    sgobin lažxvidax Čolšare,
     {die Colšer kommen dir entgegen,}
|14 min žixaldax si moktare,
     {du hältst sie für Wohltäter,}
    esran irix min amxvare.
     {sie werden (aber) wohl Feinde sein.}
|16
        ka lažšədax ečxän-amxän,
     {Sie warfen sich von hier und dort auf dich,}
    megrär šəġasuġv eǯlaǯix,
     {banden dir die Arme auf den Rücken,}
    ču lažtəxix Mušvra tubas.
                                            hinab.}
          {brachten dich zurück die Mušur-Schlucht
        Davberxo lekva esġadäs,
     {Sie brachten dich hinab nach Davber,}
|110 Davbrar qorars xocqanalix:
     {die Davbrer verschließen die Türen:}
```

3.2.2. A first result of computational analysis that can be achieved on this basis is a "bookstyle index" containing all the word forms that appear in the digitised text; cp. the following example which is taken from a complete index of Svanuri Poezia produced with the WordCruncher program:

```
xoba ......(1) . 51: 162a,20
                                                         xoga ......(1) . 46: 162,33
                                                         xogämdax .. (1) . 25a: 76,43
xobaža ..... (3) . 4:14,38;27b:96,31;29:102,34
xobažax .... (2) . 3: 8,18; 94c: 302,6
                                                         xōgän .....(1) . 79: 262,6
xobax .....(1) . 13: 46,15
                                                         xogänx ..... (2) . 63b: 226,157
xobemax . . . (1) . 39b: 128,93
                                                         xogax .....(1) . 51: 164a,46
xobidna ....(1) . 39a: 124,71
                                                         xogdax ..... (1) . 5: 18,41
xobiza . . . . . (1) . 94a: 294,102
                                                         xogemd . . . . (4) . 22: 70,4. 6. 16. 18
xobina . . . . (20) 3: 8,23. 29; 14: 52,27; 54,46;
                                                         xogena ..... (4) . 8: 28,64. 70; 17: 60,10; 39a:
24: 74,38; 26: 86,43; 88,74; 39b: 126,53; 41a:
                                                          124,72
 134,33; 51: 164a,48; 55a: 180,36. 44. 53; 63a:
                                                         xogenax . . . . (2) . 46: 166,127
212,7; 214,13; 67: 244,32. 33; 94a: 290,38; 94b:
                                                         xogenda . . . . (1) . 99d: 316,11
296,5; 95: 306,12
                                                         xogvašilax . . (1) . 5: 18,69
xobinav....(3) . 54a: 174a,52; 93b: 282,23;
                                                         xogveršla . . . (1) . 31: 108,48
 102a: 322,32
                                                         xogvranax . . (1) . 25b: 82,78
xobinay . . . . (2) . 42c: 146,15.24
                                                         xognax . . . . (1) . 13: 50,92
xobinax . . . (14) 8: 36,214; 9: 36,16; 11: 42,7;
                                                         xogcxada . . . (1) . 13: 48,60
14: 52,28; 26: 84,25; 27b: 94,14; 39a: 120,12;
                                                         xoda ......(3) . 39b: 128,100; 46: 170,177;
43a: 148,7. 11; 51: 162a,24; 55a: 178,14; 57:
                                                          93c: 286,9
 190,43; 192,83; 94b: 300,79
                                                         xodaraži ...(1) . 91a: 268,5
xobžinala ... (1) . 27a: 88,7
                                                         xodaräǯi ...(1) . 68: 244,7
xobräya .... (1) . 46: 166,109
                                                         xodax ..... (2) . 13: 46,16; 25b: 82,64
xobräyax ...(1) . 13: 48,62
                                                         xodgara ... (12) 3:8,21.42; 4:14,49; 24:74,32;
```

3.2.3. More detailed analyses require the word-forms to be defined with respect to their morphological and syntactical status. This has to be done by a so-called "tagging", i.e., the addition of the particulars of the word-forms in quite the same way as indicated in the example from GUDJEDJIANI's and PALMAITIS's dictionary given in 3.1.3. It goes without saying that for a highly inflective language as Svan, this can only partially be achieved by automatical procedures.

3.3. Once this preparatory work has been done, a final step for building up a reliable and exhaustive data base of word forms will consist in the collation of the data compiled on the basis of both lexical collections and texts. It is to be expected that in the course of this step, all kinds of inconsistences that are characteristic for the actual state of the morphology of Svan will easily come to light, thus offering themselves for special investigations into the mutual relationship of dialect forms, the sound laws involved, their relative chronology and similar questions. This task may be supported by or even be left to computer programs which can be designed to serve the purpose of a comparative "parsing" of Svan word structures with a view to the consistency of the sound correspondences involved; but this must remain a future aim which requires the cooperation of various specialists.

რეზიუმე

1. ყოველი მეცნიერი, რომელსაც ოდესმე სვანური ენა უკვლევია, გაოცებული დარჩენილა ამ ენის დიალექტური მრავალფეროვნებით. ცნობილია მრავალი თავისებურება, რომელიც ერთმანეთისაგან განასხვავებს ამ დიალექტებს, მაგალითად, კვეცა, კუმშვა, უმლაუტის, თანხმოვანთა ასიმილაციის, მეტათეზისის ნაირსახეობები.

ნაშრომში მოხმობილია სამეცნიერო ლიტერატურაში განხილული მაგალითები, რომელიც ასახავს ამ ფენომენს (იხ. 1.1). და მაინც, რჩება ბევრი საკითხი, რომელიც

დღემდე არ არის ახსნილი. საქმე ეხება ძირითადად შემდეგ საკითხებს:

— რამდენად რეგულარულია ფონეტიკური შესატყვისობები დიალექტებს შორის?

— როგორ წარმოსდგება დიალექტებს შორის განსხვავება ისტორიული პერსპექტივის თვალსაზრისით, კერძოდ:

ა) რელატიური ქრონოლოგიის თვალსაზრისით საკუთრივ სვანური ენის ფარგლებში?

ბ) მონათესავე ქართველურ ენებთან მიმართებაში? წინამდებარე მოხსენებაში განვიხილავ ამ საკითხს სვანური ფონების **გ**—ს მაგალითზე.

2. ცნობილია, რომ **გ**—ს წარმოშობის სხვადასხვა გზები არსებობს სვანურში.

- 2.1. სვანური ზმნის ლისგნჯავი პარადიგმაში ერთმანერთის გვერდით გვხვდება ფორმები ფუძეში ი ან გ ხმოვნით. ამასთან, გ—ხმოვნიანი ფორმები გვხვდება იქ, სადაც კუმშვა არის მოსალოდნელი. როგორც ჩანს, კუმშვისას სრულად კი არ დაიკარგა ხმოვანი, არამედ ანაპტიქტური გ ხმოვანი გაჩნდა მარცვლის ბოლოკიდური თანხმოვნის წინ. მაგრამ აღნიშნული წესი მხოლოდ ზემოსვანურში დასტურდება. ბასლქვემოურში მხოლოდ გ—თი გახმოვანებული ძირი გვხვდება, რაც მეორეული პროცესი უნდა იყოს. აღნიშნული ფუძე ქართული სინჯ-ავ აწმყოს ფუძისაგან არის ნასესხები, რაც იმაზე მიგვანიშნებს, რომ ძირისეული ი პირველადია.
- 2.2. სრულიად სხვა შემთხვევა გვაქვს სვანურ ზმნაში, რომელიც "ჩაკეტვა" მნიშვნელობით იხმარება. ტექსტებში დადასტურებული ფორმები შიეძლება გავაერთიანოთ ცგყან ძირის ქვეშ. ამის საპირისპიროდ ნიჟარაძის ლექსიკონში ვხვდებით მასდარის ფორმებს ლიცყვნე და ლიცყვნალი, რაც მნელად შეიძლება დავუკავშიროთ წგყან—ს. ცგყან ძირის რეკონსტრუქცია დამაჯერებული იქნება, თუ ვივარაუდებთ, რომ იგი ციყ ძირის კაუზატიური დერივატია. დგება საკითხი: ი/გ მონაცვლეობა ფუძეში აბლაუტით უნდა ავხსნათ თუ მეორეულია?
- 2.3. განსხვავებული წარმოშობის უნდა იყოს **გ** ხმოვანი ზედსართავ სახელში **წგრნი** "წითელი". ტექსტებში დადასტურებული ფორმები გვიჩვენებენ, რომ ეს სიტყვა მიღებულია **წგრანი**—საგან. სავარაუდოა, რომ იგი სომხური **წირან**ი—დან არის ნასესხები. თუ გავითვალისწინებთ, რომ სვანური ***წგრნი ი** ხმოვანზე ბოლოვდება, რომელიც არ იკვეცება, საკითხავია, საიდან გაჩნდა **გ** ხმოვანი ინლაუტში. ალბათ საქმე ეხება დეპალატალიზაციის პროცესს, რომელიც ა—ს მიერ არის გამოწვეული.

2.4. ბგერათა მსგავსი კონსტელაცია გვაქვს **ჭიშს** ფუძის ფორმებში. დიალექტებში ვხვდებით ამ ფორმათა ვარიანტებს გახმოვანების თვალსაზრისით. საგულისხმოა, რომ, როგორც დერივაციული **ჭგშხაშ-** "ფერხული" ფორმა ადასტურებს, **ჭიშს** ისტორიულად ა—ზე ბოლოვდებოდა.

2.5. საინტერესოა, შეიძლებოდა თუ არა უ–საგან მიგველო **გ** ხმოვანი ა–ს წინ. ამის შესაძლო მაგალითი არის ქართული სიტყვა **უნაგირი**, რომელიც სვანურში **ჰგნგირ** ფორმით დასტურდება, სადაც ფუძედ უნდა განვიხილოთ ***ჰგნაგირ**. მაგრამ ბალსზემოური ნათესაობითი **ჰგნგრი** ქმნის პრობლემას, რადგან იგი თითქოს ორმაგ კუმშვას გვიჩვენებს.

3. მაგალითები, რომელიც მე მოვიტანე, გვიჩვენებენ, რომ ბგერათცვლილებები სვანურში საჭიროა შეძლებისდაგვარად დიდი მოცულობის მასალაზე შემოწმდეს. ამასთან, მიზანშეწონილად მიგვაჩნია მასალის კომპიუტერული დამუშავება.

3.1. არსებობს ორი წყარო, რომელიც ამ მიზნით შეიძლება გამოვიყენოთ. პირველი

წყარო გახლავთ ლექსიკონები.

3.1.1. ლექსიკონების კომპიუტერში შეტანა პრინციპში მარტივია, მაგრამ სვანური ენის ლექსიკონების შემთხვევაში დგება რამდენიმე სპეციალური პრობლემა. მაგალითად, უნდა გავითვალისწინოთ გრაფიკულად როგორ არის ჩაწერილი ლინგვისტური მასალა ძველლექსიკონებში. კომპიუტერულად მათი დამუშავებისათვის საჭიროა გრაფემათა გაერთმნიშვნელიანება ტრანსკრიფციის თვალსაზრისით.

3.1.2. შემდგომ დგას საკითხი, განსაკუთრებით ზმნურ ფორმათა შემთხვევაში, თუ რომელი ფორმები შევიტანოთ მონაცემთა ლექსიკონურ ბაზაში. მაგალითად, გუჯეჯიანი— პალმაიტისის ლექსიკონი შეიცავს მრავალ ფლექსიურ ფორმას. ჩვენთვის გაუგებარი რჩება,

რა პრინციპით იქნა შერჩეული ეს ფორმები.

3.1.3. ერთ–ერთ უმთავრეს პრობლემას წარმოადგენს ისიც, რომ დღემდე გამოცემულ ლექსიკონებში სვანური ენის დიალექტები არ არის თანაბრად წარმოდგენილი. ამასთან, სვანური ენის დიალექტთა კომპიუტერული კვლევისათვის აუცილებელია შეიქმნას სვანური ენის მონაცემთა ბაზა, რომელშიც მოცემული იქნება:

— სიტყვათა სრული პარადიგმები,

— ამ ფორმათა დიალექტური ვარიანტები;

ვინაიდან დღემდე ღიად რჩება საკითხი, როგორ უნდა დავყოთ დიალექტები კილოებად ბგერათცვლილებების გათვალისწინებით.

.2. ზემოდასახელებული მონაცემთა ბაზის შესაქმნელად მეორე წყარო უნდა იყოს

ტექსტური მასალის კომპიუტერიზაცია.

3.2.1. ტექსტის კომპიუტერში ავტომატიზირებული შეტანა გარკვეული საზღვრის ფარგლებში შესაძლებელია. თანამედროვე ტექნიკური საშუალებები იძლევა ამის შესაძლებლობას. ტექსტის სკანირება მნიშვნელოვანწილად დამოკიდებულია ნაბეჭდი ტექსტის ხარისხზე. ამასთან, ყველა შემთვევაში აუცილებელია ტექსტის ხელით კორექტირება.

3.2.2. იმისათვის, რომ ტექსტის კომპიუტერული ანალიზი გამარტივდეს, უპირველეს ყოვლისა საჭიროა — მისი სტრუქტურირება, შემდგომ კი მორფოლოგიური და სინტაქსური მახასიათებლების შეტანა ინღექსირებისათვის. მხოლოდ ამის შემდეგ გახდება

შესაძლებელი ყველა მონაცემის გაერთიანება მონაცემთა ბაზაში.

3.2.3. მონაცემთა ბაზის შექმნის შემდეგ ჩვენი მიზანია ღიალექტებს შორის არსებული სხვაობები ბგერათცვლილებების თვალსაზრისით პროგრამული საშუალებებით ვიკვლიოთ. ამ მიზნის მისაღწევად საჭიროა მრავალწლიანი მოსამზადებელი სამუშაოების ჩატარება.