Rounding and Exceptions from Rounding in East Tocharian

In a series of recent articles[1] that are a part of a comprehensive investigation of the Tocharian *o*-vocalism, I have examined several Tocharian words containing such vocalism and tried to uncover and formulate the rules that govern the labialization of the reflexes of CT.[2] *α (and *$\mathring{\bar{a}}$[3]) and in general the appearance of *o* in either dialect or both. These rules have been partly known or guessed for a long time, but often they have been vaguely formulated or even quite incorrectly. The reason for this vagueness, apparently, is the fact that they often seem to be no rules at all, because for every word that follows the rule there appears to be another that does not. The rules have therefore been formulated and taken as mere indications of a tendency and not as strict phonological laws. However, it is my contention that the rules in question are indeed strict laws (i.e. as strict as sound laws are in any language) and that the apparent exceptions can be explained, for the most part, as no haphazard phenomena, but as reflecting the crossing effect of other sound laws.

In this paper I wish to examine the apparent exceptions to the East Tocharian rounding[4] of *a* to *o*. In my previous articles I

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[2] CT. = Common Tocharian.

[3] It is assumed here (with Winter, Normier et al.) that I.-E. *$\bar{a}$ yielded CT. *$\mathring{\bar{a}}$ which further developed into B *o*, A *a*, except in absolute final position (and here I depart from the above-mentioned linguists) where CT. *-$\mathring{\bar{a}}$ became *-o > B -o, A *zero*.

[4] The term *rounding* is defined here as 'labialization of a vowel caused by a labial consonant', whereas *umlaut* is defined as 'a change in vowel quality

have assumed that the rule governing this change operated
approximately in the following manner: East Tocharian *a*
deriving from CT. **æ* or **ā̊* was rounded to *o* before *kw* (which
later usually became *k*), *p* and *m* or clusters containing one of
these sounds. That is to say, a following labial had a rounding
effect upon A *a,* except for the labial *w* which had no such
effect, cf. A *śanweṃ* par. 'jaws', *kanweṃ* par. 'knees', *naweṃ*
'roar' or the cases where *-wV* > *-u* after the apocope of final
vowels: *śaru* 'hunter' (B *śerwe*), *katu* 'ornament, jewelry' (B
ketwe), *kratsu* 'rag' (B *kretswe*) etc. Obviously, *u*-umlaut was no
longer operative in East Tocharian at the time of the apocope.
In one word only, an *a* appears to have been rounded to *o*
before *w,* i.e. A *kowi,* the nom. pl. of *ko* obl. sg. 'cow'. However,
Van Windekens (1976, p. 226) is surely right in maintaining that
A *kowi* for expected **kawi* (cf. B *kewäṃ* obl. pl.) has been influ-
enced by the singular form *ko* < I.-E. **gʷou-.*

The present study reveals that this understanding of the rules
of rounding in East Tocharian is not quite accurate. A modified
formulation will therefore be proposed at the end.

Rounding occurs in three particular environments: before *kw,*
p and *m.* The examples will now be listed and the environments
scrutinized. Rounding before *kw* > *k* can be observed in the
following cases:

1) Rounding of *a* < CT. **æ*
   noktiṃ (B *nekcīye*) 'in the evening' < **nakwtiṃ* < CT.
   *nækwt- < I.-E. **nokʷt-* (cf. already Sieg–Siegling–
   Schulze 1931, p. 267);
   oṅk (B *eṅkwe*) 'man' < **aṅkw* < CT. **æṅkwæ* < I.-E.
   *n̂kᵘos (cf. Campanile 1969, p. 198);
   śorkmi pl. (B *śerkw*) 'strings' < **śarkw-* < CT.
   *śærkwän ← I.-E. **kērgu̯r/n-* (cf. Hilmarsson 1984 a);
   yok- (B *yok-*) 'to drink' < **yakw-* < CT. **yækw-* < I.-E.
   *ēgʷ- (cf. Winter 1955, p. 173);
   B *oṅkipṣe* 'shameless' (loanword from East Tocharian, cf.
   A *kip,* but B *kwipe* 'shame' < **aṅkwip-* < CT. **æṅkwip-*;

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caused by a vowel of the following syllable'. *Labialization* is a general term
covering rounding and back umlauts (*u*-umlaut, *o*-umlaut).

orkäm (B *orkamo*) 'obscure, dark' < **arkwäm* < CT.
*ærkwmo < I.-E. **org^{u}mōn(ts)* / **r̥g^{u}mōn(ts)* (cf.
Petersen 1933, p. 21);

ṣokyo 'very' (to B *ṣek* 'always'?; cf. Van Windekens 1976,
p. 458) < **ṣakw-yo* < CT. **ṣækw-*;

*oṅkrac (indecl.; B *oṅkrocce* obl. sg.) 'immortal, eter-
nal' < **aṅkwr-ac-* < CT. **æṅkwr-åt/c-* < I.-E. **n̥-dhg^{u}hr-* /
*n̥-g^{u}hdhr- (cf. Hilmarsson 1986a).

2) *a* < CT. **å̊*
poke (B *pokai* obl. sg.) 'arm' < **pakwe* < CT. **på̊kwai-* ←
I.-E. **bhāĝhu-* (cf. Hilmarsson 1984b, p. 110–111);
yoke (B *yoko* / *yokiye*) 'desire, thirst' < **yakwe* < CT.
*yå̊kwai- ← I.-E. **i̯āk^{u}ā* (cf. Av. *yās-* 'to demand, crave'
< **i̯āk^u-sk̂-*, Toch. B *yāsk-* 'to beg' < **i̯ək^u-sk̂-*, Skt. *yāc-*
'to entreat').

Apparent exceptions to the rule of rounding before *kw* are as
follows:

1) *ak* (B *ek*) 'eye', *wak* (B *wek*) 'voice';
2) *arkant-* (B *erkent-*) 'black';
3) *maku* (B *mekwa* pl.) '(finger)nail', *saku* (B *sekwe*) 'pus'.

However, a closer examination of these words reveals that
they need not necessarily constitute exceptions.

1) A *ak* 'eye' and *wak* 'voice' represent ancient consonant
stems, I.-E. **H₃ek^u-* and **u̯ok^u-*. They remained consonant
stems throughout the history of Tocharian. To explain the lack
of rounding in these words one might tentatively suggest that a
labiovelar in absolute final position lost its labial factor at a so
early stage that it did not affect the preceding vowel, cf. Lane
1960, p. 73.

Another Tocharian word, A *yok,* B *yok* 'hair; colour' has been
explained by Winter (1980) as deriving from I.-E. **i̯ēg^u-*, cf. Gk.
ἥβη 'manhood, strength of youth', Lith. *jėgà* 'strength' (for the
semantic side, see Winter's convincing arguments in the work
cited). Winter takes this Tocharian word as a consonant stem in
which the root vocalism has suffered labial rounding before
Toch. **kw.* The Greek and Lithuanian words, he argues, repre-

sent secondary transfers of earlier neuter (cons. stem) collectives to the fem. $\bar{a}$-stem flexion.

However, if all three words, AB *yok*, A *ak, wak*, B *ek, wek*, remained consonant stems throughout their Tocharian history, it is quite suspect to find rounding in the first word, but no rounding in the latter two. Besides, Winter is wrong in maintaining[5] that „labialization in B affects /e/ ... when it derives from Common Toch. /ē/" (i.e. in my notation: from CT. *α < I.-E. *$\bar{e}$ and not CT. *α < I.-E. *o). That statement is contradicted by B *śerkw* < *$śærkwän$ < *$kērgur/n$- which together with the other examples above shows that rounding of the reflex of CT. *α (of whatever origin) did not take place in West Tocharian at all.[6]

It is only by assuming an *u*-umlaut to explain the vocalism of AB *yok*- that one can by-pass these difficulties. A proposal that the old consonant stem *$\underset{.}{i}\bar{e}g^u$- at some point in the history of Tocharian became an *u*-stem is not as ad hoc as it might sound. B *yok* has the plural *yākwa* < CT. *$yākwā$ (with the labial factor regularly retained in non-final position) which could be interpreted as an *u*-stem parallel to the plural *$\bar{a}rwā$, an *u*-stem with the singular *αru 'wood'. The proportion *$\bar{a}rwā$: *αru = *$yākwā$: X could have yielded X = *$y\alpha ku$ for regular *$y\alpha k$. Like *αru became AB *or*, so *$y\alpha ku$ also suffered *u*-umlaut and appeared as AB *yok*, cf. Hilmarsson 1985 a. Thus the discrepancy between A *ak, wak* on the one hand and *yok* on the other could be avoided.

2) A *arkant*- (B *erkent*-) 'black' was associated with A *orkäm*, B *orkamo* 'dark' by Krause–Thomas (1960, p. 57, 66). Further Indo-European cognates, they indicated, would be Gk. ἔρεβος 'darkness (of the underworld)', Goth. *riqis* 'darkness' etc. (originally Petersen 1933, p. 21), so that the Tocharian words would derive from I.-E. *org^u-. This comparison was accepted by Van Windekens 1969, p. 486, who at the same time stressed that the

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[5] Unpublished article, kindly submitted to me in manuscript by Prof. Winter. [Now published, Winter 1985.]

[6] The Verb *yok*- 'to drink' may have a generalized *o*-vocalism from the first person sg. pres.-subj. *yoku*, i.e. *u*-umlaut.

suffix A *-ant-,* B *-ent-* might be considered comparable to the one observed in Lat. *argentum* 'silver', Skt. *rajatá-* 'id.'. Later Van Windekens (1976, p. 150, 340–341) explicitly stated that A *arkant-,* B *erkent-* were to be derived from I.-E. **org^u-onto-,* whereas A *orkäm,* B *orkamo,* apparently because of the difference in vocalism, would represent I.-E. **org^{u}mō(nt)-.* This form would yield CT. **ārkmo(nt)* and the sequence *ā–o* became *o–o* in West Tocharian, whereas in East Tocharian the regular form **ārkäm* appeared as *orkäm* through the influence of B *orkamo.*

Van Windekens' explanation of these latter words is somewhat unsatisfying. The postulated vocalic grade **ōrg^u-* is otherwise not attested, the change B *ā–ā* to *o–o* is doubtful (cf. B *swāñco, āppo, āyor* etc.; see also discussion of B *oṅkolmo* below), and one might wish to avoid accepting the influence of the one dialect upon the other unless absolutely evident.

Actually, the solution is far simpler. I.-E. **org^{u}mōn* (cf. for the vocalism Gk. ὄρφνη < **org^{u}snā,* Frisk 1965, p. 431–432) / **r̥g^{u}mōn* would result in CT. **ærkwmo* (for I.-E. **R̥-* > CT. **æR-,* Hilmarsson 1984b, p. 116–118) and this form would further develop into B **orkwmo* (*o*-umlaut) > *orkamo* (reduction of *kw* to *k* and insertion of an anaptyctic, accentuated *ä*). In East Tocharian CT. **ærkwmo* would yield **arkwäm*[7] (apocope and anaptyctic vowel) > *orkäm* (rounding through *kw* and subsequent reduction of *kw* to *k*).

Now, if A *orkäm* and *arkant-* both derive from I.-E. **org^u-* or **r̥g^u-,* it is quite disconcerting to find rounding in the one word and no rounding in the other. One might wonder whether these words are cognates at all. It was indicated that Van Windekens (1969, p. 486) had stressed that the suffix of A *arkant-,* B *erkent-* might be comparable to that of Lat. *argentum.* That thought might be worth persuing further by proposing that Lat. *argentum* and A *arkant-,* B *erkent-* actually are cognates and that A *orkäm,* B *orkamo* are no relatives of theirs.

Phonologically and morphologically, this would fit perfectly, and the semantic difficulties are not insurmountable. The root

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[7] Cf. below for the possibility of *o*-umlaut affecting East Tocharian.

*$H_2erĝ$- appears in the sense 'shining, white, silver' in many
Indo-European languages, cf. Pokorny 1959, p.64-65, and
Tocharian is no exception, for here we find A *ārki*, B *ārkwi*
'white' < CT. *$ārkw$- (plus an -*i*- of obscure origin) < I.-E.
*$H_2erĝu$- (*u*-umlaut did not affect Toch. *ā*, Hilmarsson 1984b),
cf. Skt. *árju-na*- 'shining, white', Gk. ἄργυ-ρο-ς 'silver', ἄργυ-φο-ς
'silver-white' (epith. of sheep), cf. Meillet 1911, p.149; Van Win-
dekens 1976, p.167; Adams 1980 (1981), p.441 ftn.7. This fact,
however, need not deter us from deriving Toch. A *arkant-*, B
erkent- 'black' from that same root. The semantic association of
the notions 'white' : 'shining' : 'black' is of frequent occurrence
in diverse languages. It may suffice to mention OHG. *blanc*
'glistening white' as against Mod. Engl. *black*, or OIcel. *blakkr*
'pale, yellowish brown' as against Mod. Icel. *blakkur* 'dark,
black'.

Phonologically, A *arkant-*, B *erkent*- would reflect an Indo-
European zero grade root vocalism and an *o*-grade suffix vocal-
ism, i.e. < CT. *$ærkænt$- < I.-E. *$H_2r̥ĝ-ont$-, and the lack of
rounding would be understandable, since no labiovelar is
involved.

There remains only the morphological question. Lat. *argen-
tum* 'silver' is a thematic formation, deriving from I.-E. *$H_2erĝ-
n̥t-o-m$, cf. also other Italic forms, such as Faliscan *arcentelom*
'small silver vase', Oscan *aragetud* (abl.) 'silver'. Its Celtic cog-
nates (OIrish *arcat* (also *arggit, airget* – all reflecting [*ar'g'əd°*]
as seen in Mod. Irish *airgead* –), Mid. Welsh *ariant*, Mod. Welsh
arian, Bret. *arc'hant*, Gaul *Arganto*-) are probably best seen as
identically formed (I do not understand why Mallory and Huld
(1984, p.3) posit a zero grade root vocalism for the Celtic
words). Further cognates (also with a thematic *nt*-suffix) are
found in Iranian, cf. Av. *ərəzatəm* 'silver', OPers. *ardatam* 'sil-
ver' (Ossetic *ærzæt* 'bronze' might be a loanword, cf. Benven-
ist[e] 1965, p.137), whereas Arm. *arcat'*, according to Greppin,
cited by Mallory-Huld, op.cit., p.4, may be entirely non-Indo-
European.

OPers. *ardata*- can reflect an I.-E. *$H_2erĝ$- or *$H_2r̥ĝ$- (cf.
Kent, p.1953, 15-16), but on the testimony of Av. *ərəzata*- a
zero grade is always posited. However, one might possibly be

justified in contesting the evidence of the Avestan word. The modern Iranian language Yezdi (of Kurdish stock) has $\bar{a}l\bar{\imath}$ 'silver' (with $-\bar{\imath}$ based on the analogy to gold terms, Mallory–Huld, loc. cit.) in which $\bar{a}l$-, according to Benveniste 1929, p. 59–60, must reflect a normal grade $*H_2erg$- > Proto-Iranian $*arz$-. If the term for 'silver' is of Indo-European origin, as commonly accepted and convincingly argued by Mallory–Huld, it would be strange, if Iranian possessed this thematic formation with two different ablaut grades. The normal grade of Yezdi $\bar{a}l\bar{\imath}$ and the Italo-Celtic forms thus induce one to probe for an alternative explanation of the Avestan form.

According to Kellens (1974, p. 275) there is some imprecision as to the general treatment of initial syllables from $*\dot{r}$ in the Avestan manuscript tradition, which he then proceeds to demonstrate on the example of *arənauuac-* 'who pronounces the wrongs', which is sometimes written with an initial *arə-* and sometimes *ərə-*. One might then wonder, whether such oscillation is found in the writing of original $*ar$-. Actually, in the case of our silver-term (all occurrences, except one, are in the Younger Avesta) all manuscripts, according to Geldner 1895, show a consequent zero grade *ərə-*. However, on the example of another word, Bartholomae's *arəg-* 'to be worth', containing an ascertainable normal grade (= Skt. *arh-* 'id.'), it can be observed that also in the case of original Iranian $*ar$- do the Avestan manuscripts hesitate between *arə-* and *ərə-*. Thus e.g. in Yasna 50.10 we encounter *arəjat̰* in K 5.4, J 3.6.7, Jpl, Hl, Jml, L 13, but *ərəjat̰* in J 2, Pt 4, Mf1, K 11, L 1.2.3, Dhl, B 2, Bbl (but in Yasna 10.17 only *arəjahe*, Yašt 9.30 only *arəjat̰-*, Yašt 5.116 only *arəjat̰-*, whereas Yasna 53.9 has a rich variation *arəǰ-, ərəǰ-, raǰ-, rah-, riǰ-*). Therefore, in spite of the uniform rendering of Av. *ərəzata-*, there is a distinct possibility that *ərə-* here might be a generalized orthography for a 'more correct' and expected *arə-*. The Avestan word (and therefore also the ambiguous OPers. *ardata-*) would then be reconcilable with the Yezdi form and their Italo-Celtic cognates, indicating a uniform I.-E. $*H_2erg\hat{n}tom$.

Now, Mallory–Huld are probably right that $*H_2erg\hat{-}nt$-o-m should be classified as a substantivization and thematicization

of an original adjective or even an *nt*-participle. Such adjective
(← participle) might actually be reflected by Toch. A *arkant-*, B
erkent-, whose flexion is athematic (A nom. pl. masc. *arka(m)ś*
like *kramś* 'good' < CT. *$*kär\mathit{œ}ncäs$* < I.-E. *$*k\mathit{r}H\text{-}ont\text{-}es$*, B obl.
sg. masc. *erkent* like *krent* < CT.*$*kär\mathit{œ}ntäm$* < I.-E. *$*k\mathit{r}H\text{-}ont\text{-}m$*,
cf. OIrish *car(a)e* 'friend' < *$*karants$* < *$*karonts$* < I.-E.
$*k\mathit{r}H\text{-}ont\text{-}s$, J. E. Rasmussen, private communication). These
Tocharian forms would derive from CT. *$*\mathit{œ}rk\mathit{œ}nt\text{-}$*, as shown
above, and further from I.-E. *$*H_2r\hat{g}ont\text{-}$*. The flexion of this
Indo-European adjective (participle), it might be suggested, was
nom. sg. *$*H_2r\hat{g}\text{-}ont\text{-}s$* (which regularly yielded the Tocharian
forms), gen. sg. *$*H_2r\hat{g}\text{-}nt\text{-}\acute{o}s$*, from which the silver-term *$*H_2er\hat{g}n\text{-}tom$*
may have been derived as a vṛddhi formation.[8]

3) The lack of rounding in A *maku* '(finger)nail', *saku* 'pus'
seems unexpected. The corresponding West Tocharian forms,
mekwa (pl.) and *sekwe*, show that the Common Tocharian pre-
forms must have been *$*m\mathit{œ}kw\mathit{œ}$* and *$*s\mathit{œ}kw\mathit{œ}$* from I.-E.
$*nogh\underset{\smile}{u}o\text{-}$ (with *n-* assimilated to *m-*?) and *$*sok^uo\text{-}$* resp., which
should have yielded rounded forms in East Tocharian as shown
by A *oṅk* 'man' (= B *eṅkwe*) from CT. *$*\mathit{œ}\dot{n}kw\mathit{œ}$*.

However, it is possible that the discrepancy between A *saku*,
maku and *oṅk* on the one side and A *saku, maku* and *yuk* (= B
yakwe) from CT. *$*yäkw\mathit{œ}$* 'horse' on the other might be explic-
able in terms of syllable structure and phonotactics. Also, it is
possible that an exact chronological ordering of a set of sound
changes, operating from the Common to the East Tocharian
stage, might shed some light on this problem. Thus, it might be
relevant to know the relative chronology of rounding, *u*-umlaut,
change of *ä* to *u* before labials, delabialization of *kw*, apocope,
etc.

I. *U*-umlaut was a process that in all probability began

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[8] Although I.-E. *$*H_2er\hat{g}ntom$* 'silver' is not attested in Tocharian, it is perhaps
conceivable that its previous existence might be inferred from the fact that the
actual words for silver in Tocharian, A *nkiñc* (with *-ñc* after the adjective
nkäñci), B *ñkante* (possibly a borrowing from Ancient Chinese *$*ngi\mathit{e}n$*,
according to Van Windekens 1976, p.634), show a suffix deriving from CT.
$*\text{-}änt\mathit{œ}$ which may have been added to the loanword on the analogy of an
indigenous *$*\bar{a}rkänt\mathit{œ}$* < *$*H_2er\hat{g}ntom$*.

already in Common Tocharian, as it affects East and West Tocharian alike. It was probably still operative in the early stages of East Tocharian, if one is to judge by such cases as A *cmol* 'birth' which was an *u*-stem in East Tocharian (pl. *cmolu*), whereas B *cmel* with the plural *cmela* points to an earlier consonant stem. That is to say, CT. **cmæl* → early-A **cmælu* > **cmolu* > *cmol,* cf. Van Windekens 1976, p. 252. On the other hand, *u*-umlaut ceases to be operative before the apocope of final (CT. **-æ* >) A **-a,* because, when that sound was dropped, a new final *-u* emerged (cf. **sakwa* > *saku*) which did not cause *u*-umlaut.

II. Apocope of final **-u.* This change, of course, occurs after the operation of *u*-umlaut and may even have been the cause of its cessation. However, it is also possible that this apocope occurred only shortly before or simultaneously with the apocope of final **-a* and final vowels in general. For the purposes of the matter under discussion here, this is not relevant.

III. A *ä* > *u* before a labial. It is possible to put a relative date to this change on the basis of the opposition *yuk : saku.* The divergent treatment of the Common Tocharian final **-kwæ* in these two words[9] suggests that the labial element had been lost in the first word at the time of the apocope of (CT. **-æ* >) A **-a.* Such loss might be explained in terms of a dissimilation of the sequence *u(...)kw* to *u(...)k,* i.e. A **yukwa* yielded **yuka* which through apocope resulted in the attested A *yuk,* whereas if one does not assume dissimilation in **yukwa,* the resulting form would have been **yuku* (cf. CT. **sækwæ* > A **sakwa* > *saku*). The dissimilation, of course, presupposes the rounding of *ä* to *u* before a labial (cf. also A *ṣuṅk* 'throat' (B *ṣaṅkw*), *tuṅk* 'love' (B *taṅkw*), *ṣurm* 'cause' (B *ṣarm*)). Van Windekens discussed this problem (1962, p. 181–182) and saw two possibilities: either I.-E. **eku̯o-* was reflected by A **yäku* which

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[9] Anreiter 1984, p. 64 contends that the Indo-European sound combination *velar plus u̯* developed differently from a plain labiovelar in Tocharian. This claim is falsified by pairs like A *saku : maku,* B *sekwe : makwa* (I.-E. **soku̯o- : *noghu̯o-*) and A *yuk : maku* (I.-E. **eku̯o- : *noghu̯o-*). If B *cake* 'river' reflects I.-E. **teku̯os,* the loss of the labial factor is unexpected, but must be due to some environmental disturbances.

became *yuku through u-umlaut, or the umlaut occurred in an earlier form *yäkwV and *-kwV later lost the w. However, both suggestions are incompatible with the development seen in saku, maku.

IV. The sequence u(...)kw becomes u(...)k. As shown above, this change comes after the change ä > u before a labial, but it precedes the apocope of (CT. *-æ >) A *-a or else *yukwa would have resulted in *yuku as *sakwa in saku.

V. Apocope of A *-a. It was shown that the apocope must be dated after the above-mentioned changes. On the other hand, it must have occurred before the rounding of (CT. *æ / *å >) A a before labials, or else one would have expected A *sakwa > *sokwa > *soku. Through apocope, A *-kwa became -ku with the consequence that *sakwa, *makwa resulted in the attested saku, maku. Later, when A a was rounded before labials, these words no longer contained any -kw-, the necessary conditioning factor of rounding. And since u-umlaut had ceased operating, there was no change to *soku, *moku.

However, matters are complicated by the fact that one word, A oṅk 'man', does not seem to comply with these rules. The corresponding West Tocharian form, eṅkwe, shows that the Common Tocharian preform was *æṅkwæ, which, according to the above, should yield A *aṅkwa and through apocope A *aṅku. This form should not have been rounded and should not have lost its final -u.

I can offer no explanation as to why -w- was not vocalized in this word after the apocope. The only structural difference between *aṅkwa on the one side and *sakwa / *makwa on the other is the sequence -ṅkw- as against -kw-. It is no use contending that -w- did not vocalize after a closed syllable, for this is falsified by e.g. *käntwo > A käntu 'tongue'. For the moment an ad hoc postulation will therefore have to suffice, namely, that after the apocope, the sequence *-kw yielded -ku, whereas *-ṅkw remained unvocalized. CT. *æṅkwæ > A *aṅkwa thus resulted in *aṅkw (apocope and no vocalization), and since -kw was still intact, this form was subject to rounding and yielded *oṅkw > oṅk.

VI. Rounding of A a to o before kw. This change, it was

argued above, must have taken place after the apocope of final
vowels, whereas on the other hand, obviously, it must have pre-
ceded the delabialization of *kw*.

VII. Delabialization of *kw*.

Bearing in mind the special phonotactics of A *aṅkwa*, and
adhering to the relative chronological order of the sound
changes as argued above, i.e.

   I. *u*-umlaut
  II. apocope of *-u*
 III. *ä* > *u* before a labial
 IV. *u*(...)*kw* > *u*(...)*k*
  V. apocope of *-a*
 VI. rounding of *a* to *o* before *kw*
VII. delabialization of *kw* to *k*

the development of A *yuk, saku* and *oṅk* becomes intelligible,
and A *saku, maku*, the apparent exceptions to the laws of
rounding, are seen to be quite regular, cf. the following scheme
(at stage A are set the changes CT. *æ, *å̊, *ai* > A *a, a, e* resp.,
although they might have taken place later (before stage VI at
the latest)):

CT.	*æru	*yäkwæ	*sækwæ	*æṅkwæ	*på̊kwai-
I	*oru	--	--	--	--
A	-	*yäkwa	*sakwa	*aṅkwa	*pakwe-
II	*or*	--	--	--	--
III	-	*yukwa	--	--	--
IV	-	*yuka	--	--	--
V	-	*yuk*	*saku*	*aṅkw	--
VI	-	-	--	*oṅkw	*pokwe
VII	-	-	--	*oṅk*	*poke*

Rounding before *p* is found in the following cases:

> *klop* 'pain; misfortune' < *klap* < CT. *klæpæ < I.E.
> *ghlobom*, cf. OIcel. *glap* 'misfortune, mishap' (Hilmars-
> son 1985b)
> *korpā* 'against' < *karp(-ā)* < CT. *kærpæ < I.E. *kuor-
> pom*, cf. OIcel. *hvarf* 'turn' (cf. Van Windekens 1976, p.230

who, however, operates with an *u*-stem and therefore *u*-umlaut in this word);

opäśśi (B *epastye*) 'adept'[10] < **apäst* (+ *ya* < I.-E. *-ịo-*) < CT. **œpästu-* < I.-E. **opi-stHu-*;

opṣäly (B *ekṣalye*) 'season' < **apṣäly* (etymology uncertain);

opyāc (B *epiyāc*) 'in memory' < **apyāc* < CT. **œpiyāc* ← Mid. Iran. **abiyātiš* (cf. Hansen 1940, p.151, Isebaert 1980, p.103);

opänt- (B *epiṅkte*) 'in the middle' (cited by Winter 1982, p.401) < **apänt-* < CT. **œ(n)pänktœ* < I.-E. **ṇ-penkᵘto-* (i.e. 'in the fifth place' (with reference to the four cardinal points) = 'in the middle', as suggested by Winter, personal communication);

opärkā traditionally 'in the morning', but perhaps rather 'early', cf. below for a discussion of this word.

Other words with A *o* before *p* are either etymologically unclear, or do not derive their *o*-vocalism from earlier A *a*. Thus A *orpaṅk* 'tribune (?)' may be a compound of A *or* 'wood' + *paṅk* 'bench' as suggested by Van Windekens 1966, p.497, or Isebaert 1980, p.142 might be right that this word derives by metathesis from earlier **ārpoṅk* < CT. **ārpoṅk* ← Iran. **āru-pōng*. A *ṣtop* / *ṣtow* 'stick' is compared to Gk. στύπος 'stump, stick' by Van Windekens 1976, p.464, and might thus derive from I.-E. **stoupo-*, cf. OIcel. *staup* 'stump (of metal)'. On the other hand, A *prop* in *prop-mahur* 'diadem' is a loanword, cf. Skt. *prabhā-* 'light, splendour' (Van Windekens 1976, p.638).

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[10] The West Tocharian correspondence of this word is *epastye* with no palatalization. This indicates that the suffix A *-i*, B *-ye* (< CT. **-yœ*) here is a late addition, as also suggested by B *epastäññe* (beside *-styä-*) 'aptitude'. Because of B *epastäññe*, Isebaert's derivation (1977, p.384–385; 1980, p.136) of B *epastye* from **-ped-styo-* is not feasible. Rather, this form points to a previous consonant stem or an *u*-stem. The I.-E. root **steH₂-* 'to stand' with an *u*-suffix and various prefixes was used to form adjectives in Indo-European as reflected by Lith. *apstùs* 'abundant', *atstùs* 'distant', Arm. *astu(ac)* 'God, creator' < **sm̥-stHu-(aĝos)* (cf. Hilmarsson 1983), Skt. *anuṣṭhú* 'properly, correctly, really' (cf. Mayrhofer 1976, p.806), *suṣṭhú* 'aptly'. Similarly, the Tocharian words in question might derive from I.-E. **opi-stHu-*.

The corresponding West Tocharian form is *prāp* which indicates an underlying A /ā/ and not /a/ (cf. also A *wrok*, B *wrākai* (obl.) 'pearl').

Apparent exceptions to the rule of rounding before *p* are as follows:

1) *apärkär* (B *emparkre*) 'long, in detail'
2) *apälkāt* (B *empālkatte*) 'unworried'
3) *lap* 'head'
4) *napem* 'human being'
5) *rape* 'music'
6) *svarp / sparp* 'string'
7) *warp* (B *werpe*) 'enclosure'
8) *rapurñe* 'passion'
9) *tarp* 'pond (?)' (cf., however, discussion below)
10) *kapśañi* 'body' (B *kektseñe*)
11) *śalpem* par. 'soles (of the feet)'
12) *trap-* 'to stumble' (B *trāpp-*)
13) *tampe* 'force'
14) *kāryap* 'damage' (B *karep*)
15) *anapär* 'before' (B *enepre*)

When one considers the first six words on this list, all of which possess what can be termed as certain or relatively certain etymologies, it is immediately striking that all show *p* deriving from I.-E. **bh*. Thus we have:

1) *apärkär* 'long, in detail' adv. to the adj. *pärkär* 'long' < I.-E. **bhr̥ĝhro-*, cf. Arm *barjr* 'high' (Meillet 1912, p. 115),
2) *apälkāt* 'unworried' to the verb A *pälk-* 'to see; to shine' < I.-E. **bhelg-/*bhl̥g-*, cf. φλέγω 'to burn' (Meillet 1911, p. 148, Sieg–Siegling–Schulze 1931, p. 389,
3) *lap* 'head' < CT. **læpœ* < I.E. **lobhos*, cf. Gk. λόφος 'neck, crest of a helmet' (Schulze 1933 (= 1927, p. 252).
4) *napem* 'human being' < I.-E. **nobh-*, cf. Av. *nāfah-* 'family', *nāfya-* 'belonging to the family, relative', Sogd. (buddh.) *n'β* 'people' and further Skt. *nābhi-* 'navel' etc. (Van Windekens 1976, p. 309),

5) *rape* 'music' < CT. **ræp-* < I.-E. **robh-*, cf. Mid. Irish *reb* 'play' < **rebhā,* Swiss German *räbeln* 'make noise' (Van Windekens 1941, p. 105),

6) *svarp / sparp* 'string' < **swærpœ* I. E. **su̯orbhom,* cf. OIcel. *svarfa* 'to swerve', Welsh *chwerfu* 'turning' (Van Windekens 1968, p. 98).

Conversely, none of the words with rounding of A *a* to *o* before *p* contain an etymological **bh* except, apparently, *opärkā* 'in the morning' which Van Winkekens 1976, p. 339 analyses as *o-* (prefix) + *pärk-* 'to rise'. Since Van Windekens does not reckon with rounding in East Tocharian (only *u-* / *w-* umlaut), he takes this word as a borrowing from West Tocharian, where the prefix could have the form *o-* through *o*-umlaut before a syllable containing *-o-*. But *opärkā* has no *-o-* in the second syllable, and a matching West Tocharian word is lacking. Therefore, an internal East Tocharian solution seems preferable.

If one does assume that rounding was just a sporadic phenomenon in East Tocharian, Van Windekens' analysis of *opärkā* would be quite acceptable. The verb AB *pärk-* 'to rise' is used of the sun, so that *opärkā* 'in the morning' would equal 'at sunrise'. Still, since AB *pärk-* derives from I.-E. **bherĝh-* / **bhr̥ĝh-* (cf. Skt. *br̥hánt-* 'high', Van Windekens 1941, p. 90), and since the thought being persued here is that rounding did not occur before an original **bh,* divergent treatment of the prefix in A *apärkär* on the one hand and *opärkā* on the other, if both contain *-pärk-* from **bherĝh-* / **bhr̥ĝh-,* would be quite incomprehensible.

Actually, an alternative explanation of A *opärkā* might be proposed. This word is a hapax, occurring only in A 265 a3, viz.

opärkā koṃ pärkamāṃ säs parno wrasom

which need not necessarily be translated '*in the morning* (= at sunrise), as the sun was rising, this illustrious being', but might also equal '*early,* as the sun was rising, this illustrious being'. The latter translation would be justified, if *-pärk-* in A *opärkā* derives not from I.-E. **bhr̥ĝh-,* but from **pr̥ko-* 'early, quick, fore' as found in OIcel. *forr* adv. 'quickly', adj. 'forward, eager'

< Germ. *furha- < I.-E. *prko- (cf. also Gk. πρόχα 'forthwith'),
a guttural extension of I.-E. *pṛ- 'forward, fore'. In the light of
such derivation, the initial rounded vowel of opärkā < *apärk-
< CT. *æ(n)pärkæ < I.-E. *n̥-prko- (*n̥- 'in, at'), as against the
unrounded one in apärkär would be comprehensible. In the
first word there is an etymological *p, whereas in the latter there
is an etymological *bh.

As for the remaining words showing no rounding before A *p*
(no's 7–15 on the list above), an etymology with I.-E. *bh is in
some cases conceivable, in other cases no etymology is ascer-
tainable and in still other cases disturbing factors may have pre-
vented rounding from taking place. Thus:

7) *rapurñe* 'passion' could derive from an I.-E. *robh-, cf. Skt.
   rábhas- 'violence, impetuosity', *rabhasá-* 'wild' < I.-E.
   *rebhos- / *robhos-, Osset. (D.) *ravgœ*, Osset. (I.) *ravg* 'jeal-
   ousy, longing' < *rābaka- (cf. Benvenist[e] 1965, p. 28).
   Such etymology was first proposed by Poucha 1930, p.
   315, although he felt compelled to reconstruct I.-E. *rabh-
   on account of Lat. *rabies* 'rage, madness' (cf. also Pokorny
   1959, p. 852 who hesitates between *rabh- and *rebh-).
   However, an I.-E. *rabh- would yield Toch. A *rāp- and
   not *rap-*, so that a normal ablauting *rebh- / *robh- seems a
   more feasible solution, esp. in view of the fact that Lat.
   rabies may have a secondary *a*-vocalism (like *magnus*
   etc.). Van Windekens' alternative (1976, p. 401) is not com-
   pelling (to Gk. ῥέπω 'I incline, bend toward').

8) *warp* 'enclosure' (B *werpe*) along with A *warpi* (B *werwiye*)
   'garden' etc. might derive from I.-E. *u̯orbh-. Such etymol-
   ogy (i.e. *u̯orbh- or *u̯orb- 'to turn, entwine') was pro-
   posed by Lane 1938, p. 29 and is accepted by Van Winde-
   kens 1976, p. 561, cf. Lith. *vir̃bas* 'twig', Lat. *verbera* 'rod'.
   Cf. also Hitt. *u̯arpa-* 'enclosure' and discussion in Mel-
   chert 1984, p. 157.

9) *tarp.* The meaning assigned to this word by Thomas (1964,
   p. 103) 'Teich' and Van Windekens (1976, p. 493) 'étang',
   i.e. 'pond', is not entirely certain. This is acknowledged by
   Thomas 1957, p. 280, ftn. 1. It occurs three times, viz.

70 b 5 ///*şluneyntu pälkātār kācky arşäntās şäññā rārpunt
        tarpsaṃ wri*(s)

(textual emendation by Sieg 1952, p. 44 who translates:

'... die ..., welche Sehnsucht hervorrufen, siehst, (wenn
du) in den von Natur gegrabenen Wasserläufen (?) des
Wassers';

145 b 6   *sudarśaṃ riyac kātse ñäkciṃ wäryo ywic[a] tsopats
          tarp cäş antul(e) säm ştām lantu tämyo*

translated by Thomas 1957, p. 280:

'In der Nähe der Stadt Sudarśana [ist] ein mit himmli-
schem Wasser gefüllter großer Wasserlauf (?). Aus diesem
heraus [ist] der Baum gegangen. Deshalb (wird er Pārijāta
genannt)'.

In its third occurrence (219 b 4) *tarp* (i. e. pl. *tarpañ*)
stands beside *kärtkalyi* usually translated 'ponds' (but B
kärkkälle 'mud, mire' rather than 'pond', cf. Thomas 1976,
p. 112, K. T. Schmidt 1984, p. 152). Although this text is
only fragmentary, there is no reason to believe that
kärtkalyi here defines *tarpañ*. Rather, if one here has a list-
ing of some sort, these two words probably had distinct,
albeit possibly related meanings. Sieg and Thomas, as
seen above, translated *tarp* as 'Wasserlauf (?)', i. e. 'water-
course, water-bed'. A more accurate sense of this word,
one might perhaps suggest, was 'water-bed covered with
vegetation'. Such sense seems to be implied 1) by the fact
that in 145 b 6 a tree is said to grow out of *tarp*, and 2) by
the fact that in 70 b 5 *tarpsaṃ wri*(s) 'in the *tarp* (pl.) of the
water', as pointed out by Sieg (loc. cit.), translates Skt. *sar-
itkuñjāś ca sodakās* (*saritkuñja*- 'water-place overrun with
plants', *sodaka*- 'containing water').

Duchesne-Guillemin's derivation (1941, p. 154, accepted
by Van Windekens 1976, p. 493) from I.-E. **torpo-* (cf.
Lith. *tárpas* 'interval, cavity'), although perhaps still possi-
ble, would lose some strength, if one accepts the meaning
'water-bed with vegetation' instead of 'pond' for A *tarp*.
However, this 'new' sense opens up for another possible
etymological explanation, which seems immediately pre-

ferable for semantic reasons and also (on the assumption that rounding did not take place before *bh) for phonological reasons. A *tarp* might derive from I.-E. *dorbho-, cf. Skt. *darbhá-* 'grass, tuft of grass', White Russ. *dórob* 'basket', Olcel. *torf* 'turf, peat', OHG. *zurf* 'lawn' etc., cf. Pokorny 1959, p. 211–212.

Drosdowski (1977, p. 204–208) has argued against an association of the Sanskrit and Germanic words. Since Skt. *darbhá-* 'tuft or grass' certainly is to be linked to the verb *dr̥bháti* 'strings or ties together, ties in a bunch', a basic root *derbh-* 'to braid, entwine' should be posited, cf. also Skt. *darbhana-* n. 'mat of grass', Av. *dərəwδa-* 'bundle of muscles', West Iran. *(ham-)darb-* 'to sew' (Mayerhofer 1963, p. 60), White Russ. *dórob* 'basket' < *dorbho-, cf. Słowski (ed.) 1981, p. 112–113. Drosdowski then goes on to claim that since the sense 'grass, tuft of grass' is not attested in Germanic, and since there is no reason to assume a semantic transition of that sense to 'turf, peat', the Germanic words, found only in the latter sense, cannot derive from the same root. Furthermore, for semantic reasons, there can be no connection between OHG. *zurf* etc. and verbs like OHG. *zerben* 'to turn', *zirben* 'to turn in rounds', OEngl. *tearflian* 'to roll' etc. Rather, by focusing on the meaning 'turf, peat', one is bound to turn to the Balto-Slav. representations of the root *der-* 'to split, rip', where the meaning 'turf, peat' is abundantly attested. As a bridge between this family of words and the Germanic turf-words, Drosdowski points out Russ. (dial.) *derbá* 'new-broken ground; turf', *derbovátь* 'to break ground, remove moss, turf, vegetation'.

However, it seems that Drosdowski's arguments are not necessarily valid. First, Russ. (dial.) *derbá* (*derbovátь*), according to Boryś (see Słowski (ed.) 1979, p. 62–63), derives not from Slav. *dr̥ba (as assumed by Drosdowski, Pokorny 1959, p. 212 and others), but rather from Slav. *derьba with the verbal abstract suffix -ьba added to the root *der-. A direct comparison with the Germanic turf-words would then be excluded.

Second, the question of a semantic transition of 'tuft or grass' (Skt. *darbhá-*) to 'turf, peat' (OIcel. *torf*) is not essential, for in both cases we are confronted with a secondary meaning which has evolved from the primary meaning of the root **derbh-*, i. e. 'to braid, entwine'. Thus Skt. *darbhá-* and White Russ. *dórob,* signifying 'tuft of grass' and 'basket' resp., both derive from a basic I.-E. **dorbhó-* 'that which is braided, entwined'. The essential question would therefore rather be: can there be a semantic transition of 'to braid, entwine' to 'turf, peat'?

A quick look at the sense of Icel. *torf* immediately reveals that this can be so, for the entwining and matting of plant roots is at the core of its semantics. Thus the Íslenzk orðabók (Böðvarsson, (ed.), 1963, p. 729) defines *torf* as 'the soil of marshy ground and flooded tracts of land, dense with entwined and matted plant roots; peat'. Note also the idiom *torf = tyrfið mál* 'complicated speech'. The same can be observed in other Germanic languages, e. g. Engl. *turf* 'covering of grass etc. with matted roots; sod; peat'. There is therefore no semantic obstacle that would deny a derivation of this Germanic family of words from the Indo-European root **derbh-* 'to braid, entwine'.

Toch. A *tarp,* if 'water-bed with vegetation' (cf. Icel. *torf* 'soil of flooded land, dense with matted plant roots'), although agreeing with Skt. *darbhá-* and White Russ. *dórob* in word-formation (I.-E. **dorbhó-*), would agree with Germanic as far as the semantic development is concerned.

10) *kapśañi* 'body' is of disputed origin, cf. Van Windekens 1976, p. 187–188. B *kektseñe* shows *-k-* for A *-p-,* indicating that the latter may be the result of dissimilation. A quite plausible comparison was suggested by Toporov (1973, p. 148–150): to Lith. *kaktà* 'forehead', *kaktenà* 'skin of the forehead; part of helmet covering the forehead; hill-top' (< **kok-tien-* or the like). The dissimilation in East Tocharian would have taken place after the law of rounding ceased to operate.

11) *śalpeṃ* par. 'soles (of the feet)'. It is inviting to analyse this
    word as a compound with *-pᶜṃ*, the paral of *pe* 'food' (cf.
    Van Windekens 1976, p. 470), and assume that rounding
    did not take place across the compound boundary.

12) *trap-* 'to stammer' (cf. Sieg's translation 1952, p. 13, but B
    trāpp- apparently 'to stumble') occurs only once in East
    Tocharian, and then in the form *trapmāṃ*, a Class VI pres.
    participle. The corresponding West Tocharian verb also
    forms a Class IV present, cf. *troppontär* (3. pl. med.). Van
    Windekens' etymology of this word appears solid (I.-E.
    *trop-, cf. OS. *thrabōn* 'to tread' etc.). The lack of rounding
    in A *trap-* may be due to system pressure: Class IV is char-
    acterized by the vowel sequence A *a–a* (B *o–o*), cf. A
    aratär 'stops', *asatär* 'dries', *praskatär* 'fears' etc., and this
    may have influenced the vocalism of A **trapatär, trap-*
    māṃ.

13) *tampe* 'force' surely derives from I.-E. **tomp-* (cf. Lith.
    įtampas (dial.) 'force, tension', usually fem. *įtampa*) as
    suggested by Van Windekens 1939, p. 127. The lack of
    rounding in A *tampe* may be seen in connection with the
    intervening *-m-*, as it appears that *-m-* usually did not have
    a rounding effect (cf. discussion below).

14) *kāryap* 'damage' (B *karep*), despite Van Windekens 1976,
    p. 196, has no clear etymology.

15) *anapär* 'before' (B *enepre*) may be analysed as *ana-* plus
    -pär < I.-E. **pro* (cf. Van Windekens 1971, p. 452). The
    lack of rounding in this word might be due to the fact that
    it is not the first but the second syllable that would be
    affected, i.e. one might assume that rounding occurred
    only in the first syllable of a word.

The evidence indicates decidedly that rounding of A *a* to *o*
did not take place before a *p* from I.-E. **bh*. Seven examples
support this (*apärkär* < **ṇ-bhṛĝh-*, *apälkāt* < **ṇ-bhḷg-*, *lap* <
*lobho-, *napeṃ* < **nobh-*, *rape* < **robh-*, *svarp / sparp* <
suorbho-, *tarp* < **dorbho-*) and two more may possibly be
added (*warp* < **uorbho-*, *rapurñe* < **robh-*). In the cases
where there is rounding before A *p*, that *p* derives not from I.-E.

*bh, but reflects I.-E. *b or *p or (in loanwords) Iranian *b. Furthermore, opärkā, instead of being a counter-example, affirms this conclusion. The only serious counterexample would be trap- < *trop-, but here one can blame the 'Systemzwang' for the unrounded vocalism.

This conclusion is of some consequence, as it implies that the labial occlusives *bh, *b, *p still had not merged into one in East Tocharian (at least not at the time of the rounding) and therefore not in Common Tocharian either. It has long been known that at the time of the palatalization in Common or Proto-Tocharian the three I.-E. dental occlusives were still kept apart or at least had not merged into one sound. The details concerning this matter are still disputed, but if the reflex of I.-E. *bh was still distinct from the reflex of I.-E. *p and *b (that had merged into one) in East Tocharian, it might lend support to Van Windekens' opinion (1976, p. 79–84) that the palatalized result of I.-E. *dh in Tocharian was ts as against c from I.-E. *t and *d (for different opinions on this matter, cf. Evangelisti 1959, p. 109–118, Winter 1962, p. 16–35, Anreiter 1982, p. 19–31 etc.).

This, however, was an early Tocharian process, whereas the divergent treatment of A a before p < *bh on the one hand and p < *p / *b on the other is a late dialectal phenomenon. Actually, there is further evidence that *bh developed differently from *p / *b. As pointed out by Van Windekens (1976, p. 79) *mbh yields Toch. m, but *mp / *mb yield Toch. mp, cf. A kam, B keme 'tooth' < *ĝombhos, but AB cämp- 'to be able' < *temp-. That process was probably Common Tocharian as it is reflected in both dialects alike, but still it supports our conclusion that the Tocharian reflex of I.-E. *bh somehow differed from that of I.-E. *p and *b.

If one is justified in that conclusion, it would appear that at some time in the history of Tocharian, distinction in voice was neutralized with the result that *p and *b merged in /p/, whereas the relevant feature determining the eventual reflex of *bh was not its voice but its aspiration.

There seem to be three general alternatives for the development of an aspirated occlusive. First, it may remain aspirated,

losing or not losing its voice. After the neutralization of voice distinction in Tocharian, *bh would be represented by the phoneme /ph/. However, it seems unlikely that that sound would be less prone to cause rounding that /p/. Also, there is little reason to assume that [mph] would be simplified to [m] whereas [mp] remained unchanged. Second, on aspirate may lose its aspiration, losing or not losing its voice. This alternative clearly does not apply to Tocharian, because after the loss of voice distinction, *bh > *b would have merged with the reflex of *p and *b. Third, an aspirate may become a fricative. Such development is common enough in Indo-European languages, cf. e.g. Greek, where I.-E. *bh passed through the stage /pʰ/ and yielded finally a voiceless labiodental fricative /f/, whereas e.g. in Germanic, I.-E. *bh turned out as a voiced bilabial fricative /ƀ/ (for certain at least internally in intervocalic position).

There are three phenomena of Tocharian phonology that might be elucidated, or at least more readily comprehensible, if it is assumed that the development of I.-E. *bh in that language was actually in the direction of a fricative rather than an occlusive: a) the lack of rounding before the reflex of *bh; b) the development of *mbh to m; c) the sporadic confusion of ⟨w⟩ and ⟨p⟩.

Ad a: Rounding did not take place before the fricative w, whereas it did take place before the occlusive [p] from I.-E. *p / *b (or Iranian b). The lack of rounding before a p from I.-E. *bh might then be taken to indicate a fricative quality of this reflex. This might be summered up in one rule: A a is rounded to o before a labial *occlusive,* but not before a labial *fricative.*

Ad b: I.-E. *mbh appears as m in Tocharian. It is possible that this development reflects a direct assimilation of *mbh to *mm > m. However, this would mean that the assimilation was prior to the neutralization of voice distinction, which is conceivable, but not very credible. Besides, if the assimilation occurred so early, original *mb might have been expected to be treated in the same manner. Apparently, it was not. For, if Van Windekens' analysis (1976, p.234) of Toch. B krämp- (kremp) 'to be disturbed', caus. 'to restrain, hinder' as deriving from I.-E. *kremb- / *kr̥mb- (*kromb-) is correct (cf. OE. hremman 'to restrain, hin-

der', OHG. $(h)rim(p)fan$ 'to contract'), it would indicate the non-assimilation of *mb.

The development of *mbh to m should therefore, more plausibly, be set at a later date, i.e. after the neutralization of voice distinction. The neutralization brought about the merger of *p and *b in /p/. If *bh was still an occlusive at that time, it ought to have yielded /pʰ/. However, there is little reason to assume that [mph] would suffer assimilation, whereas [mp] remained unchanged.

On the other hand, if *bh had become some sort of a fricative, say /ƀ/, by the time of the neutralization of voice distinction, the development of *mbh, through a stage *mƀ, to m could be set off against that of *mp / *mb to mp.

Ad c: The sporadic use of ⟨p⟩ for ⟨w⟩ and vice versa might also be seen in connection with the fricative quality of the Tocharian reflex of I.-E. *bh. If one assumes that Toch. p < I.-E. *bh actually represents a bilabial fricative /ƀ/, its occasional alternation with w would be comparable to the alternation of b and v in many varieties of Indic. This alternation, originally caused by the phonetic resemblance of the fricatives /ƀ/ and /w/ or /v/, thereupon spread to the graphemic level with the consequence that also the occlusive /p/ < I.-E. *p, *b, denoted by the same sign as the fricative /ƀ/ < I. E. bh, i.e. ⟨p⟩, came to be expressed by the grapheme ⟨w⟩ occasionally. Cf. also Van Windekens 1976, p.77 who suggests a tendency toward fricativization of all labial occlusives in Tocharian.

The evidence concerning rounding before m is conflicting. Thus rounding is possibly to be found in:

1) *omäskem* 'bad', *omäl* 'hot', *onmim* 'remorse',
2) *koläm* 'ship', *onkaläm* 'elephant' (if one assumes there was metathesis of vowel quality in this word, cf. however below),
3) *ñom* 'name', *ṣom-* 'one'.[11]

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[11] The verbal stems *yom-* 'to reach' (B *yom- only in the subjunctive and preterite forms, elsewhere *yäm-*) as well as *yow-* (Pret. III *yowā*, *yowäs*; B *yop-* only in the subjunctive, preterite and infinitive forms, elsewhere *yäp-*) and *yok-* (inf.; B *yok-* only in the subjunctive (also as pres. ind.?) and infinitive

For *śolyme,* denoting some instrument of torture, no secure etymology exists, and it will be left out of consideration here (the *o* might reflect a previous diphthong).

However, there is no rounding in the following cases: *kam* 'tooth' (B *keme*), *ram* 'witness' (B *reme*), *wram* 'thing' (B *wreme*), *slam* 'flame' (B *sleme*), **yśaläm* 'passion' (B *yśelme*), *tampe* 'force', *parmā* 'willingly' (B *perma*) etc. etc.

If one can draw any conclusions from a so conflicting material, it seems that group 1) indicates that A *a* in absolute initial position was rounded to *o* before *m.* Apparently, there are no counter-examples (*amok* 'art' is a loanword from Mid. Iran. **hamōk,* perhaps through West Tocharian, cf. Isebaert 1980, p. 71–73, 177). Thus *omäskeṃ* 'bad, evil' derives from **amäskeṃ* < CT. **æ(n)mäskain-,* i. e. the privative prefix **æ(n)-* < I. E. **n̥-* plus the verbal root *mäsk-* 'to be' (for the semantic side, cf. Skt. *asatya-* 'wrong' (RV.), 'bad' (ŚBr.), *ábhva-* 'terrible', OIcel. *óvœrr* 'unpeaceful') plus the suffix **-ain-,* cf. *plyaskeṃ* 'meditation' to *pälsk-* 'to think'. Such rounding is also found in *omäl* 'hot' with the substantive *omlyi* 'heat' to which West Tocharian corresponds with *emalye* and *emalya* resp. It might be suggested that this word is cognate with the verb A *mäl-* 'to oppress' (B *mäll-* 'to oppress; to contest') with the prefix CT. **æ(n)-* < **n̥-* 'in'. The notion 'heat, hot' may derive from the use of this root to denote 'oppressive weather, thick air', cf. Icel. *molla* 'oppressive heat with no wind blowing' and the verb *molla* 'to be warm; to cook slowly', *malla* 'to cook slowly' from the same root (for other etymological attempts, cf. Van Windekens 1976, p.634 (with lit.), Isebaert 1978, p.346, Čop 1955, p. 30). The third example of this group is *onmiṃ* 'remorse' corresponding to B *onmiṃ.* The origin of this word is disputed and unclear (cf. Van Windekens 1976, p.335, Isebaert 1980, p.141, Čop 1975a, p.33, 1975b, p.11–12) so that it cannot shed any light on the problem under discussion here.

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forms), on the evidence of the West Tocharian forms, seem to have an *o*-vocalism basically restricted to the subjunctive and the preterite. It is conceivable that the *o*-vocalism originated in the first person singular subjunctive through *u*-umlaut of CT. **æ* (cf. B *yoku*), whatever the etymology of the final *-u,* cf. e.g. Adams 1978, p.449 with ftn.12.

In group 2) *koläm* and *oṅkaläm* (if with metathesis from
*āṅkoläm) are contradicted by **yśaläm* (pl. *yśalmañ*). The
corresponding West Tocharian forms are *kolmai* (obl. sg. with
obl. pl. *kolmaiṃ* presupposing a nom. sg. **kolmo / *kolmiye*),
oṅkolmo and *yśelme* resp. This indicates that the *-m-* (or *-lm-*) is
not the cause of the rounding in A *koläm* and *oṅkaläm* (if <
*āṅkoläm) which then must be sought elsewhere.

In two recent articles I have denied that *o*-umlaut operated in
Common or East Tocharian, maintaining that it was an exclu-
sive West Tocharian phenomenon (Hilmarsson 1985b and
1984c, p. 143), primarily on the basis of A *praski* 'fear' as against
B *prosko / proskiye.* However, it seems that I have not taken due
notice of the fact that whereas B *prosko* and *proskiye* are fem.
nouns of Class VI, 2, A *praski* is masc. in the singular with a plu-
ral form *praskintu,* indicating a genus alternans Class III, 2
inflexion. This discrepancy as well as the difference in root
vocalism might be explained in the following manner: Common
Tocharian had two words **præsko* (< I.-E. **prok-sk̂-ā*), a fem.
substantive, and **præskiyæ* (< I.E. **prok-sk̂-i̯o- (-iHo-)*), a
neuter substantive or perhaps an adj. later substantivized. CT.
*præsko yielded **prosko* through *o*-umlaut. This form survived
in West Tocharian, but not in East Tocharian. CT. **præskiyæ,*
on the other hand, survived in East Tocharian, yielding *praski*
regularly, whereas in West Tocharian it suffered the influence
of *prosko* whose vocalism, inflexion and gender it adopted. The
fact that the nom. sg. final *-iye* of Class VI, 1 had begun to infil-
trate Class VI, 2, replacing – or co-existing with – its proper final
-o, may have given impetus to this development, cf. discussion
of A *kolye,* B *kolyi* below. Thus the main objection to positing
an *o*-umlaut of (CT. **æ* >) a in East Tocharian words is
removed.

Actually, positive evidence of *o*-umlaut can be observed in
East Tocharian. In at least one instance such umlaut is seen to
be operative in East Tocharian times, witness A *oklop* 'in dan-
ger' < **aklop* (similarly Isebaert 1980, p. 137) < **aklap* (i.e.
rounding of A *a* before *p* < I.-E. **b* with subsequent umlaut of
the initial *a*) < CT. **æ(n)klæpæ* < I.-E. **n̥- + *ghlobom* (cf.
above), which through the assumption of an *o*-umlaut becomes

quite regular (for a different and more complicated explanation, cf. Van Windekens 1976, p. 332).

On the other hand, a few East Tocharian words show the effect of *o*-umlaut that presumably occurred already in Common Tocharian times. Among these words might be *koläm*, as discussed below, as well as *orkäm* (B *orkamo*), whose *o*-vocalism, however, might also have been effected through rounding, cf. above (for *oṅkaläm*, cf. discussion below).

Furthermore, A *kolye* 'tail' (hapax: 12 b 4 *kliso pāccās poṣṣāsā to lap śālyiṃ kolyeyac* 'sleeping on the right side, the head on the left toward the tail') might show the effect of *o*-umlaut operating in an East Tocharian word. The corresponding West Tocharian form is *kolyi*. As far as I am aware this words occurs only twice. In M 1 b 4 *yākweñña kolyi* indicates fem. gender. A correspondence of the type A *kolye* : B *kolyi* is unusual or even singular in a fem. noun (A *rake* : B *reki* etc. are neuters of Class II, cf. Krause–Thomas 1960, p. 98). On the other hand, a correspondence A *-Ċe* : B *Ċ*(i)*ye* is regular in the fem. words of Class VI, 1. One might then wonder, if the form B *kolyi* of M 1 b 4 has not been misspelled for **kolyiye*, or rather, if *kolyi* is not simply a regular obl. sg. form (cf. *ālyi, sālyi*, the obl. sg. of **aly-iye, salyiye* resp.) mistakenly or incorrectly used for the nom. sg. Such mistakes do occur elsewhere in the magical and medicinal texts wehre *kolyi* is found, cf. e.g. Y 2 b 4 where the obl. form *sālyi* is evidently used in the sense of or for the nom. sg. *salyiye* 'salt', and M 3 b 6 where the obl. pl. *pyapyaiṃ* is similarly used for the nom. pl. *pyapyaiñ* (for this latter example, cf. Thomas 1952, p. 23, ftn. 3). In its second occurrence (M 3 b 1), *kolyi* stands before *ñor* and might therefore be interpreted as **kolyiñ*, the regular nom. pl. of a Class VI, 1 fem. noun.

Recently, I have argued (Hilmarsson 1986b) that Class VI, 2 in Tocharian is built upon Indo-European *ā*-stems and ablauting *ōn*-stems, whereas Class VI, 1 is built upon *ēn*-stems. The ablaut in the *ōn*-stems (*e*-grade suffix e.g. in the loc. sg. and nom. pl.) offered a port of entrance for the influence of Class VI, 1 upon VI, 2. A consequence of this was the (partial) replacement of Class VI, 2 finals by those of Class VI, 1. A further consequence was the occasional transfer of words from

Class VI, 1 to VI, 2, and such transfer, presumably, could also
take place in the opposite direction. On this basis the *o*-vocal-
ism of A *kolye* (and B *kolyi*) can be explained as follows: The
Indo-European root was probably *$\hat{k}$el-* / *$\hat{k}$ol-*, as suggested by
Duchesne-Guillemin (1941, p. 166) and Van Windekens (1976,
p. 229). However, the latter's direct comparison with Skt. *śalya-*
'dart, point of an arrow' is difficult semantically as well as phon-
ologically and morphologically.[12] A more direct comparison is
offered by OIcel. *hali* 'tail' (also mentioned by Van Windekens),
which is a perfect semantic match of the Tocharian words.
Deriving from *$\hat{k}$olēn* it would also be a perfect morphological
match, if our analysis of B *kolyi* as the obl. sg. form of *$*kolyiye*,
a class VI, 1 noun, is correct. However, a motivation for the
Tocharian *o*-vocalism would then be lacking.

Therefore, one might rather suggest that I.-E. had a form
$\hat{k}$olōn with an alternating stem *$\hat{k}$olen-* (OIcel. *hali* might have
a generalized *e*-grade of the suffix), this would yield CT. *$*kælo*,
obl. stem *$*kælyän-*. In the nominative, *o*-umlaut produced the
form *$*kolo*, and through the generalization of palatal *-ly-* from
the oblique stem, the form *$*kolyo* was reached (cf. B *swāñco*
'(sun)beam' for *$*swānto* from I.-E. *$*suH_2ntōn* 'the sunny one',
Hilmarsson forthcoming). This was a Class VI, 2 noun, but
through the interaction of the Classes VI, 1 and VI, 2, this word
was thereupon transferred to VI, 1, acquiring the characteristic
final of that class. Thus A *kolye* need not be taken as a borrow-
ing from West Tocharian (Van Windekens, loc. cit.), but would
be a regular match of B *kolyi* for *$*kolyiye*, and the *o*-vocalism of
both words would have been caused by an *o*-umlaut in Com-
mon Tocharian.

Another word might invite an analysis similar to that of A
kolye, B *kolyi*. However, it seems that its etymology is doubtful.
This is B *olyi* 'ship' (obl. sg.) whose East Tocharian match is
often cited as *olyi*. The form actually attested in the eastern dia-
lect is *olyik* (29 b 2), and its context is not so clear that its sense

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[12] To accept with Van Windekens 1976, p. 18 that I.-E. *$*o* was retained as B *o*
before *ly* (and *lm*) and take A *kolye*, *olyi* as loanwords from West Tocharian
is unfeasible, cf. A *malyw-*, B *mely-* 'to press'.

can be safely arrived at. Its association with B *olyi* is therefore far from certain. However, even assuming that A *olyik* somehow matches B *olyi,* the problems of word-formation and extra-Tocharian connections are by no means solved. Since Hansen (1940, p. 151) these words have been equated with Lith. *aldijà* 'boat', OCS. *ladiji* 'id.'. However, Hansen's derivation from I.-E. **oldh-* cannot be maintained, for **-dh-* would not be lost in Tocharian. Van Windekens (1976, p. 334) encounters this problem by reconstructing an I.-E. **oldi̯-* with *-d-* regularly lost before *-i̯-* in Tocharian. This answers one question, but the matter is still not solved. The acc. sg. of Lith. *aldijà* is *aĺdiją* and the circumflex, as pointed out to me by Kortlandt (per. litt.), would preclude a derivation from **old-,* demanding **oldh-* because of Winter's Law of lengthening. However, Kortlandt also points out that Lith. *aldijà* might actually be a borrowing from Slavic, for, in his opinion, it would seem improbable that Lithuanian would have preserved a sequence *-i̯i-* in a Proto-Indo-European word (cf. e. g. *vìlkė* < **-i̯i-* < **-iH-*) whereas the preservation of *-i̯i-* in Slavic would point to a stressed *jer* which lost the accent to the ending as a result of Dybo's Law.

If then Lith. *aldijà* is a borrowing from Slavic, the circumflex need not present a serious obstacle for reconstructing an I.-E. **old-.* However, Norw. (dial.) *olda* 'großer Trog, Wasserkumme, Wasserrinne (aus ausgehöhltem Baumstamm)', Old. Dan. *aalde, olde* 'ausgehöhltes Gefäß' etc. is probably correctly associated with Lith. *aldijà,* OCS. *ladiji* by Pokorny 1959, p. 31–32, cf. also Stang 1971, p. 13. The Germanic words preclude a derivation from **old-,* and the status of Toch. A *olyik,* B *olyi* (obl. sg.) becomes unclear again. An analysis similar to that of B *kolyi,* therefore, would be speculative.

Now, back to A *koläm,* B **kolmo* 'ship'. Etymologically, Van Windekens' association (1976, p. 228–229) of these words with OHG. *scalm* 'ship' seems appropriate. However, assuming that *o*-umlaut operated in East as well as in West Tocharian (cf. above), it seems unnecessary to take A *koläm* as a borrowing from the latter. Rather, A *koläm* and B **kolmo* both derive from CT. **kœlmo* (*o*-umlaut) < **kœlmā̊* < I.-E. **kolmā,* as OHG. *scalm* from I.-E. **skolmā.*

On the other hand, the etymology of A *oṅkaläm,* B *oṅkolmo* is not so transparent. Van Windekens' suggestion (1941, p.82; 1976, p.337–338; also Duchesne-Guillemin 1941, p.159) that the final A *-aläm,* B *-olmo* is a suffix identical with the one found in B *onolme* '(human) being' is very attractive, but further analysis of this suffix is difficult and its vocalism problematic, cf. above and below, also ftn.12. Also, Van Windekens' identification of the radical element *oṅk-* as an ancient **aṅk-* < I.-E. **ank-* 'to bend', although semantically attractive, is phonologically far from easy. Van Windekens suggests an expected A **āṅkaläm* became *oṅkaläm* under the influence of B *oṅkolmo.* If one wishes to avoid that kind of inter-dialectal borrowing, one might with Isebaert (1980, p.137) assume that a metathesis has taken place in the East Tocharian form, changing original **āṅkoläm* to **oṅkāläm* > *oṅkaläm* (reduction of *ā* to *a* in a medial syllable). However, one would still be left with the problem of the suffixal *-olm-* and its vocalism, and West Tocharian *oṅkolmo* would still require a comment. Van Windekens claims that (I.-E. **ank-olmō(n)* >) **āṅkolmo* yielded B *oṅkolmo* regularly (cf. also Isebaert 1980, p.142), i.e. that West Tocharian *ā* could be umlauted to *o* before an *o* of the following syllable. However, most of the examples of that change, brought forth by Van Windekens, are actually more correctly understood as showing *o*-umlaut of the West Tocharian reflex of CT. **æ* but not **ā.* The only example that might stand close scrutiny is *onolme* '(human) being', if from **ānolmæ* < I.-E. **anH-* 'to breathe'. But I.-E. **anH-* is attested in B *anāsk-* 'to inhale' < CT. **ānā-sk-* < I.-E. **anH-sk̂-,* and it is difficult to see how the change of *ā – ā* to *o – o* can have been brought about,[13] cf. however discussion below.

I cannot propose an etymology that would be decidedly more plausible than those mentioned above. However, if one whishes

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[13] The class sign of Pres. Class IV, B *-o-,* A *-a-,* derives from I.-E. **-ā-.* In West Tocharian it causes *o*-umlaut of B *e* < CT. **æ* (e.g. B *orotär* (A *aratär*) 'ceases' < **erotär* < CT. **ærǎtär* < I.-E. **orātṛ*; in B *osotär* (A *asatär*) 'dries' no *o*-umlaut has taken place, for the root vocalism here is I.-E. **ā,* not **a,* i.e. B *osotär* < CT. **ǎsǎtär* < I.-E. **āsātṛ,* cf. Lat. *āreō* 'I am dry').

to avoid getting involved with explanations based on inter-dialectal borrowing or influence, or the assumption of a vowel metathesis, it appears that the only way to explain A *oṅkaläm*, B *oṅkolmo* as regular forms would be to assume a Common Tocharian preform *æṅkwằlmo* (or possibly *ằṅkwằlmo*). Such a form would yield B *eṅkolmo* (CT. *ằ* > B *o* regularly; *w* is dropped before *o*, cf. B *ost* : A *waṣt* 'house') > *oṅkolmo* (*o*-umlaut of the initial syllable). In East Tocharian, CT. *æṅkwằlmo* would regularly yield *aṅkwaläm* (apocope plus insertion of anaptyctic *ä*; CT. *ằ* and *æ* > A *a*) > *oṅkaläm* (rounding of A *a* before *kw*; delabialization of *kw*). The problem would thus be referred to Common Tocharian, which, of course, does not constitute a solution in itself, but at least CT. *æṅkwằlmo* can be considered a concrete starting point.

If the elements B *-olmo* and *-olme* (of B *oṅkolmo* and *onolme* resp.) are cognates, with the meaning 'living being, animal', CT. *æṅkwằlmo* might be analysed as a compound, *æṅkw + ằlmo*, whose first constituent, *æṅkw-*, might derive from I.-E. *ṇku-* 'a bend, curve, hook', attested as an *u*-stem in Av. *aṅku-* 'hook', and with a *-lo-* extension in Gk. ἀγκύλος 'crooked, curved', ἀγκύλη 'the bend of the arm', OIcel. *ǫngull* '(fishing) hook', etc. Such a compound would have the meaning 'the animal with the curve / hook', referring, of course, to the elephant's trunk or its curved tusks.[14]

Furthermore, B *onolme* 'human being' would then be analysable as deriving from CT. *æn-ằlmæ* (CT. *ằ* > B *o* regularly, with subsequent *o*-umlaut in the initial syllable) with *æn-* from I.-E. *ṇ-* 'in, inside'. The original meaning of this word would then have been 'one living inside (the family community' → 'human being'. Semantic parallels are found e.g. in Celtic, cf. *ingen* 'daughter', *inailt* 'female servant'.

Thus A *oṅkaläm* need not be understood as having suffered metathesis (< *āṅkoläm*), but rather as deriving from CT. *æṅkwằlmo* regularly, whereas the other word of group 2), *koläm* < *kolmo* < CT. *kælmo*, would be set off against

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[14] Cf. however Ivanov 1980[82], p.166 for a quite different explanation of this word: an Austro-Asiatic origin.

*yśaläm < *yśalma < CT. yśǽlmœ by assuming that there was
no rounding through the -m- (or -lm-), but simply an o-umlaut,
caused by the final *-o. This umlaut may have been Common
Tocharian, since its effects are seen in both dialects, but it
appears to have been operative well into the dialectal period,
for the initial syllable of A oklop can have been umlauted only
after the rounding in the second syllable had taken place.

As for the remaining words showing o-vocalism before -m-,
i.e. group 3) ñom 'name', som- 'one', they stand in sharp con-
trast to words like kam 'tooth', wram 'thing' etc. I can see no
way to explain these forms by any common law. Therefore,
inspite of Hilmarsson 1984c, the o-vocalism of A som fem. obl.
sg. (B somo) is probably best explained as showing o-umlaut
and not rounding before m. This o-vocalism was then general-
ized in the entire paradigm (except the nom. sg. masc.).

A ñom perhaps owes its o-vocalism to the adj. ñomum 'hav-
ing a name', where o may have arisen through u-umlaut, cf. Van
Windekens 1976, p. 327, Isebaert 1980, p. 136.

Another solution is perhaps conceivable. As I have recently
suggested (Hilmarsson 1984a, ftn. 4; cf. also Lindeman 1982, p.
63) the origin of the initial palatal of A ñom, B ñem might per-
haps be sought in an ancient weak case form where the zero
grade of the root morpheme preceded an e-grade of the suffix.
The group -nm- was then palatalized and a palatal ñ thereupon
generalized in the entire paradigm. Thus, I.-E. nom. sg.
*(H)nomṇ : gen. sg. *(H)ṇmens would in Tocharian yield
*nœmän : *œñmän. With the generalization of the genitive pala-
talization, there arose a paradigm *ñœmän : *œñmän. If both
allomorphs, *ñœm- and *œñm- survived into East Tocharian,
the latter would have rounding to *oñm- (CT. *œ- > A a- > o-
before -(R)m- in absolute initial position, cf. omäl and omäs-
keṃ above). This vocalism was thereupon generalized, so that
(*ñœm- >) A *ñam became ñom.

Due to the conflicting material, any conclusion concerning
rounding before m must be stated and taken with utmost
reserve: Rounding before m took place in absolute initial posi-
tion. Elsewhere there was no rounding, except in the words ñom
and som-.

To sum: Rounding of East Tocharian *a* is a much more regular affair than hitherto assumed. Far from being sporadic, it is a regular sound law that can be formulated thus:

East Tocharian *a* of whatever origin (CT. **æ* or **å̃*) was rounded to *o* 1) before *kw,* 2) before a labial occlusive (i.e. before *p* from I.-E. **p / *b* or Iranian *b,* but not before *p* from I.-E. **bh*) and 3) before *m* in absolute initial position (with *ñom* and perhaps *şom-* as exceptions). These rules apply also, if the rounded and the rounding sound are separated by a sonant (except *m*).

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