Abstract: Both Jacques (2010) and Zeisler (2015) propose explanations for the synchronically unexpected past *zos of the Tibetan verb 'eat'. After evaluating their proposals, this essay suggests that *zos is the regular outcome of a sound change *as > -os, the results of which were erased through analogy in almost all other verbs.

Tibetan verbs showing stem ablaut typical have -o- in the present and -a- in the past, e.g. 'kill' with present gsod, past bsad, future gsad, and imperative sod. The verb 'eat' with the stems za, zos, bzah, zo has the opposite pattern showing -a- in the present and -o- in the past. Following Meillet's (1925: 25) principle that irregular morphology preserves archaisms, Guillaume Jacques (2010) proposes that *zos is a fragment of erstwhile agreement morphology in Tibetan. His proposal has not proven popular. Randy LaPolla (2012: 120) objects to the importance that Jacques places on this one verb. LaPolla's objection is misplaced for two reasons. First, single verb forms are sometimes of paramount significance for an entire family; witness Vedic śáye 'lies' (Clackson 2007: 146). Second, 'eat' is not the only Tibetan verb to show this pattern. Hill (2014) draws attention to three further verbs that appear to show a vowel -o- in the past, viz. ḍheṅ, doṅ, —, — 'disappear', ḍchaḥ, ḍchos, ḍchaḥ, ḍcho 'chew, gnaw', and laṅ, loṅs, laṅ 'finish' (cf. Hill 2010: 89, 148, 279).

In addition to LaPolla, Zeisler (2015) also rejects Jacques' explanation of *zos, instead arguing that *zos is borrowed into the paradigm of 'eat' from the cognate potentialis verb 'be able to eat'. Of the additional verbs that Hill (2014) notes, Zeisler (2015: 43-44), points to the confused and contradictory reports of the indigenous lexicographical tradition for 'disappear' and 'finish' to speculate that Hill conflates separate verbs. Zeisler finds 'chew' "most interesting, particularly as it seems to display the same pattern as the verb za 'eat'" but regrets that it is "not very well attested" (2015: 44). She notes two attestations of a present stem ḍcha, both in the phrase rus-pa gle ḍcha 'the bones, fodder for the gle' (Pt 1194, ll. 62-3 and IOL Tib J, r68).

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1 I would like to thank Abel Zadoks for first proposing to me that Tibetan -a- changes to -o- in (some) closed syllables.

2 For his part, LaPolla offers no alternative explanation for *zos.
Zeisler fails to consult the *Wörterbuch der tibetischen Schriftsprache*, which provides ample attestations of this verb. The *Wörterbuch*, a research project of the Bayerischen Akademie der Wissenschaften, started in 1954, began publication in 2005, and at the time of writing in July 2015 has grown to 24 fascicles, reaching bsñol. This dictionary supersedes all previous Tibetan lexicographical work in coverage and scientific rigor. To showcase the excellence of this resource I quote the three relevant entries in extenso.

*bcaḥ* fut. zu ↓²ḥchaḥ beißen, kauen, essen; ~ ba Nahrung, Getränk, Saufen; *bsaḥ* ~ Speisen und Getränk, Essen.

*bsaḥ* ~ dañ ni na bsaḥ … gsol (metr.) „er gab Speisen und Getränke sowie Kleider“ (Anav 1: 89,15); *bsaḥ ba dañ ~ ba gya nom pa „üppiges Fressen und Saufen“ (Prav 187,7); *bsaḥ ba dañ btuñ ba dañ ~ ba rnam pa sna tshogs „verschiedenartige Speisen, Getränke, und Nahrung (skt. bhojya)“ (Suv 95,21); *bsaḥ ~ de bźin btuñ ba ņiū .. rab tu bsaḥ (metr.) „Essen und ebenso auch Triken soll man zu sich nehmen“ (Hev 1.6.20a); so yi dag byed ~ bar bya (metr.) „mann soll [die Zweige] zum Reinigen der Zähne kauen“ (Ahs 1.2.3b); *mgọ bo na bas ḥdı mi ~ (metr.) „bei Erkrankungen des Kopfes soll man dies nich essen“ (Ahs 1.2.4b); *bsaḥ ba dañ / ~ ba … kyiś yaṅ dag par tšim par byas nas „als er sie mit Speisen und Getränken völlig zufriedengestellt hatte“ (ViśṬ 76,36).

Lex. *bsaḥ ba dañ ~ ba ma ḥoṅs par lhuṅ bzed mi bzed ≅ nānāgate khādanīye bojaniye pātram upanāmayiṣyāmaḥ „solange die Zeit zu essen oder zu trinken nicht gekommen ist, werden wir nicht die Bettelschale hinhalten“ (Mvy 8569); *gźib pa ni sos ~ ba lces ḥjib pa „bźib pa: mit den Zähnenbeißen, mit der Zunge saugen“ (KloṅD 736,6).

²ḥchaḥ fut. ↑²*bcaḥ* knabbern, kauen, essen; vgl. ↓²ḥchos.

*rtsa ba ḥbras bu ~ ba dañ* (metr.) „Wurzeln und Früchte knabbern“ (Prav 51.21); *rus la ~ baḥi rus kyaṅ dkon* (metr.) „Knochen sind selten, sogar für diejenigen, die sie essen“ (gZer 510,6).

Lex. ~ p sos ldad pa sogs (Dagy).

²ḥchos essen, kauen; vgl. ↑²ḥchaḥ

~ sam sos na źes bya ba ni lkog mar kham gis mid naḥo „gekaut oder gegessen bedeutet: man schluckt die Speise den Hals hinunter“ (K5 297a6).

Lex. khādita „gekaut“ (in Mvy 7040); ~ pa p carvita (Ak 288.60); ~ pa p myaṅs paḥam zos paḥi don du ḥaṅ snaṅ „wahrgenommen oder erscheint auch i.
S. v. gegessen“ (brDa); ~ pa ṣ pa (TTC).

As the reader sees, the Wörterbuch falls short of labeling ḥchos the past of ḥchaḥ but the equation of ḥchos-pa with zos-pa in the sources cited provides evidence that ḥchos is a past stem.

A few passages from the Kanjur further confirm that ḥchaḥ, ḥchos, and bcaḥ belong to the same verb and are respectively present, past, and future.

dge-sloṅ-gis rnam-pa gsum dben-par bya-ste / bšaṅ-ba-daṅ / gci-ba-daṅ / so-śiṅ
bcaḥ-baḥo / dge-sloṅ-gis so-śiṅ ḥchos-nas / de bźin-du mi dor-gyi chus bkru-bar bya
/

A monk shall go into isolations for three purposes, defecation, urination, and chewing on toothpicks. After a monk has chewed a toothpick, he is to wash with water which has not been thus discarded. (K8, Vol. 13, 310a)

yaṅ dge-sloṅ-ma gaṅ dus ma yin-par bcaḥ-baḥam bzaḥ-ba ḥchaḥ-ḥam za-na ltuṅ
byed-do

Also, if a nun chews and eats what is to be chewed and eaten when the time is not full, this is a transgression. (K4, Vol. 9, 14b)

The Kanjur also attests the imperative, which the Wörterbuch omits.

tshe-daṅ ldan-pa ḥdi ḥcho śig / ḥdi zo śig ces bya-ba ni bcaḥ-ba-daṅ bzaḥ-baḥo/

When (someone) says, 'O venerable sir, chew this! Eat this!' the (offering) is to be chewed and to be eaten (K3, Vol. 7, 148a)

These citations from the Kanjur and the occurrence of bcaḥ and ḥchos in the Mahāvyutpatti (Mvy), published before 814 CE, taken together with Zeisler's own citation of ḥcha in Dunhuang documents, guarantee that the entire paradigm is of hoary provenance. The conjugation of 'chew' ḥchaḥ, ḥchos, bcaḥ, ḥcho that these citations establish is parallel to 'eat' za, zos, bzaḥ, zo.

Zeisler's explanation that zos and ḥchos are borrowed form a potentialis paradigm is possible, but poorly motivated. The postulated independent verbs *zo 'to be able to eat' and *ḥcho 'be able to chew' are as far as I know unattested. It is unclear why speakers would target the past stem and not some other form for this replacement by borrowing from a potentialis. It seems unlikely that an inherited bzas would yield to such a borrowing, since analogical pressure (e.g. bsams, bsgrubs, etc.) reinforces it as the expected
form. The distribution of *zos in peripheral dialects versus *bzas in the center (Zeisler 2015: 46) suggests that *zos is the archaism. In addition, syllable structure weighs against Zeisler’s proposal of borrowing the *potentialis as a past stem. In an earlier paper, where she first draws attention to the *potentialis, Zeisler (2002) notes the *potentialis verbs *chod ‘able to cut’, *sod ‘able to kill’, *lon ‘able to take’, and *sñogs ‘able to catch’. These verbs are all closed syllable whereas the two verbs that show -o- ablaut in the past have open syllable roots. Perhaps this distribution is coincidence, but, perhaps not. An account of this distribution is a plus for any explanation of the ablaut seen in ‘eat’ and ‘chew’ and Zeisler’s explanation does not garner this plus.

Presuming that Jacques would see *ḥchos as additional evidence for erstwhile agreement, his explanation accounts for the attested phonological distribution. He offers three concrete possibilities for the phonological development of the -os in *zos; 1. *zaus > *zos, 2. *zau > *-zo with -s added by analogy, 3. *zasu > *zos, presumably with an intermediate phase such as *zosu (2010: 47). None of these laws leads to -o- in closed syllable roots. Consider the verb √laṅ ‘take’ *len, *blaṅs, *blaṅ, *loṅs; the three proposals all produce the attested past: 1. *blaṅus > *blaṅs, 2. *blaṅu > *blaṅ → *blaṅs, 3. *blaṅsu > *blaṅs. These proposals require one to consider all transitive past stems ending in -as as analogical developments. Thus, in the verb ‘do’ *byed, *bya, *byas, the innovative past *byas replaced inherited *byos, which was lost without a trace. A verb such as ‘think’ *sems, *bsams, *bsam, *soms serves as an analogical model for *byas, viz. *bsam : *bya :: *bsams : X = *byas.

Each of Jacques’ proposals has ramifications for Tibetan historical phonology in general. The first proposal requires a sound change *-us > -s, that operated after *-au- > -o-, to avoid *zaus developing to *zas instead of *zos. This sound change leaves unexplained why some words still contain -us, such as *rus ‘bones’. The second and third proposal require the loss of final -u, a not implausible change per se, but one which gives rise to the problem that words such as *bu ‘son’, *su ‘who’, and *ḥbru ‘grain’ did not undergo the change. Zeisler reasonably objects to the third proposal that if *asu becomes -os then one might expect *isu to develop to *esu or another outcome other than the -is seen in verbs such as ‘do’ *bgвид, *bgwis, *bgyi, *gwis (2015: 46). Each of Jacques’ proposals is rather complicated and partly unmotivated in its details. Ockham’s razor favors abandoning the insistence on a *-u- suffix and accepting a simpler sound change, namely *as > -os.

The proof of a phonological account for the forms *zos and *ḥchos is whether the account explains idiosyncrasies other than those that served as its motivation. A change *-as > -os
has the advantage of explaining the invariant verb *ltos 'look to, attend to' as the inherited past of *ltas, *blta, *blta, *ltos 'look at'.

Postulating an inherited paradigm *zlo, *zlas > *zlos, *bzas, *zlos similarly reconciles the two verbs *zlo, *bzlas, *blza, *zlos 'say, repeat' and *zlos (invariant) 'repeat'. The pair of verbs *dgah 'be happy' and *dgos 'need, want', both of invariant conjugation, suggests an intransitive verb with the conjugation *dgah, *dgos, lacking a distinct future and imperative as non-volitional verbs do. In a more complicated case, for the verb *smra, *smras, *smra, *smros 'say' we predict an inherited past stem *smros. Although *smros does not exist as a separate verb, there is an invariant verb *smos 'say, call' which the Dag yig gsar sgrigs sees as additionally an alternative present (sic) of *smra. One may legitimately speculate that *smos is a regular phonetic development from *smras.

Just as Jacques' proposals must either account for words ending in -u or -us, so too the proposal *as > -os must account for all instances of -as in the language. Analogy within a paradigm explains verb forms ending in -as, but cannot explain the case markers or nouns that have this rime. The case markers -las and -nas pose no particular problem. They are derived by the the suffixing of -s to the case markers -la and -na (Simon 1941: 385). This suffixation occurred after the change *as > -os. Nouns that end in -as arose after the application of this sound change, whether through borrowing or through derivation. For example, a nominalizing -s forms the noun *ltas 'omen' from the verbal root *vltas 'see'; compare skyems 'beer, libation' from *skyem 'be thirsty' (Beyer 1992: 118). The supposition that *as > -os is an old change answers the objection that *ltas 'omen' does not relate to 'look' transparently enough to suggest a recent formation. Similarly *zas 'food' derives via suffixation from *vza 'eat'. Such nouns as *skas 'stairs', *las 'deed', *nas 'barely', *sñas 'pillow', and *ras 'cotton' lack recognized cognates elsewhere in the family. Tibetan

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3 The ensuing discussion proceeds with the hypothesis *-as > -os, but most of the argument still holds mutatis mutandis using Jacques' more complicated phonological proposals.

4 The relationship between *smra, *smos, and the additional verbum dicendi with the stems rma, rmas requires further attention.

5 There are a few verbs which synchronically speaking have a root final -s (mkhas 'know' (v.), glas 'change one's residence', ḥgas, ḏkas, ḏgas, ḥkos 'split (vt.)', ḥgas, gas 'split (vi.)', ḥgras 'feel revulsion, be unhappy', ḏrñas 'ridicule, belittle', ḏḥhas 'hard, firm', ḏgas 'speak', ḏnas 'stay (v.), place (n.)', spras, spras, spras, spras 'adorn, decorate', bas-pa 'finished, complete', gzas 'prepare to, be about to'), but the possibility remains that this -s was originally a past tense suffix in these conjugations.

6 The words in rime -as in Zhang (1985) not yet mentioned here are: klas-pa 'boundless, huge', gras 'class, type', gás-s 'song', šas 'some, sharecropper field', slas 'retinue'.
ḥbras 'rice', deriving from *ḥmras according to Simon's law (Hill 2011: 448-449), has a Chinese cognate 糯 *[m]ər'ats (21-26g) 'rice'. In this case, Tibetan final -s likely originates from the *-ts cluster seen in Chinese. If this explanation is correct, then final *-ts simplified to -s only after the change *-as > -os. The anteriority of *-as > -os to *ts > -s provides further support for an early operation the former. The Kurtöp cognates bù 'do', jù 'borrow', zù 'eat', chú 'devour' the generalized past forms cognate to Tibetan *byos (replaced by byas), *rños (replaced by brñas), zos, and ḡchos further support an early date for the change *as > -os since it must have occurred prior to the split of Tibetan and the East Bodish languages (Hyslop 2011: 55-56, 1247, 143). In sum, the comparative evidence poses little obstacle to, and potentially supports, the proposed change *-as > -os.

The inherited paradigms proposed here, together with brief remarks on subsequent developments, are as follows:

√za 'eat'
   pres. za
   past. zos (exists alongside analogical bzas)
   fut. bzaḥ
   imp. zo

√ḥcha 'chew'
   pres. ḡchaḥ
   past. ḡchos
   fut. bcaḥ
   imp. ḡcho

√lta 'look at'
   pres. lta
   past. ltos (continues as separate invariant verb 'look at, attend to', replaced by analogical bltas)
   fut. blta
   imp. ltos

√zla 'say, repeat'

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7 Sagart (2014) points to a similar correspondence in the pair Tibetan rũs, 'bone' and Chinese 律 lwit < *[r]ut (31-18c) 'pitch pipe', with the complication that Chinese is missing final *-s.

8 Gong’s (2002[1995]: 115) proposal to relate Tibetan rdzas 'thing, object' to Chinese 事 dǝriH < *[m-s-]rǝʔ-s (0971a) 'serve; service, affair' is neither semantically nor phonetically compelling.
pres. zla
past. zlos (continues as separate invariant verb 'repeat', replaced by analogical bzlas)
fut. bzla
imp. zlos
√dga 'be happy'
pres. dgah (continues as separate invariant verb 'be happy')
past. dgos (continues as separate invariant verb 'need, want')
√smra 'say'
pres. smra
past. smos (continues as separate invariant verb 'say, call', replaced by analogical smros)
fut. smra
imp. *smos (obsolete, replaced by analogical smras)
√bya 'do'
pres. byed
past. *byos (replaced by analogical byas, but compare Kurtöp cognate bù 'do')
fut. bya
imp. byos
√rña 'borrow'
pres. rña
past. *rños (replaced by analogical brñas, but compare Kurtöp cognate jù 'borrow')
fut. brña
imp. rños

Abbreviations
Ahs = Vogel (1965)
Ak = Vidyābhūṣaṇa (1911)
Anav = Hofiinger (1982-1990)
brDa = Dge bśes chos kyi grags pa (1957)
Dagy = Dagyab (1966)
Dag yig gsar sgrigs = Tsan chung (1979)
gZer = Tenzin Namdak (1965)
Hev = Snellgrove (1959)
KloṅD = Chandra (1973)
Mvy = Ishihama and Fukuda (1989), but following the numbering of Sakaki (1916)
Prav = Eimer (1983)
Suv = Nobel (1944)
TTC = Zhang (1985)
ViśṬ = Schneider (1993: 74-270)

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