ASSIMILATION, AND THE DEFINITE NOMINAL PARTICLE
IN BALTIC TIBETAN

—R. K. SPRIGG

I. Introductory

A noteworthy feature of one of the nominal phrase particles in the
Balti dialect of Tibetan, the definite particle, is that it varies considerably
in phonetic shape according to context, being pronounced as [po] in
some circumstances, and as [o] in other circumstances, and sharing,
in yet other circumstances, vowel features with the final vowel of a
preceding noun, as in (i) [limpo] 'the key', (ii) [nompo] 'the medicine'
(m-drig, sma'i), (iii) [thros] 'the horse', (thar pa) 'the snow' (ra, khar-
ba), and (iv) [rupa] 'the man' (ru, m). At the grammatical level of analysis the definite particle is a component of the nominal phrase, or, more specifically, of a subcategory of
nominal phrase hence termed the 'definite' subcategory of nominal
phrase. Where the definite nominal phrase contains more than one
word, the definite particle is exemplified in the final word of the phrase,
the order of grammatical categories in that word being (i) noun, and (ii)
definite particle (and, if exemplified, (iii) the genitive particle 's)',
the definite particle 's', or some other particle: e.g. [smampu], [pren-khdo],
[smaw-pa], [ba: ], [gkypu], [khu: s], [smaw-pa], ... as in the following
data examples, in which the nominal phrase has been enclosed in round
brackets:

i. [smaw-pu; ga: 'jat] Where is the medicine? (smaw)
ii. [pren-khdo: ci s] What advantage came from it? (phun-kh) (v/e)
iii. [(de smaw-pu) dh] Being that bridegroom (brug)
iv. [go-la sker-pu; n歅 m] The son who was born first died last
year. (bus)

v. [(gkypu) bu: zes, . . . ] One said this, . . . (p. 63; (oked
vi. [(de kha: s) khol tapla] That dog has bitten him. (khug)

The grammatical structure of the one-word, two-word, and three-word
nominal phrases in these examples, in which word boundaries are indicated
by space in the phonetic transcription, and by ••• in the following grammatical analysis, is:

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i-i. noun, definite particle;

iii. preposition; noun, definite particle;

iv. noun, locative particle; verb, nominalizing particle, genitive particle;

v. noun, definite particle;

v. noun, definite particle, agentive particle;

vii. preposition; noun, definite particle, agentive particle;

In example (ii), (vi), and (vii) the nominal phrase includes a preposition ('(de), (di); that', 'this'), and in (iv) a qualifying nominal phrase containing the genitive particle; in all such cases the definite particle is obligatory. In examples (i), (ii), and (v), in which there is neither a preposition nor a qualifying nominal phrase, the definite particle links the utterance containing the example with some earlier utterance. For comparison I now give a few examples of words that do not exemplify the definite particle: [khiː], [pʰemːʰi], [emːwː], and [emː], as in the following sentence examples.

i. [khiː cɪŋbi kholq ʁə tape] A dog bit him. (khyi)

ii. [pʰemːʰi c̪ər: mʊt] There is no advantage. (pʰemːʰi c̪ər: mʊt)

iii. [emːwː kəpo xəsə dʊget] The taste of medicine is bitter. (smun)

iv. [səqw po bəskpo bənət dʊget] Leather for a bridle is special. (nab)

The grammatical structure of these four words is:

i-ii. noun;

iii-iv. noun, genitive particle.

My aim, in introducing these sentence containing words that exemplify the definite nominal-phrase particle, together with contrasting examples that do not exemplify it, is not, however, primarily grammatical. It is to propose a phonological analysis that shall deal adequately with the various phonetic forms of this particle, whose diversity must now be evident from the words [səqw], [pʰemːʰi], [səqw, bo:], [kəpo], [bənət], [emːwː], [bəskpo], and [bəskpo], in each of which it is present, though in [pʰemːʰi], [bo:], and [bənət], for example, it is well disguised.

The method adopted in phonemic analysis for dealing with phonetic variations of the sort exemplified by the definite particle is first to phonemize the variants, and then, in the subsequent stage called morphophonemic, in which each of the phonemic forms of individual morphemes are related to the others, to treat one of the variant phonemic forms, usually the most complex, as a so-called 'base form', and to derive the remaining various forms from the 'base form' by processes of simplifica-
tion termed 'assimilation' and 'elision'. A well-known passage in
Gleason, 1955, deals with the different forms of the English plural
flexions [z], [s], and [t], as in the noun plural forms bits, bile, and
father ([beɪt], [bɪl], [fɑθər]): 'It is sometimes of little importance which
allomorph is selected as the base form. The English noun plural
morpheme [-z] has three common allomorphs /z/ ~ /s/ ~ /z/ which
are phonemically conditioned. Any one of these can be selected as
the base form. If we assume /s/ to be basic, we may say that after a
voiced sound it becomes voiced, /z/; after a /s/ we get /l/ a vowel /l/ is
inserted, and - - - .

One of the commonest types of morphophonemic change is assimilation.
This is a label for the situation where some phoneme is more nearly like
its environment than is the phoneme sound in the base form. - - -
The change of /n/, an alveolar nasal, to /m/, a bilabial nasal, makes it
more similar to /p/, a bilabial stop. The assimilation of /n/ is said
to be conditioned by /p/.' (pp. 82-3).

A more recent theory, the 'generative phonology' of Chomsky and
Halle, has abandoned some of the concepts of phonemic analysis; but
the 'base form' concept has been retained, with change of name to
'underlying representation'. I cannot, unfortunately, illustrate the
continuance of this concept in their work from the same material as for
Gleason, the English s-plural flexion; but the following passage makes it
clear that they treat certain verb forms as 'base forms' in relation to
corresponding nouns: 'from the verbs permit, permit, etc., we derive
the nouns permits, permitted in the next transformational cycle by the substan-
tive rule, the stress on the second syllable being automatically weakened

Several years of studying the pronunciation of such Indian languages
as Gujarati and Punjabi while teaching English at Government College,
Lahore, in the twenties aroused the late J.R. Firth's hostility towards
the assimilation concept.9 In one of his earlier publications, 'The use
and distribution of certain English sounds', in 1935, he attacked
'not concept in the following passage: - - - it is of the utmost importance
to investigate the distribution of phoneme alternation in various contexts,
or what I have termed contextual distribution. If sounds are described,
classified, and explained by this statistical contextual technique, most
contemporary theories of elision, coalescence, and assimilation will
be seen to be confusing and, what is much more to the point, entirely
unnecessary' (Firth, 1957, p. 37).

Throughout my career in linguistics I have required Firth as my
guru; against the general background of his teaching I found no difficulty
in accepting his low opinion of the value to linguistics of 'assimilation', or in following him in his belief that variant phonetic forms of the same lexical item should be given equal status, each being appropriate to its particular 'context', or environment, to the exclusion of the others. When each variant is uniquely appropriate to its phonetic context, it follows that there is no room for the principle of elevating one particular form to the status of 'base form'; on the contrary, each variant phonetic form should enjoy parity of esteem with its fellows. On the basis of these equal variant phonetic forms of a common lexical item, whether that lexical item be the plural 3'-flexion lexical item of English or the definite-particle lexical item of Balti Tibetan, one can then devise an abstract form, or formula, that is equally representative of each of the variant phonetic forms, and equally remote from each of them. Such an abstraction, a linguistic lowest common denominator, as it were, has come to be known in 'prosodic analysis', the phonological theory that I am applying in this article, as a 'phonological formula'. In a prosodic analysis each lexical item (or lexically separable item), e.g. the four separable items of English cat-e, dog-e, and fish-e, or the three Balti lexical items of [kX-po-s] 'by the ear', or the two Balti lexical items combined in [kX] 'the ear', has its phonological formula, and one only. The phonetic features by which a phonological formula is linked to the variant forms by which it is exemplified in utterances are termed its phonetic 'exponents'.

The 'phonological formula' concept is my reason for resisting the temptation to refer to the Balti definite-particle lexical item as 'po'; for the phonetic form [po], as in, for example, [tXnJpo:] 'the medicine', to which 'po' would correspond, is only one of the phonetic variant shapes, a consonant-and-vowel phonetic shape, that this lexical item assumes. Whatever of tunes of the vowel of [bX:] 'the sea', or of the first of the two syllabic vowels [s:] of [kXhi:s] 'by the dog', or of the second syllabic vowel [o:] of [pXnhi:o:] 'the advantage', also represent the definite-particle lexical item act as its phonetic exponents equally with [po] and the only difference between them and [po] is the difficulty, or impossibility, of isolating those 'phonetic exponents from the words [bX:], [pXnhi:o:], etc., in which they occur. That difficulty, though, is no valid reason for giving them a status inferior to the more manageable form [po], as though they were, in some sense, second-class citizens; on the contrary, the aim should be to devise a formula, a 'phonological formula', to cover all variants on an equal footing.
II. Phonetie exponeency

In order to arrive at a phonological formula I shall follow Firth's prescription, quoted above: 'it is of the utmost importance to investigate the distribution of phoneme alternation in various contexts, or what I have termed contextual distribution', except for the reference to 'phoneme' alternation, which Firth later abandoned; it is the relations of sounds to preceding and following sounds, sounds studied from the point of view of their syntagmatic relations, that I shall be concerned with, the contextual distribution not of phonemes but of sounds and the phonetic features that they are composed of.

There are two main contexts to be considered, (A) the context to which the consonant-aided-vowel variant form [po] is appropriate and (B) the context to which certain vowel features are appropriate. There is no denying that the [po] variant form is the easiest to account for; and, since I have, in any case, to account for all the phonetic forms that this particle lexical item takes, I might as well begin with the easiest one.

A. The 'consonantal' type of piece ([Cpo])

The term 'consonantal' is doubly appropriate for the phonetic context, or phonetic piece of utterance, in which the variant [po] occurs, because this form of the particle matches a preceding consonant ([C]) as the final of the noun constituent of the word in which they both occur, and also because it is only in this type of piece that the definite-particle lexical item has a consonant ([p]) among its exponential features. The span, or extent, of the piece concerned includes the final sound of the preceding noun syllable ([n], [s], etc), and, for the particle, consonant and vowel:

consonant: labiality + pluxion + voicelessness + non-aspiration,

half-closeness + backness + rounding [-Cpo].

More specially, the consonantal features summarized as 'consonant' ([C]) here are (with labiality, uvalarity, velarity, dentality, alveolar, and palatalization and retroflexion abbreviated as follows: lab, uvul., vel., dent. alveo., pal., pal. voicel. vocel., occ., nas., fric., lat, pl., plos., retro):

| i. lab. | +voiceless | +occ. | [p][p] |
| ii. ' | +voiceless | +nas. | [n][n] |
| iii. uvul. | +voiceless | +occ. | [o][o] |
| iv. vel. | + | +fric. | [x][x] |
v. vel. + (voice) + nas. [npo]
v. dent. +voiceless. + ooc. [npo]
v. alveol. + (voice) + nas. [npo]
v. alveol. +voice + lat. + pal. [npo]
ix. - + - + roll [npo]
x. - +voiceless. + frie. [sso]
xi. pul. + - + ooc. + retro. [npo]

as in such sentences as:
ii. [di rgamp po rai hj] This box is open.
iii. [di hjappo awi jl] Whose is this yak?
iv. [di strapo hjip:] Bring one like this.

Since [po] is the phonetic form of the definite particles that is appropriate to the 'consonantal' piece, it could usefully be distinguished from the other phonetic variants (section 3) as the 'consonantal-piece' form. All the noun lexical items that are associated, or collocated, with this particle lexical item in the consonantal type of piece ([kpo] could, equally be classified as 'consonantal-piece' noun lexical items: [rmpo], [rgam], [hjip], etc. This type of piece draws on two syllables for its features one of which is the syllable containing final [ o] and the other the syllable [po].

B. The "vowel" type of piece [[ao], [a:o]; [v:]]
1. In contrast with the consonantal type

Like the consonantal type of piece, the vowel type of piece may, at least in the Skaedo dialect, draw on two syllables ([[ao], [a:o]): but commonly examples of this type of piece draw on a single syllable, though that single syllable corresponds to two lexical items, one of which is, of course, the definite particle lexical item; e.g.
two-syllable piece ([ao], [a:o]) [rmpo] (my) horse rdo [khrop] (this) mouth kha [haba:o] (my) ear mza-ba [khapa:o] (this) snow kha-ba.
Before leaving these examples there are two points to be made. Firstly for the two-syllable-piece examples there is a pitch difference between the short-vowel examples ([a o]) and the long-vowel examples ([a o]): the former have a fall in pitch on the first of the two syllables and the latter a rising-falling pitch. Secondly, the two-syllable examples are alternative pronunciations of some of the one-syllable examples, whence the fact that [kho] (this mouth) and [kho:] (their mouth) in the two-syllable set of examples are matched by [kho] (the) mouth and [kho:] (the) mouth in the one-syllable set. My informant preferred the one-syllable-piece type of pronunciation, as in [kho:] and [kho:]. Some of these single-word examples are further illustrated in the following sentences:

\[
\begin{align*}
\text{bu} & \quad \text{[gola skepi bu : satni si]} & \text{The son who was born first died last year.} \\
\text{shop-bu} & \quad \text{[di soqru : mij : nh]} & \text{This book is mine.} \\
\text{mi} & \quad \text{[de mj : tce : set]} & \text{That man has come.} \\
\text{(T). kurst} & \quad \text{[de kurtju : likom o mer]} & \text{That chair is no good.} \\
\text{go} & \quad \text{[di gzo : cat]} & \text{Shut this door.} \\
\text{byo-pho} & \quad \text{[di bjajo : mij : nh]} & \text{This cockerel is mine.} \\
\text{me} & \quad \text{[di mj : likam baten jh]} & \text{This fire is burning well.} \\
\text{phan-kh (y) e} & \quad \text{[phwakho : ci s]} & \text{What advantage came from it?} \\
\text{kha} & \quad \text{[mwe : kho : le : gchi : zo jh]} & \text{Her mouth is too big.} \\
\text{rda-ba} & \quad \text{(mij : morts tahet)} & \text{It is painful to my ear.}
\end{align*}
\]

Some idea of the sort of contribution the definite-particle lexical item makes to these noun-and-particle words can be gained by comparing them with corresponding noun words, in which it is a noun lexical item that is final in the composition of each word; so the final features of that word are those of the noun lexical item, not those of the noun lexical item in combination with those of definite-particle lexical item:

\[
\begin{align*}
\text{nomosyllabic noun} & \quad \text{diryuklic noun} \\
\text{[bu] son (s) } & \quad \text{[bu] } \quad \text{book shop-bu} \\
\text{[mi] man } & \quad \text{[kurt]} & \text{chair kurt (U)}
\end{align*}
\]
[zgo] door sgo [bjalo] cockerel bay-pho
[me] fire me [phumkgo] advantage phan-kh(y)e
[kha] mouth kha [nua:] ear nua-bo.

These examples appear in sentences as follows:

- Bu bu ji [bú bái jo:] There are four sons.
- Shog-ba [t̪ʃ̪ok bɔ kʰjɔ:] Bring a book.
- M[l] [mi kʰjik ɸː] A man has come.
- Kunti (U) [kúnti kʰjik ʃː] Bring a chair.
- Sgo [s̪go kʰɔʃː] Make a door.
- Bja-pho [bʃə kʰjik ʃː] Bring a cockerel.
- M[e] [me ʃɔpɔ] Light a fire.
- Phum-kh(y)e [phum-kh(ʃ)jo] There is no advantage.
- Kha [k̪ha ʃlamanto jo] Shut your mouth.
- Nua-ba [nua: bja, kʰo:] Hey! Pay attention!

If one compares this last set of examples noun-word examples, with the noun and (definite) particle words even just before them, one can set up the following relationships between the syllable-final features of the noun words and the syllable-final features of the noun and particle words:

- Noun word: [u i] [o e a a:] Noun-and-particle word: [u ju:] [o: jo: o o:].

The five short final vowels of the noun word correspond to long vowels in the noun and particle word, and the one long final vowel so far given in a noun word also corresponds to a long vowel in the corresponding noun and particle word, but not the same long vowel ([a:] versus [o:]).

The long vowel [a:] is not, however, the only long vowel that can occur finally in a noun word; there are also [u:] and [o:], and the words in which they occur are characterized by the same rising-falling pitch (or alternatively, a rising pitch) as was noted above for such noun words in [a:'] as [nua:] "ear (nua-ho) and [kha:] "hose" (kha-ho); e.g. [bo:] cut be'u [phiro:] child phira [zəgən]

[co:] rîm hjo-bo [tibọ:] grandchild tlo-bo

as in such sentence examples as:

- [bu: bu jɔt] There are four calves.
- [tibọ: nua:m jɔt] How many grandsons are there?
These words ending in [a:], [o:], and [o:] could, from their pitch behaviour, usefully be considered as disyllabic, and treated as having final [aa], [uu], and [oo].

The relations of these noun words ending in [uu] and [ov] with their corresponding noun-and-definite-particle words seem to show identical final features in both: a long vowel, either close ([u:]), or half-close ([o:]), together with the characteristic rising-falling or rising pitch pattern; in this respect they show a different relationship from noun words and noun-and-particle words like [tsna:] and [uno:]- (or [maao:] and [ma-ba] and [khaa] and [kho:]; [kha-ba] above.

noun word: [uu]
[oo]  [aa]
noun-and-particle word: [u:]
be'u  [de bu: khuri mar] That calf is not his own.
phru (g) -yu  [de phru; khow: in] That child is his.
jo-bo  [khow: mshen maxel] The Rajah has gone to the polo-ground.

To summarize the position thus far, then: if the long vowels [u:], [o:], and [a:] are treated as disyllabic, i.e. as [uu], [oo], and [aa], then the final vowels of the noun type of word are the following five:

- a. close back rounded
  i. front spread
  ii. open front/back neutral
- b. half-close back rounded
  i. front spread
  ii. open front/back neutral

(the degree of frontness and backness of the open vowel varies with palatality and non-palatality of the preceding consonant, and with nasality and non-nasality).

In order to try and arrive at vowel feature to ascribe exclusively to the definite-particle lexical item, one might try to subtract the final features of noun words listed in the preceding paragraph from the final features stated earlier for the noun-and-particle word, which are. It will be recalled:

[uu]  [ju:]  [o:]  [jo:]  [o:/oo]:
but this would be far from easy. For example, since the only feature that distinguishes [bu:] 'son' from [bu:]; 'the son' is vowel length, only
vowel length could, in this instance, be attributed to the definite-particle lexical item; in the case of [kho:] 'mouth' and [kho:] 'the mouth', the difference is, again, vowel length, and, added to this, the difference in degree of openness between openness and half-closeness; and, lastly, the difference between [bu:] 'call' and [bu:] 'the call' appears to me to be nil. On the other hand, such a disentanglement of phonetic exponents may not be necessary: the vowel features can be attributed

In that case the features to be stated for the combination of definite particle lexical item and the final of the noun lexical item combined, without attempting to delimit boundaries. The two lexical items can have an undefined share in the available vowel features, rather as though the vowel features were a joint bank account.

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e.g.

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monosyllabic noun
disyllabic noun
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a. i. [mju:] (that) man [karsju:] (that) chair (U) kars
   ii. [bu:] the son [boqbu:] (this) book shog-bu
b. i. [kho:] (this) fire [phomkhjo:] The advantage phun-khyi
   ii. [gko:] (this) door [gjofo:] (this) cockerel bya-pho
   [kho:] the Rajah jo-bo
   [kho:] (hor) mouth [khaqpo:] (this) hand kug-pa
   [kho:] (this) snow kha-ba
   iii. [kho:] (.) [khaaboo:] (.)
2. A further prosodic subdivision: 'close', 'open'
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In anticipation of a further prosodic subdivision the phonetic exponents of the vowel type of piece given in the preceding paragraph, and the examples of them, have been listed as either (a) or (b). This division reflects the difference between the vowel feature closeness (section (a)); [u:] and the contrasting half-closeness 'centrite' (section (b)); [o:] [o:]. One of the vowel-feature exponents in the 'vowel' type of piece, the degree-of-openness feature, alternates between closeness (section (a)) and half-closeness (section (b)), whence two sub-categories of 'vowel' piece, termed 'close' and 'open', need to be distinguished.

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Correspondingly, those noun lexical items which are colligated with the definite-particle lexical in its 'close-piece' phonetic form ([m:] or ([s]) can be classified as 'close-piece' lexical items, while those noun lexical items, on the other hand, which are restricted to the 'open' piece are classified, prosodically, as 'open-piece' ([o:] or ([e]). E.g.

a. close-piece: ([m:] or ([s]) bu (sox) bu 3 (khu) u, (bui)
b. open-piece: i. [me, mo:] bu (bui) fo (bui) fo:]. [coo], (coo)
i. [kha, kho:/khao] (kha) bu (kha) ao

Every 'vowel-piece' noun lexical item can be put into one or other of these two prosodic classifications accordingly, as 'close-piece' or as 'open-piece' lexical items; and the degree of openness of vowel for the definite-particle lexical item is a function of the prosodic type of piece, 'close' or 'open', in which it occurs.

Within the open sub-category of piece of further division has to be drawn to account for the distinction between (i) the type of open piece that has, as its phonetic exponent, a pure vowel ([o:]) and (ii) the type of open piece that alternates a pure vowel ([o:]) with a vowel sequence ([o:] or ([o:]). Again, the noun lexical items that are restricted to the former type, e.g. [mo:] or ([s]) me, ([o:] or ([o:]) bu ([o:]) pho. ([o:]) bu ([o:]) ho, need to be distinguished from the latter, e.g. [kha], [khao] (kha) bu (kha) ao. In any case, the former type of noun lexical item has, as its phonetic exponents in the noun-wood type of piece, one or other of the half-close vowels [e] and [o], while the latter has, in corresponding circumstances, the open vowel [e]. If the latter type is termed 'neutral', or, for easy simplification, 'o' the former type can be termed 'non-neutral', or 'non-ao'.

The definite-particle lexical item cannot, of course, be classified like its associated noun lexical items, as consonant-piece or vowel-piece, and, if the latter, as close-piece, open-piece, a piece or non-piece; for it occurs in all four types of piece, and is not exclusive to any one type. Only in this sense can forms be classified by type of piece:

A. 'consonantal' piece:

B. 'vowel' piece:

| a. | 'close': [o:] |
| b. | 'open': [o:] |
| i. | non-ao: [o:] |
| ii. | a: [o:] |
The only phonetic features common to all the phonetic forms the definite-particle lexical item are (i) lip-rounding, and (ii) a degree of openness of vowel that allows of variation between close and half-close according to type of piece. The minimum requirement for a phonological formula is a symbolization that shall cover these two common features, the rest being contributed, in each instance, by the prosodic type of piece; but it is also necessary to take account of comparable contrasting lexical items.

The definite-particle lexical item is restricted, in its relations with preceding lexical items, to intraverbal juncture: it can never occupy the initial place in a word. In order to be comparable, therefore, other lexical items must be members of the particle category, and subject to this same limitation. There are seven other particle lexical items. Only one of these seven shares lip-rounding and backness with the definite particle; it is the locative particle [tal] [tin] [tul]. Its remaining vowel feature, degree of openness, is constant, being between close and half-close, with some centralization; while the definite particle, in contrast, alternates between closeness and half-closeness under the conditions that I have stated. Consequently these two will require different vowel terms U and O; the phonetic exponents of which are:

U: backness, rounding, between close and half-close, centralized O: ..., half-closeness/closeness, by type of piece; e.g. (locative particle)
[laut] to lend lat-pa; [dumo] ahead midu;
[thuru] down thu.

As far as the consonantal piece is concerned, the definite particle shares labiality, plosion, voicelessness, and non-association with the comparative particle [pates], e.g. [sapata] than medicine [sapa], [tapata] than darkness; but there the resemblance ends, for the comparative particle has those same features in the vowel piece as well, e.g. [mapata] than I met, [dja; pate] than this 'id. These two lexical items cannot, therefore, have the same initial consonantal term; and, in fact, the vowel term O proposed above for the sake of a vowel distinction is itself sufficient indication of the [p] variant appropriate to the consonantal-piece pronunciation of the definite particle as well as of the vowel pronunciation (O) and the shared-feature pronunciations [O:] and [u:]

The phonological formula of the definite-particle lexical item is O.

III Conclusion

The phonological formula O for the definite-particle lexical item summarizes the sets of features, or the share in a set of features, stated
five paragraphs earlier in accordance with its 'contextual distribution' as proposed by Firth as long ago as 1935. Translated into a diagram it would appear as follows:

\[
\begin{array}{cccc}
\text{consonantal piece} & \text{close piece} & \text{vowel piece} & \text{open piece} \\
\text{e.g.} [\text{brenpo}] & \text{bu:} & \text{ngo;} & \text{kho:;} \\
[\text{b}n\text{ijo}] & \text{loq bu:} & \text{dy:} & \text{khaov;} \\
[\text{banpe}] & \text{nu:} & \text{njo:} & \text{kho:;} \\
[\text{lampo}] & \text{kausju:} & \text{ph n) kjo:} & \text{khaov;} \\
\end{array}
\]

This summary of mine deals with all the variant phonetic forms of the particle lexical item O, and does it economically, through a total of four different types of piece. It does not need to have recourse to derivation, by rule, from a base form in the manner of Chomsky, or derivation, by assimilation from a base form in the manner illustrated from Gleason in section (f), through a so-called 'substitution' of phonemes.

Since there is not a study of the Bih\textquotesingle{T}ibetan definite-particle lexical item by Chomsky or any of his followers, I cannot assess the value of my form of statement against a generative-phonology statement of the same data in the light of such criteria as adequacy and economy; but I suspect that prosodic analysis has an advantage over generative phonology in regards economy of statement in that it 'cuts its coat according to its cloth'; each variant form of a lexical item is accounted for via the 'piece' of utterance that relates variant to the phonetic context in which that variant occurs. Generative phonologies, on the other hand, seem to have a weakness for over-generalizing, with the result that each such over-generalization has to be corrected by a 'salvation' rule; and every 'salvation' rule adds, unnecessarily, to the complexity of the statement.

Further, prosodic analysis reflects the trained hearer's response to the phonetic data supplied by the speaker, and does not require the hearer to try and guess the speaker's intentions. It is not concerned, in other words, with 'what the speaker of a language knows implicitly (what we may call his competence' (Chomsky, 1966, p. 7); but if it should, at some future time, become possible to relate the hearer's reaction to an utterance to the speaker's intimation concerning his utterance, I suspect that intuition may well turn out to be closer to the contextually distributed and, therefore, direct and equal relationship of the variant phonetic forms of a lexical item that result from prosodic analysis than to such 'phonological representations', in generative phonology, as result from a chain of process rules transforming a base form.\textsuperscript{9}
NOTES

1. Phonetic transcription is indicated by square brackets; its symbols have the values laid down by the International Phonetic Association, except that [C] and [Ñ] have been introduced to represent, respectively, any appropriate consonant and vowel, and that, in the hope of making things easier for the printer, [ç] symbolizes not a voiceless palatal plosive but a voiceless palato-alveolar affricate. Also with the printer in mind the following non-IPAs symbols have been introduced:

[?] = glottal plosion; [br] = voiceless alveolar roll, commonly one-tap; [bj] = voiceless non-syllabic front spread vowel; [J] = somewhat centralized front spread vowel between close and half-close, as in both vowels of the English word Hindu and the first vowel of the Hindi word hind: [u] = somewhat centralized back rounded vowel between close and half-close, as in English ball; [r] = half-open front spread vowel; [n] = voiced velar nasal; [z] = voiceless velar fricative; [z] = voiceless palato-alveolar fricative; [j] = voiceless prepalatal retroflex plosive; [s] = voiceless palato-alveolar fricative; [f] = voiceless bilabial fricative.

The Balti examples are of the Skardu dialect, as spoken by Mohammadzâhir Hussein Baltistani, a seventeen-year-old student, as part of six months' research carried out in 1964-5 in Rawalpindi. To those who may be wondering why I did the research in Rawalpindi rather than in Skardu itself, less then two hours' flying time away, I would explain that I was prevented from taking this obviously preferable course by the Pakistan Government, who denied me permission to visit Baltistan.

2. Where it seemed useful to do so, I have added Classical Tibetan forms in italics for comparison.

3. Pronunciations of the kind illustrated at (ii) are to be heard in Skardu, the capital of Baltistan; but are probably not current in Khaplu, the other main Balti dialect area.

4. It is a pleasure to acknowledge the help that I received from A.F.C. Read, the author of Balti Grammar, a ready-made source of examples illustrated here by inverted commas and a page reference.

5. The extent to which Firth came under the spell of Indian languages. Dravidian as well as Indo-Aryan, can be measured from the following extract from his list of publications: 'A short outline of Tamil pronunciation', appendix to A. H. Arden, A progressive grammar of Tamil, Madras, 1934; 'Phonological features of some Indian languages', The proceedings of the Second International Congress of Phonetic Sciences, 1935; 'Alphabets and phonology in India and Burma', Bulletin of School of Oriental Studies, 8 (1938); 'A practical script for India', Indian Listener, 1938; 'Specimen: Kashmiri, Melître Phonétique, 1939; 'Alphabets for Indian languages', in D. Jones, The problem of a national script for India, 1942; 'Introduction' [on pronunciation and the alphabet], in

When I visited Government College, in 1964, I found that Firth was still remembered there. Indeed, in an article 'Government College: some reminiscences' in the *Pakistan Times* 'looking forward to the Centenary celebrations' Abdul Majid wrote: 'Among professors of English Mr. H. Y. Langhorn and Mr. J. E. Firth held an esteemed place. The latter's contribution to the improvement of English pronunciation is part of the College tradition and still a continuing influence' (25th Oct., 1964).

6. I have enclosed 'voice' in brackets here because, unlike Burmese, voice is invariably concomitant with nasality in Balti Tibetan, and is therefore implied by it.

7. For pitch features in Balti see 'Lepcha and Balti Tibetan: tonal or non-tonal languages?', *Sprigg*, 1966.

8. Chomsky's base form, or 'underlying form', is not necessarily at as remote a degree of abstraction as a phonological formula: indeed it can even, apparently, occur in utterances. Underlying forms are said in Chomsky, 1965, to 'appear in isolation'; and the fact that 'from the verbs permit, torment etc. We derive the nouns permit, torment --- the stress on the second syllable being automatically weakened to secondary' (Chomsky, 1965, p. 89) surely must mean that these verbs base forms are audibly stressed on the second syllable. For audible features a phonological formula, on the other hand, relies on its phonetic exponents, in an indirect relationship.

References
Chomsky, N., 1963, 'Formal analysis of natural languages'. *Handbook of Mathematical Psychology*, II (for page references see Allen and Van Buren)
Firth, J. R., 1935, *Use and distribution of certain English sounds*, *English Studies*, XVII, I (for page references see Firth, 1957)