Sandhi under the spotlight*

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The term *sandhi* is not frequently encountered in discussions of morphophonemic modifications in the traditional grammars of the Bantu languages. It is a term which, even in linguistic research outside of the Bantu language family, has carefully been avoided in some cases and in others found to have varied applications. This article attempts to gain some clarity on the meaning and origin of the term *sandhi*, to determine general principles which underlie sandhi modifications and to consider issues which cannot be ignored when it comes to the application of the term to the Bantu languages. The discussion is mainly based on examples from Northern Sotho.

Introduction

Sandhi is an ancient Indian term for the modification and fusion of sounds at or across the boundaries of grammatical units. As language users all of us constantly implement sandhi modifications and as native speakers we are generally unaware of it. These modifications differ from language to language and may even differ from one individual to the next in the same language or from one type of speech situation to another.

Morphophonemic alternations in the Bantu languages are well-documented. It is strange, though, that the term *sandhi*, which is closely associated with morphophonemic modifications, does not very often feature in the description of such changes in Bantu linguistics. The reasons for the careful use or avoidance of the term, not only in the Bantu languages but also in linguistics generally, may become clearer as several issues are considered in the course of this discussion. The article aims to establish the origin of the term, its range of application (traditionally as well as

in modern linguistics) and general principles which underlie *sandhi* phenomena.

As will be indicated, the application of the term *sandhi* to the Bantu languages, has its own intricacies and challenges. Examples to support various theoretical points have been chosen mainly from Northern Sotho.

Definition and range of application of the term

According to Matthews (1991:150) sandhi is a Sanskrit word for *joining*, which has been borrowed from the grammarians of ancient India to describe morphophonemic modifications which may be observed when forms are used in contact with other forms. In India it is pronounced as /sándhi/ ['sʌndfii], but in English usually as /sándi/ or /sændi/ (Hall, 1964:138). According to Lass (1984:70) the term is constituted by two Sanskrit forms, namely **sam** 'together' and **dhi** 'put'. MacKay (1987:144) offers the following

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analysis: "Sanskrit /san/ 'together'; /dʰə/ 'to put, to hold'; /i/ noun ending. Hence, 'juncture.'" As pointed out by Andersen (1986:1), it was apparently Georg von der Gabelentz (1891) who first advocated the adoption in general linguistics of the term sandhi as a cover term for a diversity of phenomena occurring at junctures. In 1962 Allen published a study which could be regarded as a classic on sandhi, this phenomenon only having enjoyed limited attention in various works up until that time.

In 1983 a workshop, organised especially with the view to focussing on sandhi phenomena in the languages of Europe, was held during the 10th International Congress of Phonetic Sciences in Utrecht. The papers which were read were published in Andersen (1986). Together the papers constitute quite a collective understanding of the topic, but they largely target the languages of Europe. The fusional typology of many of these languages provides an abundance of classical instances of sandhi. The Bantu languages, being essentially agglutinative in nature, are also subject to sandhi modifications, though not on a comparable scale as languages of the fusional type, because their morphemes are ideally invariable and clearly segmentable. Nevertheless, the observations made in the published conference papers mentioned above, also allow one to make a meaningful study of sandhi modifications in the Bantu languages.

Ever since the term came to be used in general linguistic terminology late in the 19th century, it has had marginal status. Matthews (1974:114) points out that not all scholars use this term and for those who do use it, the application is bound to vary. Usage has never been standardised regarding the extent to which the term should be applied to morphophonemic phenomena, as well as to particular types (e.g. assimilation, fusion of consonants, etc.)

Andersen (1986:1) remarks that 'As a technical term without a strict definition it has been used in some kinds of discourse and carefully avoided in others. It has, so to say, been a term, but not quite a term.' The reason for Andersen's description of sandhi as a 'technical term without strict definition' is understandable, since it encompasses a diversity of phenomena, which individually require more specific names, such

as elision, liaison, neutralisation and strange sounding terms such as haplology, epenthesis, metathesis, apocope, syncope, to mention but a few. Apparently it was in this more general sense, namely that of a handy label or cover term for all types of modifications (ranging from assimilations to dissimilations of all kinds), that the term was first used in general linguistics.

Types of Sandhi

Traditionally the concept was used to describe modifications which take place specifically at *word* boundaries. This means that the final segment or segments of one word and/or the initial segment or segments of the following word change when the words are strung together to form phrase-like utterances. To illustrate this in a simplified manner, a contraction between two words (e.g. in an auxiliary verb construction) in Northern Sotho will be considered. Compare example (1):

(1)   uncontracted form:
        ke rata (auxiliary verb) + *go sepela* (complementary verb) 'I like to go'
        contracted form: *ke ratô sepela*

In isolation (i.e. in the uncontracted form) the auxiliary verb *ke rata* occurs unaltered, consisting of a subject concord ke- and a full verb stem -rata. In Dinneen (1967:266) and Bloomfield's (1961:186) terms this would be the **absolute form** of the word (i.e. when it is uttered alone). It may, however, adapt itself to the complementary verb *go sepela*, resulting in *ke ratô sepela*, where *ke ratô* would then constitute the **included form** or **sandhi-form** of the word according to the above authors (i.e. when it is uttered with other words).

The sound change in the above example entails the deletion of the velar fricative **g** [ɣ] of the infinitive prefix **go-** and the coalescence of the stem final vowel **a** [a] of **-rata** with the remaining vowel **o** [o] of the infinitive prefix, resulting in the mid-low back vowel **ô** [ɔ]. The output of fusion as in the above case is usually a compromise segment. The vowels [a] and [o] are replaced by a vowel acoustically intermediate between the two, namely the mid-low vowel [ɔ]. This is an optional modification, but it is instrumental in

establishing a smoother transition between the auxiliary verb and its complementary verb.

In the light of the above interpretation of sandhi as 'modification at *WORD* boundaries', the following example would not qualify as an instance of sandhi:

(2)   *dikgômo tša gêšo*   'our (communal) cattle' >
        dikgômo tšêšo

According to the word identification theory proposed by linguists such as Ziervogel (1979) and Poulos and Louwrens (1994) for Northern Sotho, the first element of the possessive construction (**tša**) is a possessive concord and the second element (**gêšo**) is a possessive base or stem. Although **tša** and **gêšo** are written as two orthographic words, they constitute a single linguistic word or unit (Ziervogel, 1979:49; Poulos & Louwrens, 1994:96). The modification thus does not take place between two words, but rather between two constituents within one and the same word, disqualifying it as a phenomenon of sandhi.

According to another descriptive model (cf. Lombard, van Wyk & Mokgokong, 1985:169, 172), the possessive concord is classified as a *particle*, which is valued as a word and not as a (prefixal) morpheme. This complicates the issue, since it means that theoretically the modification indicated above has now taken place between two linguistic words. The very same sound adaptation now qualifies as a sandhi modification.

The scenario sketched above highlights one of the problems one has to deal with when applying the term *sandhi* to modifications in the Bantu languages. Unless there is a clear word identification system in place, the domain of sandhi occurrences will be a floating one.

Linguists have extended the original application range of the term, so that it should include not only modifications across word boundaries, but also modifications which take place between morphemes within a word. Such an approach widens the scope of occurrences of sandhi tremendously. Two types of sandhi are accordingly recognised, namely *external* sandhi and *internal* sandhi, but once again such a division is not divorced from the problem of word identification in a language.

External sandhi

External sandhi refers to modifications which take place across the boundaries of words. It has also been called *sentence sandhi*. Most of the examples of this type of sandhi in Northern Sotho are optional, including many contractions in possessive constructions and constructions involving demonstratives, compare the examples in (3):

(3)
gar'a mmilôbilô 'amidst the multitudes' <
gare (adverb) + *ga mmilôbilô* (possessive qualificative)
(as in: *"Di itšatšara gar'a mmilôbilô"*
'They were crying bitterly amidst the multitudes'
(Rafapa, 1980:4))

mmangwanago 'your aunt'	< *mmangwane* (noun) + *wa gago* (possessive qualificative)
banake or *banaka* 'my children'	< *bana* (noun) + *ba ka* (possessive qualificative)
mokgô 'this manner'	< *mokgwa* (noun) + *wô* (demonstrative pronoun)
monnô 'this man'	< *monna* (noun) + *yô* (demonstrative pronoun)

In some cases the explicit, uncontracted form may become extinct and the changed form becomes obligatory as in the following examples which most probably developed from auxiliary verb constructions:

(4)
o fô bolêla   < *o fa go bolêla*
                'He is simply talking'
ba diô homola < *ba dia go homola*
                'They are merely keeping quiet'
e nô bogola   < *e na go bogola*
                'It is merely barking'

To some scholars the term *sandhi* is equivalent to 'external sandhi', i.e. in accordance with the way it was originally used in Sanskrit. They do not seem to consider the broader interpretation of sandhi (i.e. across as well as within words) in their definition, cf. MacKay (1987:145) who proposes that in modern terminology

'the term *sandhi* unmodified refers to **external san-
dhi** (emphasis IMK), that which occurs across word
boundaries.' This is also the approach followed by
Robins (1964:201) and Ternes (in Andersen, 1986:14).
Scholars advocating the view that the term *sandhi*
should be reserved for instances of *external sandhi*
only, argue that instances of *internal sandhi* are appro-
priately catered for anyway by terms which describe
various types of modifications more accurately, such
as haplology, liaison, elision, epenthesis, etc. This rea-
soning makes sense, since the use of *sandhi* in these
situations is redundant, being too general, non-infor-
mative and not adding to our knowledge of a particular
modification we are dealing with.

Internal sandhi

Modifications which take place at morpheme bound-
aries within words, have also aptly been called *word
sandhi*. Here the modifications do not take place op-
tionally, but are compulsory, compare the palatalisation
which takes place at the juncture of the root *phiri* 'wolf'
and the diminutive suffix **-ana** in example (5):

(5)   *phiri* + *-ana* > *phišana*

In the above example *phiri* may be viewed as an ab-
straction when serving as a basis for the phonological
process. It is thus at a different conceptual level than
the actual realization or sandhi alternant **phiš-**. The
suffix **-ana** which specifies the environment is clearly
recognisable both on the level of abstraction as well as
in the actual realization.

The situation becomes more complicated where
the units do not each occupy their separate places, but
are woven into one unsegmentable piece. Matthews
(1991:151) regards instances of fusion, where the
boundaries between the units are obliterated, as sandhi
phenomena of a more drastic type. In the following
examples the verbal root fuses with the immediately
following suffix:

(6)
-tlog- 'go away' + *-y-* (causative) +
-a (terminative morpheme)
> *-tloš-* + *-a*   'cause to go away'

or
-šal- 'stay behind' + *-ilê* (past tense)
> *-šetše*   'stayed behind'

The boundaries of grammatical units

Sandhi modifications take place at or across the bound-
aries of grammatical units. These grammatical units or
domains in which sandhi modifications operate have
to be defined differently for different languages ac-
cording to their structure. In some languages the or-
thographic word separated by spaces may be the ap-
propriate unit by means of which types of sandhi can
be described, especially if there is not much deviation
from the linguistic word. Pétursson (in Andersen,
1986:252) is of the opinion that for languages written
and printed in the European alphabetic manner, the
orthographic word is a useful criterion for the descrip-
tion of external sandhi phenomena (modifications tak-
ing place across word boundaries).

The traditional word (usually the linguistic or or-
thographic word) does not necessarily function as a
domain for phonological rules (including sandhi rules).
In some languages the appropriate domain for dealing
with sandhi rules might be the syllable, the phonologi-
cal word, the phonological phrase or some other stretch
of material between phonological junctures (audible
open transitions). There is no one way of defining the
boundaries of these phonological units across languages,
since they are defined differently for different languages
according to their nature, e.g. based on a potential pause,
or one stress, or length, or on whether they are uttered
alone or as part of a larger sentence. In the case of the
Bantu languages, length (usually on the penultimate
syllable of an utterance) mostly marks the boundaries
or potential pauses between 'stretches of phonologi-
cal material' within which or across which sandhi modi-
fications occur. Neither the orthographic word, nor the
linguistic word functions as the ideal domain for pho-
nological rules in Northern Sotho.

The question one might justifiably ask at this point
is: how important is the distinction between internal
and external sandhi, considering the fact that modifica-
tions take place for the same basic reasons, namely to
achieve ease of transition or to signal text cohesion?

After all, sandhi is a phenomenon often closely linked to spoken language and its occurrence is not determined by the speaker's knowledge of what does or does not constitute a linguistic or orthographic word. In one Bantu language a certain modification may be identified as an instance of external sandhi, while the same modification in a similar situation in another Bantu language may be regarded as internal sandhi, depending on the recognition of linguistic (or orthographic) words in the relevant grammars. In this regard Basbøll (in Andersen, 1986:24) states that 'the boundaries which are relevant for sandhi do not generally equal boundaries between words when these are defined on independent grounds (e.g. morpho-syntactically).'

Admittedly, when scholars refer to 'words' or 'word boundaries' in their treatment of sandhi in the relevant literature, they do not specifically refer to *linguistic* or *orthographic* words, but neither is a clear definition always offered as to exactly how the notion 'word' should be interpreted.

Householder's definition

A definition which can usefully be explored is the one proposed by Householder, as indicated in Matthews (1974:114). Householder states that sandhi refers to *phonological adjustments at boundaries*. Three matters which arise from this definition deserve comment:

- The nature of the adjustments
- The location of the adjustments
- The nature of the boundaries

The nature of the adjustments

The *adjustments* need to *make sense phonologically*, in other words we should at least expect the adaptations to have some phonetic rationale. Compare the subject concord of a class 1 noun in the Northern Sotho examples in (7) below:

(7)
mosadi o rêka dijô   'the woman is buying food'
> **mosadi w rêka dijô*
versus
mosadi o apea dijô   'the woman is cooking food'
> *mosadi w apea dijô*

When the subject concord precedes a verb stem commencing with a consonant (cf. -**rêka**), it is pronounced as a vowel o- [o]. If, however, the concord precedes a verb stem with an initial vowel, it will lose its syllabic quality and become a glide [w]: Thus, instead of *mosadi o apea dijô* [mosaⱡioap'eaⱡi:ɜʷɔ] one would hear *mosadi w apea dijô* [mosaⱡiwap'eaⱡi:ɜʷɔ] 'the woman is cooking food'. Some adjustments may not have such a synchronically logical basis, but as Ternes (in Andersen, 1986:11) observes, most of the sandhi changes "have, at some stage of the history of their linguistic processing, vaguely been attributed to an endeavor of achieving 'ease of articulation'...".

A popular example of a transitional sound which is not justified etymologically and which occurs dialectically in English (cf. MacKay, 1987:145), is the insertion of a [r] between two vowels at word junctures, compare the examples in (8):

(8)   *Botswana r and Zimbabwe*
        the idea r is excellent

This linking sound is inserted involuntarily by speakers, its main function being to achieve ease of transition between two vowels. Bloomfield (1961:417-8) refers to examples such as these as analogic innovations: The final [r]-sound in a word like *water*, for example, is not pronounced in final position and before consonants, i.e. [wɔ:tə], but before a vowel in a close-knit phrase it keeps its [r] as in *the water is* [ðə wɔ:tər iz]. In a phrase before a following vowel, a word like *idea* follows the same pattern, resulting in the sandhi-form [ajdiər] as in *the idea is*, even though it never had final [r]. Matthews (1974:111) also asserts that the occurrence of the so-called 'linking *r*' is 'certainly not restricted to words which happen to have an *r* in the spelling'.

Speakers of a foreign language tend to hear in terms of their mother-tongue and may resort to adaptations and insertions when they find certain combinations of sounds difficult to pronounce. So for example a word like 'northern' will frequently be adapted to 'notheren' by a Sotho-speaking person to comply with the open syllable structure of the Bantu languages.

An example of a modification which does not seem

to be historically motivated, yet is obligatory, is observed when vowel commencing verb stems in Northern Sotho are preceded by the reflexive prefix or the object concord of the first person singular, or are used to form deverbatives. Such examples require the insertion of a consonant (mostly -k-, but in some cases also -t-), as indicated in (9):

(9)

reflexive prefix:	-apeêla 'cook for >
	-ikapeêla 'cook for oneself'
object concord:	-ôpêlêla 'sing for' >
	-nkôpêlêla 'sing for me'
deverbative:	-anêga 'tell' >
	kanêgô 'story'
	-itia 'hit' >
	titiô 'assault'

An interesting example is also encountered in Zulu when the formative na- ('also') precedes a locative with initial vowel e-. Instead of the expected vowel coalescence, one finds that an -s- is inserted between the two vowels:

(10)   na- + emzini > nasemzini 'also at the village'

Morphological information is needed to explain cases such as the following where sandhi occurs in one instance, but not in the other: The class prefix mo- of class 1 is generally modified to ngw- [ŋw-] in Northern Sotho when preceding a stem commencing with a vowel, e.g. mo- + -ana > ngwana 'child'. This applies only when the stem is a primitive, original stem. However, if the stem is derived from another word category (e.g. as in the case of deverbatives), the prefix retains its shape, e.g. mo- + -anêg- + -i > moanêgi 'story-teller', and not *ngwanêgi.

Adjustments which lead to alternations which are totally independent of any phonetic environment, and which depend simply upon the selection of neighbouring morphemes without regard to their phonetic form (as in suppletive alternants) are generally not regarded as sandhi modifications, e.g. the subject concord of class 1 nouns in Northern Sotho which

realises as o- in the positive form of the indicative verb, present tense, and which displays a suppletive alternant a- in the negative form. Changes such as these are not dictated by the need for easier pronunciation, but by rules of grammar and syntax.

The location of the adjustments

According to Householder's definition phonological adjustments occur *at* boundaries. As Matthews (1974:114) points out, adjustments *at* boundaries should not be understood too strictly. Sometimes other sounds besides final and initial sounds are affected. For example in passivisation in Zulu, the affixation of the passive suffix causes a phonological change in certain verb stems, but not in the immediate environment of the suffix as expected, but stem internally, cf. palatalisation in example (11):

(11)   -khumbula 'remember' >
       -khunjulwa 'be remembered'

A morpheme may also be modified due to the position which it takes up in a phrase or sentence. It is a well-known fact in the Bantu languages that length on syllables varies depending on their position in a word, phrase or sentence. Note the syllable thu in (12):

(12)   bana ba rata thu:tô
       'the children like the lesson'
       (length on the penultimate syllable thu of the morpheme thut-)

but

       diswantšhô tšê di lego thutô:ng
       'the pictures which are in the lesson'
       (no length on thu of the morpheme thut-, because length has shifted to the penultimate syllable tô)

Having made mention of the suprasegmental feature 'length' in the example above, a related matter such as tone also deserves attention here. The term sandhi is encountered in relation to tonal phenomena in the works of a few scholars including Pike (1948), Robins (1964) and Matthews (1974), cf. Robins (1964:201): 'The differences between the tones of

words in tone languages when conditioned by the tonal patterns of neighbouring words have been called **tone-sandhi'** (emphasis IMK). Compare the examples in (13):

(13)　*-nyànà* (diminutive suffix)
LL tone pattern in isolation > HL tone pattern in included position, as in
**kgòmó* + *-nyànà* > *kgòmónyánà* 'calf'

　　gò bàpàlà　　　'to play'
Verb stem has LLL tone pattern in isolation > HLL when preceded by an object concord, cf.
**gò é bàpàlà* > *gò é bápàlà* 'to play it'

Tonal adjustments are made, mostly, but not necessarily, on final and initial syllables of morphemes.

The nature of the boundaries

The term *boundaries* in Householder's definition is an open term. It may refer to *any* grammatical boundary, that is, boundaries between morphemes within words or between morphemes across word boundaries (be they orthographic, linguistic or phonological boundaries, depending on the most appropriate criteria for the specific language). The 'open' interpretation of boundaries in this definition is attractive: It precludes a debate about what should or should not constitute a word in a language, because it does not commit itself to the 'word' as a domain for sandhi.

Speech situations and formal representations

The following two issues deal with the relationship between sandhi and the speed of an utterance, and the orthographic representation of sandhi forms.

Speed of utterance

Adjustments at the boundaries of constituents can most likely be observed in speech that is rapid and casual. The organs of speech are prone to taking short cuts as they pass from one position to another quickly. MacKay (1987:146) says in this regard of foreign language learners that "if speech is to sound natural, the speaker must take the 'shortcuts' other speakers take, neither more nor less ...". Such short cuts often involve contractions and deletions. The resulting forms are not recognised in the written form, only in the spoken form. The slower the speech, and the more formal or careful it is, the less the various types of modification which will occur. Compare example (14):

(14)　*I'm gonna 've ham 'n eggs*　instead of　*I am going to have ham and eggs*

In Northern Sotho 'there is a common tendency to **devoice** or to **whisper** certain vowels in rapid unemphatic speech' (Kotzé, n.d.:39). This tendency can be observed in the initial or the final syllable of words (cf. example 15) or sentences (cf. example 16).

(15)　*selêpê* [selɛːp'ɛ]　>　[sęlɛːp'ę]
'axe', where [ę] and [ę] in the initial and final syllables respectively are whispered as indicated by the diacritic [ˌ] below the symbols.

(16)　[-tl'ɛːtʃ'ę] as in *kgamêlô e tlêtše*
'the bucket is full'

Should an adjunct, e.g. *mêêtse* 'water' be added, vowel whispering will move to the final vowel of the sentence, i.e.

[mɛɛːts'ę] as in *kgamêlô e tletše mêêtse*
'the bucket is filled with water'

Final deletion of sounds or syllables may be heard in fast or slovenly speech, cf.

(17)　*ke kgopêla lê lengwê*
'I am asking for another one'
(e.g. *lebôtlêlô* 'bottle')
is heard in fast speech as:
ke kgopêla lê leng

Initial deletion of sounds or syllables (sometimes simultaneously with final deletion) may also be observed in Northern Sotho, e.g.

(18)　*ga ke re*　　'not so? / don't I say?'>　*a ke re*
　　gomme　　'and' (conjunction)　>　*'mme*
　　ga ke tsebe　'I don't know'　　>　*a ke tse*

Orthography

Sandhi modifications which are obligatory, are mostly reflected in the orthographic renderings of a language. In the Nguni languages sandhi phenomena such as linking glides and vowel coalescence across morpheme as well as word boundaries have led to the adoption of a conjunctive writing system for these languages.

For second language learners who acquire a language in a formal class-room situation, the orthography is not always a true reflection of what happens in natural pronunciation in a speech chain. In Northern Sotho, for example, the passive form has two markers - the one being a phonological change in the verb stem brought about by the passive morpheme -(i)w- and the other the agentive marker ke- (in cases where an agent is mentioned), e.g.

(19a)
ke swêrwe ke tlala 'I am hungry'
                       (lit. 'I am caught by hunger')
ke ôpša ke hlôgô   'I have a headache'
                       (lit. 'I am struck by the head')

The inclusion of the passive morpheme in the verb stem, requires of the speaker to make phonological adaptations with varying degrees of complexity (cf. labialisation and palatalisation respectively in the examples above). True to speakers' natural inclination towards simplification and ease of articulation, one of these markers is invariably discarded. It comes as no surprise that the preferred marker which will be retained in a passive form, would be the marker ke-, seeing that its form is regular, unlike the verb stem which often requires quite drastic changes.

In the formal representation passive forms occur as in example (19a), but in the spoken language the native speaker often conveniently avoids the application of a phonological change to the verb stem, because the agentive marker ke- is felt to be sufficient to convey the intended message correctly, cf.:

(19b) *Ke swêre ke tlala*
      Ke ôpa ke hlôgô

The spoken form can in turn affect the written representation and appear as in (19b), because the

presence of the agentive marker ke- after the verb is indication enough that we are dealing with a passive form.

Shortened pronunciations are to a limited extent marked in spelling, but not all sandhi modifications are necessarily reflected in the standard written form of the language. If these changes are reflected in the written form it invariably conveys the impression of a non-prestige variety. Should English pronouns, for example, be presented in spelling without the initial *h* as is often the case when these forms are unstressed, compare *'e* for *he, 'im* for *him, 'em* for *them*, this

> is a form of eye-dialect and gives a fictitious flavor of illiteracy or homely rusticity ... We normally do not spell these forms as we pronounce them, and our spelling habits, here as in many other instances, mislead us as to the actual facts of our linguistic behavior. (Hall, 1964:163-4).

It may also happen that a habit of sandhi in closely connected words is fostered to such an extent that the spoken form acquires a representative form in practical orthography. This appears to be the case in examples such as the following in Northern Sotho:

(20)   *-re* 'say' + *bjalô* 'so'   > *-realô* 'say so'
       -itšê 'said' + *bjalô* 'so' > *-itšalô* 'said so'

Forms like -realô and -itšalô represent a type of 'fossilized' state of external sandhi which operated between the verb stems -re and -itšê and the adverb *bjalô* (so).

Conclusion

The preceding discussion does not even scratch the surface of sandhi modifications in Northern Sotho, but a comprehensive coverage of the phenomenon was not intended with this article. The aim was rather to draw the attention to sandhi as a rather neglected term in Bantu linguistics and to consider its nature and range of application in these languages.

Perhaps the simplest way of summing up sandhi is to say that it is a phenomenon of contact. When

words and morphemes are in close proximity, they influence each other, resulting in morphophonological changes. The changes may be obligatory or optional depending on different circumstances such as formal and informal speech situations or rapid versus slow, emphatic speech, etc. Even though Northen Sotho is generally classified as an agglutinating language in which morphemes ideally retain their shapes when conjoined, it is not exempt from sandhi modifications. Generally the process is assimilatory in nature, while its opposite, dissimilation, is far less usual (Matthews, 1991:150). The main purpose of adjustments at junctions is to achieve ease of transition between adjacent articulations. We expect most adjustments to have some phonetic rationale, if not overtly, then at least historically or analogically, where certain forms have become fostered due to a habit of sandhi.

The broad and loose understanding of sandhi as a term covering all kinds of morphophonemic modifications, has probably been the reason why it has survived for so long. Andersen (1986:2) states that this wide interpretation 'makes the term useful as an informal preliminary label which can be used – unlike any strictly defined term – without pre-judging the issues that a given set of data might give rise to.' If sandhi is simply another word for 'modification' (cf. Lehmann, 1976:124), i.e. if it is understood in a very broad sense as covering all phenomena where two neighbouring sounds or groups of sounds affect each other in some way or another, it can be said to occur in most languages.

Ironically, the wide range of application of the term, has also been responsible for its limited usage in linguistic circles. As a general term, its informational value is not very high when compared to numerous terms which are available to describe modifications more exactly. This is probably the reason why the term is not frequently used in the treatment of morphophonemic changes in the Bantu languages either.

In the course of the discussion doubt was voiced regarding the relevancy of a strict distinction between internal and external sandhi for the Bantu languages. It was pointed out that such a distinction presupposes a clear word identification system in a language. (The same presupposition holds true for the application of the term in its originally intended sense, namely as referring to modifications across words). This complicates matters in the Bantu languages, because more than one approach towards word identification may exist for a particular language or for the Bantu language family for that matter. Theoretically this non-uniformity could lead to the confusing situation where one and the same modification may be labelled both as an instance of internal and external sandhi. In order to divorce the investigation of sandhi modifications (which is mostly a practical phenomenon) from the problem of word identification (which is a theoretical problem), a broader definition of sandhi as proposed by Householder (as indicated in Matthews, 1974:114) was presented, namely that sandhi entails 'phonological adjustments at boundaries'. 'Boundaries' in this definition should be understood in a wide sense as referring to any units which make sense phonologically in the language, and should not be tied to linguistic or orthographic words.

Viewed as a generalized technical term covering all kinds of modifications when morphemes and words are combined in larger linguistic forms in the chain of speech, *sandhi* as a term has its place in Bantu linguistics.

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