Melodic Tone in Bantu: Overview
Dave Odden (Ohio State University)
Lee Bickmore (SUNY Albany)

1. Background

A fundamental notion of many suprasegmental theories such as Autosegmental Phonology is that of a “tone melody”, the idea that the tones on a word may be abstracted away from the phonemes that they are realized on. This allows the identification of a small number of tone patterns like H, L, HL, LH and LHL found in Mende nouns (Leben 1973, Goldsmith 1976). Such an analysis also explains patterns of verb inflection in Tiv, where verb tense-aspect is signalled by modifications of root tone whereby L roots have allomorphs like [ngòhörò, ngòhörò, ngòhöró] ‘accept’, and H roots have the variants [yévèsè, yévèsè, yévésè] ‘flee’ – stems may add L, HL or H, depending on inflectional form.

This situation, where alternation in stem tone plays a central role in verb inflection, is quite widespread in Bantu, and is the focus of this volume. Indeed, to the best of our knowledge, such patterns are universal in those Bantu languages with tone, and are missing only in a handful of languages such as Swahili or Nyakyusa that have no tone. Despite being ubiquitous in Bantu, we believe that the nature of these systems as a whole is not well understood, even though some specific systems are well-understood. Apart from the unfortunate fact that distinctive tone can still be left out of descriptions, investigation into grammatical tone is hampered by the lack of an investigative framework which informs the language-describer what data might be needed in such a study. A description that focuses on the wide range of tense, aspect, mood, polarity and clause-type factors, inter alia, which typically enter into verb inflection in Bantu is unlikely to simultaneously cover the relevant range of stems shapes for every inflectional form, along with sometimes relevant differences in subject and object prefixes. See Marlo (2013) for extensive discussion of numerous factors relevant to the study of verbal tone in Bantu, and Nurse (2008) for a study of tense and aspect in Bantu.

The typical situation is that verb roots fall into one of two lexical classes, H, and L or toneless. Stems are composed of a root plus optional derivational affixes (“extensions”), terminating in an inflectional suffix. Extensions do not generally have distinctive underlying tone (it is sometimes thought that -u- ‘passive’ and -i- ‘causative’ may have had H tone, as in Kifuliiru (van Otterloo)), and the tonality
of the final affix —a, -i, -e, -ile, among others — is quite variable. Languages will have certain general processes that affect underlying tones. Languages may have binary spreading of H (Doubling), some even have ternary spreading, and some exhibit unbounded spreading — multiple spreading patterns are possible. Sometimes H is shifted rather than spread. There may be deletion/lowering of H after H (Meeussen’s Rule), or H before H (Anti-Meeussen’s Rule). See Kisseberth & Od- den (2003) for an overview of tonal processes in Bantu.

The tones of a verb are also determined by additional “melodic” tones, giving rise to alternations like those in Tiv. Whether a verb form will exhibit any added melodic tones, and exactly where they will be realized, is a function of many factors, such as tense, aspect, mood, polarity, and clause type, plus phonological facts. To give an example of how this can work, we consider Mbadja (Halme-Bernecking). In this language, the lexical contrast H vs. L is seen in the infinitives oku-túminífa ‘to have sent to’, which also undergoes H tone spreading, as contrasted with the oku-líminífa ‘to make cultivate for’: the same opposition is found in the Optative (vá-túminíne ‘that they send for’, vá-líminíne ‘that they cultivate for’). However, we find Hs on all non-root-initial vowels in Present tává-túminíné ‘they send for’, tává-líminíné ‘they cultivate for’. What marks the Present is both a segmental prefix tá- as well as the H in the stem stretching from the peninitial to the ultima. We assume that these H tones reflect a melodic H suffix.

These systems raise questions as to their nature, synchronically and diachronically. The primary diachronic questions are, what is the original source of these systems of tone inflection, and how did the current systems develop from that source? Meeussen (1961) notes that it was widely recognised that the tones of non-initial syllables are generally a function of the final suffix, where after the first syllable, vowels have the same tone as that of the final. It is also noted that the subjunctive and imperative follow special rules which contradict this pattern, which require special study — such a study appeared as Meeussen (1962), and is translated here from the original Dutch as the first contribution. Other complications in this picture are that sometimes the verb in relative clauses has a special final tone, and one often finds H on medial vowels when the final is L, or L in the stem when the final is H, leading to the suggestion that there could have been a sequence of identical vowels in final position with different tones i.e. -áá for medial L with final H, and -áá for medial H with final L. If the proto-Bantu tone system was indeed like this, there are still innumerable more specific questions about the diachronic development into the hundreds of different extant systems.

The primary synchronic puzzle is how to represent a “pattern”. In Shona (Od- den), the stem tone of the hesternal past main clause verb is a function of the lexical contrast between H and L verbs, plus general tone rules giving the surface tones of the H verb áka-tórá ‘he took’, áka-tórésá (causative), áka-tóréséra (causative applied) and the L verb áká-bíka ‘he cooked’, áká-bíksa and áká-bíksira. But how then do we explain the different tones of the stem when the same segmental morphemes appear in subordinate clauses as in áka-tórá ‘he,

1 In saying “L” here, we mean L or toneless, depending on what is analytically appropriate, as discussed below.
having taken’, áka-tóresá, áka-tóréserá, áká-biká, áká-bikísa, áká-bikísíra?’ Extra Hs are added to the stem, but it is not trivial to say exactly where those Hs go – it may be on the final vowel, or the second vowel, and it may be missing but working behind the scenes to prevent spreading of the root H.

A related question is, where do these Hs come from? The typical autosegmental analysis is that the Hs are floating tones, which are (partial) exponents of inflectional morphemes. Meeussen’s proposal that there may have been multiple “final” suffixes with the same segmental content but different tones can be seen as a segmental version of this idea. However: as many of these studies show, systems of melodic tone are much more complex that would be possible by just adding one or two floating Hs to a stem.

An analysis of melodic patterns thus involves a number of factors. Various inflectional properties cause addition of tones to the verb, which are initially positioned somewhere in the (macro)stem, and these tones may be subject to spreadings or deletions that are specific to the pattern. The realization of those tones will ultimately be shaped by the properties of the stem, taking into consideration the fact that very long stems have the maximum freedom to realize any tone melody and short stems like CV have very limited potential for realizing a rich system of melodic contrasts. Ultimately, stem tones will be shaped by general rules of the language. An in-depth synchronic analysis of the language is thus necessary to strip away these rules, revealing what the specific tonal content of each pattern is, where those tones are associated, and what happens to the tones once they are initially associated, not to mention saying when a particular pattern is found.

2. The Present Volume

This volume, which is a collection of case-studies of Narrow Bantu languages (drawn from the vast majority of Guthrie zones), aims to advance understanding of the nature of this aspect of Bantu tone, by synchronically examining individual melodic tone systems. The aim of these papers is to give a clear description of these patterns in at least one language, relating every verb-inflectional category in the language, and deverbal nominal derivation if possible, to a melodic pattern. The languages are tonologically diverse, there being languages which maintain the Proto-Bantu root tone contrast (e.g. Dibole (Leitch), Cilungu (Bickmore)), as well as predictable-tone languages which completely neutralize the contrast (Lulamogi (Hyman), Bena (Morrison)), and those where tones are “reversed” compared to Proto-Bantu (Kifuliru, Wanga-Luyia (Ebarb et al.)).

The study of a melodic tone system must start by identifying the tonal units of the language. The status of H versus L in Bantu is both variable and controversial. Classical works on the tone phonemes of Bantu include Greenberg (1948), Stevick (1969), Meeussen (1963) and in the autosegmental framework Clements & Goldsmith (1984). In contemporary terms, the fundamental question is whether a language contrasts H versus toneless (Ø), or H versus L: or, do we find H, L and Ø, where root-initial and desinential tones are specified L or H, but extensions are toneless? Analyses of different languages may diverge in their treatment of non-H tones in part because authors rely on different theoretical assumptions, but also
because the facts of the languages differ (if, for example, the language contrasts H vs. Fall on a short vowel). There is even one two-level language, Kifuliiru, which has a rare synchronic three-way contrast between H, L, Ø in roots, and in one case, Kikamba (Roberts-Kohno), there is a four-level surface contrast between H, L, Superhi and Superlo (the latter two tones are very restricted, and roots only contrast H and L – though melodic tones include all surface tones).

A related question about tonal inventory is whether melodies are composed of single tones, or are more complex. This is determined in part by the kind of analysis carried out by an author. In some languages (Basaa (Makasso), Bena, Mbadja-Kwanyama, Cilungu, Totela (Crane)), the only melodic patterns involve single tones, though they may have multiple docking and spreading patterns. Other languages have more complex melodies involving multiple tones. Bakweri (Marlo & Odden) has inflectional patterns with Ø, L, H, HL and LH, Dibole has H, L and LH, and Kifuliiru H, L, HL, LH, HH and LL. Sometimes a melodic unit may consist of three tones (LHL in Simakonde (Manus)).

The next question is where these tones go. The target of tone assignment is some identifiable position in the stem or macrostem (object prefixes plus the stem), and within a language, different patterns can be based on position in the stem versus the macrostem. The simplest system appears to be that of Basaa, where verbs all have a H which is either part of inflectional morphology or is inserted when a word follows – a process referred to as metatony (Meeussen 1967). That H links to the final vowel and spreads to the left. The determination of where a single H goes can be very complex, in that the answer depends on the triggering category. This is the case in the predictable-tone language Kuria (Marlo et al.). In forms such as the Untimed Past Anterior ntoo-kóóndókóra. H is found on the first TBU of the macrostem (which then spreads rightward). In the Hodiernal Past Progressive Anterior Focus ntoo/ya-koóndókóóye H is on the second TBU. It may also be on the third TBU as in Remote Future Focus ntere-koondókóra, or the fourth as in Inceptive tura-koondokóra. While the possible targets for tone association are diverse, there is a striking regularity about positions targeted by melodic tones. Languages which retain lexical contrasts in roots appear to target the first, second, penult, or the final vowels, whereas predictable-tone languages additionally target the third, fourth, antepenult, and pre-stem vowels.

Since melodies are not limited to single tones, this raises the possibility that there can be multiple docking targets for complex melodies. We find in Bakweri that all melodic tones, including those of polytonal patterns, link to the final vowel, and in Makwe (de Vos) and Simakonde, the one to three tones of the melody link to the penult. In Dawida (Philipson), the tones of the bitonal melody LH link to the last two vowels. These situations correspond to two possibilities given what could be single rules, where sequences of tones all link to one position, or link one-to-one starting at a fixed position. But things can be more complex, as in Kifuliiru, where the first melodic tone links maximally leftward in the stem and if there is a second tone, it links maximally rightward. In many instances, polytonal patterns can be phonologically decomposed into combinations of single-tone patterns. Thus, Emakhuwa (Kisseberth & Guérois) has a pattern targeting the first macrostem vowel, another pattern targeting the third stem vowel, and a pattern
targeting the first macrostem vowel and the third stem vowel. Likewise, Kuria can assign tones to the first, second, third and fourth vowels, as well as the first and fourth, and Simakonde and Makwe can combine a penultimate tone pattern with a stem-initial H. Such decomposition into independent targets is strikingly evident in Kikamba where tenses independently specify whether H is assigned to the second stem vowel, whether one is assigned to the penult, as well as which of 5 tones is assigned to the FV. While polytonal melodies with significantly different association targets can usually be treated as the joint assignment of two independently necessary melody-association principles, that is not always the case. Jita (Downing) presents a complex melody with H on the first and last vowels (of the macrostem), but while final H is an independently necessary pattern, there is no independent initial H pattern.

Another type of complexity in the association of melodic tones is that there can be contextual conditionality to association. We find this in Idakho-Luyia in certain patterns, where in the subjunctive H is assigned to the second mora after the first syllable, giving a-βoyoŋán ‘let him go around’, a-kalaá ‘let him fry’, a-βoolís ‘let him seduce’ (or, the final mora if there is no second mora or second mora after the first syllable). In the present, there is a H on all moras of the third syllable if the stem is H (a-βoolitsááŋ ‘he’s seducing’), but it is on the second mora if the stem if toneless (a-laxúulaaŋ ‘he’s releasing’) – “on all moras” is a peculiarity of the melodic pattern, not the result of a general change of fall to H. Likewise in Shona, there are L and H elements to the melody where the H is suppressed in H disyllables (áka-tóra) and the L is suppressed in L disyllables (áka-biká). The general pattern is that the H is final in H verbs (váká-tóréséraná), but is on V2 with spreading in L verbs (váká-bikísírána).

Questions of conditionality in tone assignment arise in any mapping rule that targets a vowel away from the left or right edge of the stem: if mapping targets V2 or the penult, but there is no V2 or penult in the stem, what becomes of the melodic tone? Monosyllabic stems pose a number of tone problems of their own, for example they are all H in Kikamba and Karanga Shona, and all toneless in Kifuliiru, and in Simakonde they behave like stems ending with a glide (which resist tone assignment under certain conditions). Usually, if a tone-mapping rule targets a non-existent vowel, the melodic tone is mapped to the final vowel, thus the V2 H of Totela maps to the final vowel of CV toneless stems. In Emakhuwa dialects that allow melodic H to be assigned to the final vowel, a H targeted at V2 maps to the final vowel in a CV stem, and H targeted at V3 maps to the final vowel in a CV or CVCV stem. Basaa resolves the problem of there being no V2 in CV stems by lengthening L monomoraic stems when the final-to-V2 melody is added. As Marlo et al. (2014) show for Kuria, the targets V1, V2, V3, V4 are strictly enforced, so if there is no fourth macrostem vowel, melodic H remains floating.2

Sometimes the resolution of the matter is melody-dependent, so in Bena, H targeted at the stem-initial vowel cannot appear word-finally, and the H shifts to

---

2 When the stem is apparently only one vowel short of satisfying the vowel-count requirement, the H appears on the final vowel as a rising tone, which Marlo et al. analyze as the result of a rule noncontrastively lengthening all final vowels.
the penult (\textit{ndí-fwe} ‘I died’ cf. \textit{ndi-gónile} ‘I slept’), but in the subjunctive, where H is assigned to the penult (\textit{ndi-góne} ‘that I sleep’, \textit{a-diindúle} ‘that s/he open’), stems lacking a penult have H on the final vowel (\textit{ndí-fwé} ‘that I die’).

Occasionally, a pattern defies reduction to simple and sensible association principles. The complex H pattern of Jita is an example. (In this language, every H except one in the last two syllables shifts one syllable to the right). In the Present Continuous, H verbs have no melodic H (\textit{kaa-tegéresya}, \textit{kaa-βóna}), but toneless verbs with 4+ moras have H on the first and last syllables (\textit{kaa-ľuľűřířá}, \textit{kaa-gosóórá}), trimoraic L verbs have penult H (\textit{kaa-sákíra}, \textit{kaa-lúľá}) and bimoraic stems have only final H (\textit{kaa-gusyá}). Imperatives are similar, except that H stems with 4 or more moras have penult H, and shorter stems have final H.

Finally, while these papers focus on grammatically-triggered melodies on the stem, setting aside variations in prefix tone, we do sometimes find that melodic patterns have a broader domain of application, so in Shona, all prefixes from the subject prefix rightward are assigned a copy of the melodic pattern in those forms which have a melodic H. In Orungu (Maniacky & Ambouroe), certain optional prefixes receive the tone usually destined for the first stem syllable, and override the stem pattern with just initial H.

An obvious question to ask about disparate and conditional patterns of tone association is, how do they arise? Goldsmith (1987) posits two MHs in his analysis of the “complex” pattern in Lacustrine, where a H appears on the second TBU in a toneless stem, but on the FV when the stem begins with a root H. He proposes that the first of the two MHs docks onto V2 on an inner cycle, while the second docks to the FV in a later cycle, after which a single application of Meeussen’s Rule applies left to right within the stem, deleting the MH on the FV in the first case, and the MH on V2 in the second.

Understanding the phonological nature of melodic patterns involves more than just identifying the tones of a pattern and where they are mapped – frequently, one must also specify what they do. That is, there are also various rules which apply specifically to melodic tones. A very common rule particular to melodic tones is the fact that the final melodic tone in languages such as Bakweri, Basaa, Dibole, Cilungu, and Mbadja-Kwanyama spreads leftward in the stem to the second vowel. While leftward spreading is not a surprising phonological process, unbounded leftward spreading is not a general phonological characteristic of these languages –spreading applies specifically to a melodic tone. In Cilungu, this otherwise unattested unbounded leftward spreading must be further specified to apply to one of the two MHs which dock onto the FV, but not the other. An analogous situation is that in Kikamba, H assigned to V2 spreads rightward to the end of the word, but there is otherwise no unbounded rightward spreading in Kikamba. The reflexive LH melody of Bakweri (but not LH of relative clauses) undergoes a special optional Plateauing where the final H spreads across multiple L syllables to a preceding H. Numerous languages exhibit special deletion of root H, possibly object prefixes, and other preceding tones conditioned by a melodic H.

\footnote{In many Bantu languages, there is a well-known alternation in the tone of subject prefixes where subordinate clause forms systematically neutralize the H/L distinction in favor of H.}
(Jita, Luyia, Ecuwabo (Kisseberth & Guérois) and Dawida), and Kifuliiru deletes melodic Hs only after a root H. In Mbadja, there is a complex neutralization of H in monosyllabic roots, but presence of a melodic H can block root-tone neutralization. In Orungu, melodic H (and only melodic H) assigned to S1 causes devoicing of the initial consonant.

The conditioning factors for selection of a particular melodic pattern are quite diverse, but reduce to the fact that they are a component of inflectional form. At least in verbs, distinctions are generally based on those verbal inflection factors that are not about pronominal reference. What exactly goes into the verbal inflectional system of a language can vary considerably, but minimally includes tense, aspect and mood. As far as we know, all Bantu languages make such morphological distinctions as imperative, subjunctive and indicative, they can express at least past, present and future (more typically, multiple degrees of past and present), along with aspectual distinctions like progressive, completive and habitual. All languages appeal to a combination of tense-aspect-mood distinctions in the selection of melodic tone, and seem to treat tense-aspect-mood as an inseparable package, so that a category defined in terms of just tense, or just aspect, or just mood does not serve as the basis for melody selection (unless that category happens to identify a single inflectional form, such as ‘imperative’).

Relevant inflectional distinctions typically also include negation (though in some languages like Matumbi (Odden 1996), Basaa and Lingala negation is accomplished syntactically). Negation may be completely regular and transparent as in Kifuliiru, where -ta- appears immediately after the subject prefix in any verb form, but it is usually tied into the complex system of tense-aspect-mood inflection, potentially involving alternative prefixes depending on other inflectional factors such as main clause with initial ti- vs. subordination with post-SP -ta-, or other variations. In Makwe, negation can be marked with a prefix a- coming before the SP, or with -na- or -ka- coming after the subject prefix, the choice being determined by morphological tense. Negation may also be connected to the final inflectional suffix, so that -i is selected over -a in Karanga Shona in non-past negatives. Whether or not negation figures into the selection of melodic pattern varies from language to language. In Kifuliiru (where negation is transparent morphologically), affirmative and negative versions of verbs have exactly the same tone patterns, thus negation is irrelevant to tone melody. In contrast, negation alone is a predictor of melodic pattern in Totela, where again negation is morphologically transparent, and all negatives select the V2 melody. In Bena, negation is a significant predictor of melodic pattern, since negatives formed with a TAM prefix have the pre-stem pattern, and all remaining negatives have the penult pattern. Most typically, as seen in Bakweri, Kikamba, Lulamogi, Simakonde, Emakhuwa, Makwe and Mbadja-Kwanyama where the morphology of negation is rather complex, negation is just another arbitrary factor along with tense, aspect and mood for selection of melodic pattern.

Subordination and relativization are also frequently involved in distinctive patterns of inflection and melody selection. Relativization can be entirely ignored as in Cilungu, Kifuliiru, Bena, and Basaa where the form of the verb in relative clauses is not distinct from that of main clauses (hence tone pattern is not influ-
enced by subordination). Relative clause verb forms may also be subsumed under a broader morphological umbrella of conjoint forms as in Emakhuwa, or Mbadja “Basic forms” which are used for focus and relatives, as opposed to “O-forms” used in neutral matrix clauses – O-forms are derived, with tonal effects, from Basic forms by a word-level prefix plus deletion of certain H tones. There may also be distinctive inflectional morphology for relatives, making clause status a further inseparable variable in the equation for selecting tone melody, as in Lulamogi, Makwe and Kikamba. Languages differ in the extent to which relativization has a uniform vs. chaotic effect on melody-selection. On the most-predictable side, Bakweri melody selection in relative clauses is predictable from the tone of the main clause form. Subject relative forms select the melody H if the corresponding main clause form has H or HL, and has L if the main clause form has L. Object relatives select HL if the main clause form is H or HL, and select LH if the main clause form is L. In Dibole, while the Recent Past and True Past take the same H melody in main clauses, they exhibit divergent melodies under relativization—the former taking LH while the latter continuing to take H.

The factor of “negation or subordination”, i.e. the distinction between main clause affirmative versus other verb forms, frequently enters into predictability of melodic patterning. We find in Shona that negative and subordinate forms regularly select a stem melody where main clause affirmative forms do not, and in Dawida, subordinates and with one exception negatives lacking a TAM prefix all select a melodic H. Perhaps historically related to this selection of melodies in broad classes of clause-types, we also find regular insertion of Superlo tone in Kikamba with main clause affirmative verb forms, and in Kerewe (Odden notes) there is special deletion of phrase-medial word-final melodic H in such verb forms. Most negatives in Orungu have a special phrasal-neutralizing pattern where tones in the intonational phrase after the negative prefix become all H or all L, the choice relating to properties of the subject prefix.

The sporadic melodic sub-patterning of verb forms in Lulamogi points in a typical and frustrating fashion in the general direction of just-missed regularity, in terms of the correlation between clause-type and melodic patterning. In this language, distinctions are made between main, and subject- and object-relative clauses, with affirmative and negative versions. In the present, negatives have the same melody, relatives have another pattern, and main clause affirmative has a third. In the perfect, negatives again have the same melody and all affirmatives have another. In Past2, all affirmatives plus relative negatives have one pattern and main clause negatives have a second.

There is a frequent connection between negation and the final suffix -i, and if melodic patterns originated as distinct tones on the final vowel which spread leftward, it is not surprising that negatives as a class show a strong triggering connection to these patterns. It is perhaps more surprising to find such a connection with relativization, which does not generally trigger a particular final vowel. It is noteworthy, though, that object relatives (and reflexives) in Bakweri do select a uniform final affix -e.

Focus marking is often also involved in shaping morphological paradigms, so that the noun-focused verb form is inflectionally distinct from and not transpar-
ently related to the verb-focused or neutral form in a given tense-aspect in Matumbi. Distinctions in focus (conjoint-disjoint) are squarely involved in the melodic tone systems of Kikamba, Mbadja, Kuria and Emakhuwa. Other inflectional distinctions which influence melody-selection include indications of motion (‘go X’, ‘come X’) as in Dibole and Bena, narrative/consecutive aspect in Bena and Kifuliiru, and frustrated action (“almost”) in Kifuliiru.

While melody selection is usually based on inflection apart from pronominal reference, pronominal morphology occasionally plays a role. Subject prefix in Kikamba plays a role in determining the final melodic tone, for example a subject other than cl. 1 (or cl. 4, 9) in the immediate past has a final H (plus a phrasally-determined SL) in nétwaakonà ‘we just hit’, and there is no such H with cl. 1, 4, 9 subjects, e.g. néwáákonà ‘he just hit’. In Cilungu, subject markers from these same classes influences melodic pattern. Except in the Potential, when H would otherwise be on the FV, these subjects block docking. In the affirmative Recent Past and Perfect, they exceptionally trigger the V2 pattern. A long-distance correlation between final tone and initial tone is theoretically surprising but also historically less surprising given that Meeussen (1967) reconstructs initial-final tone harmony for relative tenses, though we note that such correlations extend past relatives, and Cilungu does not even have tonally distinct relative verb forms.

Other correlations with SP are found towards the left edge of the stem in some predictable-tone languages. Simakonde includes an initial H in the future with a 3rd person subject (va-nda-tákátukiíla ‘they will stand up’) which is lacking with 1st and 2nd person subjects (mu-nda-takatukiíla ‘2pl. will stand up’). In Kuria the inceptive and immediate past anterior with a 1st or 2nd person subject selects H on the 4th mora, and with a 3rd person the same tenses have H on the first and fourth moras. The situation in Kuria and Simakonde points toward a well-known difference in subject prefix tone (1st and 2nd person are L, 3rd person is H) which has shifted to the stem. We also find that a reflexive prefix triggers a uniform tone melody in Bakweri and Shona, as well as Matumbi.

The relevance of object prefixes is at the same time well-established and unusual. As Meeussen’s paper shows, the bare subjunctive in Bantu may reconstruct to a pattern with final H but L on preceding stem vowels, plus neutralization of the root contrast to L. With an object prefix, however, the pattern changes to final H which spreads leftward, with no neutralization of root tone. The papers in this volume provide much additional evidence for there being distinct melodic patterns in the bare subjunctive vs. the subjunctive with OP – every language reported here which retains OPs and the lexical contrast between H and L verbs has a distinct pattern for bare subjunctive vs. OP subjunctive, and in languages which have lost the H/L root contrast, only Lulamogi, Kuria, and dialects of Emakhuwa have the same pattern for bare and OP subjunctives. Root neutralization, on the other hand, another special property of the base subjunctive pattern, is found here only in Kifuliiru, Kikamba, Cilungu, Idakho-Luyia.

Outside of the subjunctive, an OP does not normally trigger significant changes in melody selection, and usually only has a relatively predictable phono-
tactic effect arising from combination of Hs. However, we find in Jita that the presence of two OPs triggers addition of initial and final melodic Hs (whereas a single OP triggers no additional stem tones). In Nyala-West Luyia, the V2 pattern H of the immediate past negative switches to final H when there is an OP.

Occasionally, phonological factors rise to the level of being partial predictors of melodic pattern. In Cilungu, choice of pattern correlates strongly, though not perfectly, with mora count and final tone of the TAM sequence in a construction, where multimoraic final toneless TAMs have no melodic H, those with a H monosyllabic TAM have a final melodic H, and most of those with one toneless TAM mora have a melodic H on V2-to-final. This generalization disregards the mora of the negative prefix -tá-. Kifuliru and Bena also present evidence that certain extensions may actively contribute to the melodic pattern, despite the general pattern that extensions are tonally neutral.

3. Summary

It is our hope that the studies in this volume contribute not only to the specific study of tone in the particular language being described, but will also serve as methodological models for future investigations focused on the matter of Bantu stem-melodic tone systems, by pointing to areas of potential interest. One point which comes out clearly in these studies is that deeper insights into melodic systems emerge from factoring the analysis of verb tone into general tonotactics, a set of inflectional form-driven patterns, and some set of rules that are specific to these melodies. It may be, for example, that the general pattern of monosyllabic stems significantly complicates the description of the system of melodic tones – such complexity needs to be brought to the light of day. Even if the segmental morphology of relative clause verb forms or negative verb forms is very simple, such forms still need to be investigated in detail to determine whether tone differences play a role in inflection. Subject relatives versus object relatives can be tonally distinct, even when they are morphologically the same; even when subject and object relatives are tonally identical as in Lulamogi, this is worth reporting.

These and similar studies will be valuable for the diachronic study of tone in Bantu since, as Meeussen notes, “comparative work is continuously hampered by the fact that so many descriptions are incomplete, inconsistent, unclear and poor in examples”. There are on the order of 600 Bantu languages and nowhere near that many complete synchronic descriptions which fully explore the wealth of inflectional forms and stem-shape possibilities. Nevertheless, clusters of descriptions of related languages have emerged over the past few decades, so that we now have a fairly good picture of the tone systems of the P30 languages, the Simakonde languages, Rutara, Luhya, and Zone M. We expect this progress to continue in the future, so that we may eventually have the empirical basis the answering such

---

4. Imperatives seem to be provide another example of OP relevance to tone, but imperatives with OP are generally the same in form as a subjunctive with OP, minus the subject prefix.

5. Odden (1981) estimates the number of variants from a single verb root in Karanga Shona to be on the order of $10^{14}$, though this turns out to be low since it doesn’t include a number of permutable prefixes not known at the time.
questions as “why do subordinate verb forms have special tone patterns”, or “where did the mora-counting system of Kuria come from”.

References


