MICHAUD, ALEXIS. 2017. *Tone in Yongning Na: Lexical tones and morpho-tonology (Studies in Diversity Linguistics 13)*. Berlin: Language Science Press. 573 pp. ISBN: 978-3-946234-86-9, 978-3-946234-87-6, 978-3-946234-68-5.

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If Guinness World Records included a category for the most comprehensive tonal studies of a single non-European language, Alexis Michaud's monograph "*Tone in Yongning Na*" would be among the strongest candidates. Phonological descriptions rarely exceed 50 pages, usually occupying less than 10% of reference grammars, and leaving the rest to morphosyntax. Alexis Michaud has written a book-length description that only covers tone in Yongning Na, a Sino-Tibetan language spoken in Southwest China, also known as Mosuo. Remarkably, Michaud's 500-page study of tone in Yongning Na complements a detailed reference grammar (Lidz 2010) of comparable length. As Michaud repeats twice in the monograph, "desperate tones call for desperate measures" (p. 62, 323).

The book unfolds like a detective story. In the Introduction, the author cites the very first couple of sentences he transcribed in the field. He shows that apparently the same morphemes surface with different context tones in Yongning Na, as represented in (1).

(1)  a.  *njɤ˧  ʐi˩  bi˩  -zo˩  -ho˥*.
         1SG  to.take  to.go  OBLIGATIVE  DESIDERATIVE
         'I have to go and take [my luggage] now.'

     b.  *njɤ˧  bi˧  -zo˧  -ho˩*.
         1SG  to.go  OBLIGATIVE  DESIDERATIVE
         'I have to go. / I'm afraid I have to leave.' (p.1)

Having puzzled the reader, Michaud then formulates the objective of his study, which is, not unexpectedly, to find out the underlying tones and tonal rules in Yongning Na. In the Conclusion (Chapter 12), the author unveils the underlying tones in those very first sentences and summarizes the relevant rules. For example, it appears that in (1a), the surface MLLLH sequence corresponds to a completely different underlying string LLMML.

I will now present some general facts about Yongning Na tonology and then focus on why it is so complex and challenging. There will be no critical remarks in this part of the review. I simply follow Michaud's analysis, which I find quite convincing.

From a typological point of view, Yongning Na could be considered to be rather typical in its basic tone patterning. Its basic properties are summarized below.

(a) Yongning Na has three-way H/M/L contrast with dense tonal specification, i.e., each syllable must carry a tone at the surface phonological level (p. 326).

(b) H tone is culminative, i.e., there may be only one H per tonal group, and there is a strong tendency towards late realization of H (p. 328).

(c) No tonal group can carry all L tones; a postlexical H is added to its last syllable (p. 72).

(d) M is analyzed as having dual status in being phonologically specified in some cases, e.g., for LM and MH tonal categories, as well as functioning as a default tone assigned to some toneless syllables (p. 427).

(e) There is vast evidence supporting the interpretation of contour tones as sequences of levels (p. 422).

(f) Progressive spreading of tone is favored over regressive spreading (p. 426).

(g) Intonation is generally superimposed on tones, affecting their phonetic realization but preserving the contrasts (p. 427).

(h) Tones do not have phonologically relevant length or phonation characteristics (p. 357).

(i) There is neither downdrift nor downstep (p. 424).

(j) There is no tonal morphology, e.g., no specific inflectional categories are marked by tone (p. 362).

So why write a monograph? According to Michaud, the complexity of the Yongning Na tone system lies in three logically independent but constantly interacting domains: 1) covert lexical tonal categories; 2) multiple morphotonological rules; and 3) multiple phonological rules. For want of space, here I only illustrate the problems pertaining to lexical tone categories. Three examples will follow.

First, consider monosyllabic nouns surfacing as non-low in isolation (there is no opposition between H and M in monosyllabic words): *la* 'tiger', *jo* 'sheep', and *ʐwæ* 'horse'. They produce different tonal patterns when combined with a copula *ɲi*, e.g. /lɑ˦ ɲi˩/ 'is (a/the) tiger', as shown in Table 1, cf. Section 2 of the monograph.

**Table 1.** A subset of monosyllabic nouns

| Noun in isolation | Noun + cop | Example |
|---|---|---|
| M | M+L | *la* 'tiger' |
| M | L+LH | *jo* 'sheep' |
| M | M+H | *ʐwæ* 'horse' |

Table 1 shows the same morphosyntactic context wherein tonal variation is attested. Therefore, the three lexical items shown above are to be interpreted as representing three separate lexical tone categories, even though the contrast between them is neutralized in isolation.

Consider another set of three nouns, now disyllabic, all bearing L.M[2] tones in isolation. They also fall into three separate underlying categories based on evidence from two contexts: with a *ɲi* copula and with a possessive clitic *bv* as shown in Table 2. Identical realizations are shaded in grey.

**Table 2.** A subset of disyllabic nouns

| Noun in isolation | Noun + COP | Noun + POSS | Example |
|---|---|---|---|
| L.M | L.M+H | L.M+M | *naḥĩ* 'Naxi' |
| L.M | L.M+L | L.M+M | *bomi* 'sow' |
| L.M | L.M+L | L.M+L | *boɬa* 'horse' |

In Table 2, the *intersection* of the two contexts yields three covert lexical tonal patterns. As the author notes on p. 79, "no single morphosyntactic context bringing out all the tonal contrasts of nouns has been found: each context brings out only some of the oppositions, whereas others are neutralized." This obviously raises the challenging and yet unanswered question of how psycholinguistically adequate are those lexical categories which are distinguished based on *intersecting* evidence, rather than a single reference context. As noted in Chapter 8, tonal contrasts that are neutralized in isolation tend to be lost among younger speakers. Therefore, the covert lexical tone categories should be viewed as an instance of structural complexity, even if they exist as such in the grammars of older speakers.

The first two cases highlight the analytical challenges whereby multiple contexts are needed to establish underlying lexical tone categories in Yongning Na. I did not specifically address the question as to what specific tones should be posited in each case; see Chapter 2 of the monograph for details. A third example illustrates the structural complexity of the underlying tone categories postulated for some nouns in Yongning Na. Following Michaud's conventions, underlying categories are represented in double slashes.

Three separate types of H tone are distinguished. First, there is a word-final H which is always linked to the last syllable of its lexical host; it is represented as //H#//, e.g., in *hwæʈʂæ* 'squirrel'. Second, there is a floating H tone represented as //#H//, which does not surface unless it can associate to a following syllable, e.g., in *zwæzo* 'colt'. Finally, there is a so-called "flea" tone represented with a non-standard symbol //H$//  and labelled after a lexeme *kvʂe* 'flea' to which it is attached, among others. The latter two tones behave similarly except that the "flea" tone is linked to its lexical host in isolation, whereas the floating H remains unassociated. The three underlying tone categories are summarized for disyllabic nouns in Table 3.

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[2]Following Michaud's notation, a period marks a syllable boundary.

**Table 3.** Underlying H types

| Analysis | Isolation | Noun + COP | Noun + POSS | Example |
|---|---|---|---|---|
| //H#// linked H | M.H | M.H+L | M.H+L | *hwætʂæ* 'squirrel' |
| //H$// "flea" H | M.H | M.M+H | M.M+M | *kvʂe* 'flea' |
| //#H// floating H | M.M | M.M+H | M.M+M | *ʐwæzo* 'colt' |

Note that in Table 3, a further complication arises. The association of both "flea" and floating H to the next syllable is morphosyntactically conditioned in that it does not occur with the possessive marker, which surfaces with its lexical M in this case.[3]

One can get a general feel of the complexities in Yongning Na tonology considering just the following figures:

(a) For monosyllabic nouns, three surface types of tones in isolation correspond to six covert lexical categories;

(b) For disyllabic nouns, seven surface types of tones as realized in isolation correspond to 11 covert categories;

(c) There are nine underlying tonal categories of monosyllabic classifiers;

(d) There are seven underlying tonal categories of verbs;

(e) There are separate sets of morphotonological patterns operating in compound nouns, subject-plus-verb, object-plus-verb, numeral-plus-classifier, and demonstrative-plus-classifier combinations;

(f) There are seven surface phonological rules applying within any tone group.

After this brief introduction to the complexity of Yongning Na tone as described by Michaud, I now return to a description of the book itself. It has a reference chapter, 12 numbered chapters, and two appendices. The reference chapter summarizes the author's analysis and is intended to help the reader keep all the patterns in mind. Chapter 1 contains introductory information about the Yongning Na language, research methods, and basic facts about Yongning Na grammar. Chapters 2–6 present a step-by-step analysis of lexical tone categories and morphotonological patterns covering lexical tones of nouns (Chapter 2), tone rules in compounds (Chapter 3), tones on classifiers (Chapter 4), tones in combinations of nouns with grammatical elements (Chapter 5), and tones on verbs (Chapter 6). Chapter 7 covers phonological rules as well as the division of utterances into tone groups. Chapter 8 focuses on the interaction between tone and intonation. Chapter 9 presents a dynamic view of the system. Chapters 10 and 11 characterize Yongning Na tones in typological and areal contexts, respectively. Chapter 12 concludes the whole discussion. Appendix A contains a sketch of segmental phonology of Yongning Na, and Appendix B covers historical and cultural aspects of Yongning Na society.

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[3]L on the possessive marker in the first row is postlexical; see Section 7 for details.

As the author notes on p. 326, writing about a small language is a big scientific responsibility. I believe his monograph is an excellent study that should be treated as reliable and truly valuable by the linguistic community.

First, the author presents a very well empirically grounded account of the data. Crucially, the book is accompanied by audio files downloadable from the Pangloss website (Michailovsky et al. 2014), enabling any reader to get the real feel of the language and verify the author's interpretations.

Second, the author takes great pains to make his analysis as transparent and clear as possible. Step by step, he leads the reader through the process of tonal analysis rather than neatly presenting the final results. He also discusses various methodological issues, paying specific attention to the role of consultants in fieldwork.

Third, Michaud approaches Yongning Na data in a very broad theoretical and typological perspective. The author provides useful overviews of some problematic and controversial issues relevant for his study, e.g., the relationship between tone and intonation, the status of contour tones, etc. Any technical notions common in tonal studies but possibly less known by the general linguistic public, such as floating tones, are carefully introduced before being incorporated into the analysis.

Fourth, the book is written in a very good style, nicely embroidered with insightful epigraphs and eloquent parallels, e.g., between various elicitation contexts and chemicals in processing photographic films, p. 108.

Still, as a minor point of criticism, I have to note that while the phonological part of the book is written carefully and is very well argued, the grammatical background essential for the discussion of tone is presented somewhat scantily. There is a brief section called "A grammatical sketch of Yongning Na" containing what looks more like a random collection of facts, rather than an outline of structural patterns, including those particularly relevant for the understanding of the prosodic phenomena in the language. For example, as shown above, lexical tone of nouns is determined based on the way they are pronounced (a) in isolation, (b) with a copula, and (c) with what the author labels a "possessive". Negation and the so-called "accomplished" prefixes are used to test phonological behavior of verbs. These markers are at most briefly mentioned in the grammar sketch, but I believe it would be very helpful for the reader to know, e.g., what the syntactic structure of possessive constructions is, whether the possessive syntactically attaches to the possessor or the possessee, and how the syntactic structure is mapped in the prosodic domain. The observation that "there is no inflectional morphology in Na" in the grammar sketch (p. 45) seems at least not uncontroversial, if not totally misleading. Note that both nouns and verbs are described in the book as attaching affixal markers which could be naturally seen as inflectional, e.g., the so-called dative suffix on nouns or negative prefix on verbs.

More importantly, while the choice of morphosyntactic contexts revealing tonal categories is briefly discussed for verbs (Section 6.1), I failed to find the author's reasoning behind the choice of the key contexts for nouns. For example, in Section 5.4, we learn that dative suffix *-ki˥* has the same tonal behavior as the possessive marker. Why did the author prefer the possessive marker? Further in that section, it appears that there are many other post-noun morphemes with diverse tonal patterns,

e.g., mid-tone agentive *ŋɯ˧* and topic marker *ʂʰɯ˧*. It remains unclear why they were not chosen to identify lexical tones on nouns. The lack of comment is particularly surprising here, given that Michaud keeps his analytic decisions as explicit as possible throughout the book.

Despite some minor problematic issues, Michaud's monograph is an outstanding contribution to studies of linguistic diversity in general and tonal systems in particular. It does not only cover the very complex tonal system of a small language, but it can also be used as a reference by those who need a quick introduction to the theory of tone and related phenomena, or serve as a practical example of tonal analysis complementing the set of themed articles focusing on the description of tone in this journal (Bird & Hyman 2014).

Last but not least, the monograph provides an excellent example of field research in general – with meticulously described data collection procedures and the recordings made open to the public as a part of the Pangloss collection. A very important methodological and ethical message advanced in the book is that language consultants, who are commonly considered as passive interpreters or narrators led by the linguist's agenda, equally contribute to the research process. Fieldwork may be hugely affected by their personality and their relationship with the linguist, which is something that a fieldworker should bear in mind when arriving in a new field site and collecting data.

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