Studies in African Linguistics
Volume 20, Number 3, December 1989

THE REALITY OF HAUSA "LOW TONE RAISING": A Response to Newman & Jaggar*

Russell G. Schuh
UCLA

Paul Newman and Philip Jaggar in an article in this issue of *Studies in African Linguistics* argue that a rule of Low Tone Raising (LTR), proposed in Leben [1971] is not a synchronic rule in Hausa. This rule, as originally formulated in Leben [1971], raises a final low tone (L) of a word if the syllable bearing the L (1) follows a L and (2) has a long vowel.

Newman & Jaggar's method of argumentation is, first, to show eight types of phonetic violations of LTR (§§1.1-8). Next (§§2.1-4), they show that four putative cases of LTR as a productive synchronic rule are problematic and/or have other, better explanations. They conclude that LTR is not "a synchronically viable rule on the same level as other regular rules in the language, such as the shortening of long vowels in closed syllables or the simplification of LH on a single syllable to H" (p. 229). While Newman & Jaggar argue only that LTR is not a "synchronically viable *rule*", the force of their paper, with its listing of many "counterexamples" to LTR, is to suggest that LTR has no reality at all in modern Hausa. I agree with them that LTR is not a rule; indeed, contrary to their assumption (first paragraph of §2), I would claim that it never has been a rule. The question which I wish to raise is whether there is *any* synchronic (and/or historical) reality to the phenomenon which originally attracted Leben's attention, viz. "Much checking with informants and with sources that mark a long-short distinction on final low-toned vowels...reveals no word in Hausa which ends in two low-toned syllables, the last of which contains a long vowel" [Leben 1971:202]. Newman & Jaggar's answer is that this "generalization" is the residue of a rule which is no longer productive, as shown by a multitude of surface violations. My answer is that this *is* a valid generalization about Hausa phonology, and if we are precise in our formulation of LTR, there may be no violations at all. The value of Newman & Jaggar's paper is to provide a clear and

* I would like to thank Will Leben and Paul Newman for comments on a draft of this reply. In particular, I credit Leben for the basic idea of English stress and vowel reduction being a possible factor in accounting for the apparently anomalous tones of borrowed words like *fiɗaamàɗèe* 'primary'.

explicit array of new data which will allow us to reformulate LTR more precisely and, as a consequence, to arrive at a better understanding of a number of aspects of Hausa phonology.

I will first take up Newman & Jaggar's arguments in §2 that LTR is not a productive rule in modern Hausa. The examples in §§2.1-2 involve the verbal system. Newman & Jaggar propose plausible alternative accounts to all the cases that have been cited as requiring LTR. While I do not concur in all the details of their analysis, I do agree that LTR probably does not now, nor has it ever played a role in the verbal system. (My own preference is to account for verbal tones with lexical tonal templates, using no phonological "rules", *per se*.)

In §§2.3-4, Newman & Jaggar discuss two putative examples of LTR in action in the nominal system. The example in §2.4 involves feminative forms such as *shuudîyaa* 'blue (f)' < *shuudîi* (m) + *aa*. On the analysis in Leben [1971], the *aa* which marks feminine is toneless, copies the preceding tone, then is raised by LTR (the *y* seen in the feminine form is epenthetic). Newman & Jaggar argue against such forms being active examples of LTR, pointing out that in modern Hausa, this method of forming feminines is no longer productive. In modern Hausa, feminatives are formed by the addition of a suffix *-îyaa*, with the full prosodic and melodic shape pre-specified. Their claims about modern Hausa feminative formation are probably correct, but these claims say nothing about whether or not LTR is a productive synchronic rule. They simply show that modern Hausa feminative formation calls on no *phonological* rules at all.

The most likely candidate for productive operation of LTR in modern Hausa is in §2.3. This involves the H observed on the postthetic vowel of words like *teebùrii* 'table' < *teebùr*. Leben [1971] proposed that the postthetic vowel was toneless, copied its tone from the preceding syllable, and was raised by LTR. Newman & Jaggar point out problems for this analysis and propose two plausible alternatives not using LTR to account for the tone on *-ii*. Even without accepting their solutions, the clear conclusion is that this one equivocal case of LTR is not sufficient to justify insisting that it is a productive phonological rule.

Before looking at Newman & Jaggar's counterexamples, consider their claim (§2) that LTR was a productive phonological rule in the past. Surely the "counterexamples" would be as problematic for such a claim as they would be for the claim that LTR functions as a rule in modern Hausa. Are we to assume that *all* the forms which serve as counterexamples to LTR developed *after* LTR ceased to be a productive rule?! This defies credibility, which suggests (1) that either Newman & Jaggar's "counterexamples" are not relevant to LTR and/or (2) that LTR has never been an active phonological process and Leben's observation has some other explanation. I believe that both (1) and (2) are right.

Let us now consider Newman & Jaggar's counterexamples. I will suggest that at most they show that Leben did not refine his generalization enough, and in some cases it is Newman & Jaggar who have disregarded generalizations.

Section 1.1 discusses verbal forms. Since I concur with Newman & Jaggar that verbal tones are not in the domain of LTR, putative violations of LTR in the verbal system could be ignored as irrelevant. However, there are a couple of points worth considering. The section contains two kinds of cases. The first involves a small class of four transitive verbs which always end in a long *-aa*. These verbs have H H tones in finite verbal constructions and usually have the canonical L H pattern in the imperative, but some speakers allow L L imperatives before nominal objects, e.g. *naa kiraa* 'I called', *kìraa* 'call!', but also *kìràa yâaraa* 'call the children!'. One possible explanation of the L L prenominal forms is historical. At least some of these verbs are contracted from originally trisyllabic Grade I verbs (H L H verbs ending in *-aa*), e.g. *kiraa* 'call' < **kiràayaa* (cf. the still existent Grade II form *kìraayàa* and the Grade VI form *kiraawoo* 'call hither'). The L H pattern of the contracted syllables automatically becomes H by a regular tonal rule. The L L imperative pattern seen in *kìràa yâaraa* 'call the children!' would be historically derived from a trisyllabic verb bearing the normal Grade I imperative pattern of all L and a final short vowel before noun objects, i.e. **kìràayà yâaraa* (cf. *kàřàntà littaafìi* 'read the book!' < *kařàntaa*). The L H imperative pattern on the modern disyllabic would be an analogical reformation on the canonical L H imperative pattern for verbs other than Grade I (and IV).

There is another, purely synchronic account. Four classes of verbs are lexically monotonal. These are monosyllabic verbs, the H H final *-aa* verbs under discussion here, Grade VI verbs (a derived pattern bearing all high tones and final *-oo* meaning, roughly, "action hither"), and Grade V verbs (so-called "causatives"). For the latter three classes, a single H would be multiply associated with the syllables of the verb, e.g.

For all but two classes of verbs (Grades I and IV), the imperative replaces the lexical tones of a verb by a L H template associated right to left, e.g. Grade VI *tàmbàyoo làabaařìn* 'ask the news (and come with the information)!' (< *tambayoo*). This is the pattern of the "standard" imperative *kìraa yâaraa* 'call the children!' (< *kiraa*). However, H H final *-aa* verbs have a somewhat ambiguous position in the verbal system. Though they represent a unified class, it is a tiny class, and a class, moreover, which shares two features with Grade I verbs such as *kařàntaa* 'read', viz. an initial H tone and the final vowel *-aa*. Grade I verbs before noun objects do not have the L H imperative template, but rather a multiply associated L. I would argue that because of the resemblance to Grade I verbs, speakers who use the all L pattern with verbs like *kiraa* 'call' are using the L template of Grade I imperatives rather than the L H template, i.e.

'read the book!'

'call the children!'

The L pattern on *kìràa* would thus not be a violation of LTR because LTR applies only in the *sequence* L L.

The other case discussed in §1.1 is that of verbs before nominal indirect objects. The standard descriptions state that Hausa verbs before indirect objects end in H with a long vowel. However, Newman & Jaggar report that for many speakers, verbs can take all L *with a final long vowel* before nominal indirect objects, e.g. *kàřàntàa wà Saani littaafîn*! 'read the book to Sani!' (cf. "standard" *kàřàntaa wà*...). They note (footnote 5) that many Hausaists have interpreted the nominal indirect object marker, *wà*, as a clitic. If *wà* is a clitic, then it is the final syllable of the word, and since it bears a short vowel, the all-L imperative form would not violate LTR. However, there would then be no explanation for the "standard" form with H on the final syllable of the verb stem. They conclude that "the pre-i.o. verb forms thus constitute an embarrassment to LTR whichever way one decides to analyze the degree of bonding between the verb and the i.o. marker." I do not see the "embarrassment". As Newman [1991] himself notes *in extenso*, the grammatical status of the *wà* indirect object marker is in flux, some speakers treating it as a verbal clitic, others as a separate preposition. The variation in verb tone here can be interpreted as an aspect of that variation. What Newman & Jaggar do *not* stress is that the imperative tone variation takes place *only* before nominal indirect objects. It does not take place before pronominal indirect objects (*kàřàntaa musù* 'read to them!', not **kàřàntàa musù*) nor before pronoun *direct* objects (*kàřàntaa shi* 'read it!', not **kàřàntàa shî*), the two other environments where verbs end in long vowels, nor is the final L tone vowel of an imperative before nominal *direct* objects ever long (*kàřàntà littaafîn* 'read the book!', not **kàřàntàa littaafîn*). In all these cases, the verb is uncontroversially a separate word from its complement. It cannot be accidental that in *just* the environment preceding a particle known to be fluctuating in grammatical status between clitic and preposition, verbs show the fluctuating tones!

In §§1.2-5, Newman & Jaggar discuss categories which they call "(plurals of) augmentative adjectives" (*fankamaa-fànkàmàa* 'broad'), "ideophonic adjectives" (*ɓaloo-ɓàlòo* 'large and round'), "ideophonic adverbs" (*dagajee-dàgàjèe* 'in a bad condition'), and "ideophonic action nouns" (*wuƙii-wùƙîi* 'looking ashamed'). As the terms imply, each of these categories has syntactic properties which justify distinct lexical classifications. However, these categories are identical in one crucial respect, viz. they all have the following phonological structure:

where X is a morpheme of two or more syllables

Leben [1971:note 2] already pointed out that the synonymous reduplicated interrogatives *yàayàa*? and *ƙàaƙàa*? 'how?' did not conform to LTR. One could therefore stipulate for LTR that it does not apply to the second constituent of a reduplicated form. There is, however, a phonologically based account. Newman [1989:§§4.2.1-2] suggests an analysis which is identical, except for notation, to that just above. Thus, the "augmentative adjective" would have the structure

In Hausa, there are two ways that tones become associated lexically: (1) templates which provide a single tone pattern to be assocated by algorithm over any number of syllables and (2) prespecification of a particular syllable with particular tones. The first type of association governs verb forms, all derived nominal forms, all productive nominal plurals (as well as most lexically restricted plurals), and some other forms. These categories have tonal templates that associate with the segmental melody regardless of the number of syllables and, for derived forms, regardless of the lexical tones of the base. For example, the "-uCa" plural has a tonal template H L associated right to left regardless of the segmental melody or the tones of the singular, e.g. *raaƙumàa* 'camels' (< singular *ràaƙumii*) has three syllables and utilizes only the consonants of the root; *ɗaakunàa* 'huts' (< singular *ɗaakìi*) has three syllables and adds a suffix *-unàa* to the root; *bakunkunàa* 'bows' (< singular *bàkaa*) has four syllables, internal reduplication, and a suffix. The second type of tonal association governs non-verbal, non-derived substantives (nouns, adjectives, adverbs). These categories cannot have tones supplied by templates together with automatic association algorithms because tones are entirely unpredictable. Thus, the following nouns all have a single tonal change, from L to H, but there would be no algorithm for correctly predicting where the tone change takes place: *bùlaaguřoo* 'trip', *gwàlàmniyaa* 'speaking unintelligibly', *ànnàshùwaa* 'feeling happy'. For such words, it makes no sense to say that the domain of a tone is other than the syllable, i.e. the tones of the words just cited are L H H H, L L H H, and L H H H respectively. No rules of Hausa affecting non-verbal non-derived substantives make use of tonal domains greater than a syllable, e.g. there are no rules that say "H becomes L after L" where H could have several syllables in its domain. On the other hand, there are processes that make reference to the number of syllables *and* the tones on those syllables, e.g. nouns which have exactly two syllables *and* which bear the tones H H have plurals of the "-aaCee" type (*wurii* 'place', plural *wuràaree*).

With these considerations in mind, I propose that all the forms that Newman & Jaggar list in §§1.2-5 have tones supplied by a H L template, where each tone is multiply associated to the domain of each member of the reduplicant. Now we can, in one stroke, exclude all the forms in §§1.2-5 as counterexamples to LTR

by specifying that LTR applies only to singly associated tones. (If, as assumed here, the final tone of multi-tonal verbal templates are always singly associated, LTR would also take care of verbal tones. Leben [1985], however, argues for left to right association, with multiple association of the final tone.)

In §1.6 Newman & Jaggar present recent loanwords such as *fiřaamàřèe* 'primary' as counterexamples to LTR. These words do constitute an indisputable violation of LTR which cannot be accounted for by a generalization about lexical category or derivation. However, they raise issues, worthy of further investigation, related to the phonological adaptation of loanwords in Hausa. In their example (11) Newman & Jaggar give only six words that are problematic for LTR, and these are, in fact, the only six such words that I have been able to find in looking through Hausa Language Board [n.d.], supplemented with a number of borrowed items from other sources. Five of these words have a common feature, viz. the material represented by the last two syllables of the Hausa words has been reduced to a single syllable in British English, which would be the model for Hausa pronunciation, e.g. *dispensary* [dispénsri] becomes Hausa *dî sfansàřèe*. The sixth word, *àsambùlèe* < *assembly*, has a single syllable corresponding to two Hausa syllables in all English dialects (this is also the case with *řeelùwèe* 'railway', cited in (12)). In other words, the penultimate vowel in these words in Hausa is epenthetic, not the vowel seen in the English orthography! In English borrowings with two final unstressed syllables where the penultimate vowel is pronounced in all varieties of English, the Hausa rendering either obeys LTR (*kamfànii* 'company'), has H on the penultimate syllable (*řeediyò* 'radio'), and/or has a short final vowel (*leebùřà* 'laborer'). The latter two cases would not meet the structural description for LTR, of course. It may thus be the case that an epenthetic vowel does not serve as part of the environment for LTR, even where it bears L.

Another feature unites the six examples in Newman & Jaggar's item (11), viz. they all end in *-ee*. In §1.7, Newman & Jaggar point out that another category of counterexample to LTR comprises words originally ending in diphthongs which have monophthongized (*ƙàasàrèe* < *ƙàasàrài* 'contemptuously'). They further note that diphthongs can never have counted as long vowels for the purpose of LTR. It may be that neither diphthongs *nor* mid-vowels, at least mid-vowels which are not in some sort of regular alternation relation with high vowels [Newman 1979], are in the domain of LTR. In short, further research is needed to tell us whether or not some more general explanation consistent with LTR can account for the borrowed items in Newman & Jaggar's (11), but this small and equivocal set of apparent violations is not sufficient grounds to discard LTR as a true generalization in modern Hausa phonology.

In §1.8, Newman & Jaggar present their final counterexample to LTR. This involves lengthening of the final vowel of the last word of a question as a concomitant of a morpheme, *q*, which is the sole mark of yes/no questions and

also accompanies WH questions. (The *q* morpheme also carries properties which affect tones; these properties differ from dialect to dialect.) Thus, the word *gwàdò* 'blanket' is pronounced with a long final vowel at the end of a question, e.g. *kun sàyi gwàdòo*? 'did you (pl.) buy a blanket?', and since the vowel is now long, it should be subject to LTR were it a productive rule. This putative counterexample is a red herring. Vowel lengthening associated with *q* is one of the *intonational* properties of questions and would thus not provide input for LTR if it were a *phonological rule*, much less if it were a *lexical condition* on tone.

Newman & Jaggar specifically address this suggestion for why *q* lengthening should not be subject to LTR, citing an analysis by Inkelas, Leben, & Cobler [1987] that the L component of the *q* morpheme "is added to the lexical tier" by a purely local process, resulting in surface neutralization of underlying H and underlying falling (= H L on one syllable) to falling. Leben [personal communication] has pointed out that "lexical tier" here does not refer to the "lexical level" as this term is used in lexical phonology. Hence, Inkelas et al.'s analysis of Hausa intonation is irrelevant to the issue of whether the question intonational phenomena of Hausa can serve as input to LTR. Moreover, in footnote 15, Newman & Jaggar themselves inadvertently demonstrate that question intonation can produce output to which a well-attested phonological rule could, but does not apply. They say, "... some speakers have a final *Rise* ... rather than a fall" in questions [my italics], yet in example (13), they demonstrate that Rise regularly becomes H in Hausa. Surely a Rise observed as a concomitant of question intonation is not a "counterexample" to this well-documented rule of Rise simplification! In short, there is no reason to believe that the effects of the *q* morpheme, applied at the phrase level, should feed entirely word-internal and local phonological phenomena such as LTR.

I believe that I have shown that Newman & Jaggar have not produced convincing counterexamples to LTR. The examples from the verbal system in §1.1 are probably irrelevant, but in any case, they are not inconsistent with LTR. The four examples in §§1.2-5 all constitute a single case which does not even meet the environment for LTR. The examples from borrowing in §1.6 raise interesting questions about tonal and syllabic adaptation when words are borrowed. While definitive answers to these questions must await further research, the examples suggest that generalizations may be available which exclude these cases from or make them consistent with a reformulated version of LTR. Lengthening as part of question formation in §1.8 is an intonational phenomenon which would not create input to LTR in any formulation.

If LTR is not a productive rule, yet is not counterexemplified in the surface phonology of Hausa, what, then, is its status? In modern Hausa, it seems that LTR is best viewed as lexical constraint on prosody. This includes both the prosody of non-verbal, non-derived items, which I have argued have their tones prespecified syllable by syllable, and the prosody of templates which apply to verbs and derived forms. Newman & Jaggar have set out to support the premise

that LTR is at most a remnant of a historical process by trying to show that it is massively violated in modern Hausa. Even accepting a few (for the moment) problematic cases as true violations, LTR (perhaps better called "Low Tone *Restriction*" than "Low Tone Raising") expresses an extraordinarily robust generalization about Hausa phonology—much more robust, say, than the generally accepted restriction in English against fricative clusters as syllable onsets, forcing one to list exceptions such as *sphere* and *sthenic*. In short, LTR is *real* in modern Hausa.

Where did LTR come from? Although Newman & Jaggar discount LTR as a modern synchronic rule, they accept the idea (§2) that historically it did operate as such. I pointed out that their "counterexamples" would pose as much of a problem for LTR having been a rule in the past as for its being a synchronic rule, inasmuch as most of the cases they cite have probably existed throughout the history of Hausa, but if LTR were reformulated so as to exclude these "counterexamples" from its domain, it could well have functioned as a rule at one time, with a lexical condition on prosody as its modern legacy. There is reason to believe, however, that the modern condition expressed by LTR has a source other than a phonological rule. Hausa has two phonological properties which make it unique, as far as I know, among its Chadic relatives. One is the existence of LTR, but the more important is the fact that the overwhelming majority of items in the nominal vocabulary end in long vowels whereas nouns longer than one syllable in other Chadic languages always end in short vowels (see Newman & Jaggar, p. 237, and references cited there). There is no question that the source of final vowel lengthening in Hausa is intimately related to the source of LTR. Newman & Jaggar point out (footnote 25, pp. 245-246, and example (31)) that the final vowels of all nouns lengthen before the genitive linkers, regardless of lexical length. (Newman & Jaggar, p. 246, cite Schuh [1977:74] for this phenomenon, but Carnochan [1951] was the first to describe it.) In "Standard" Hausa, lengthening shows up only with a first person singular possessor *-aa*, e.g. *gwàdò* 'blanket' but *gwàdòo-n-aa* 'my blanket', because this is the only possessor which begins in a vowel (all nouns and all other pronouns are C-initial). In Western Hausa, lengthening also takes place before the third masculine possessor, e.g. *gwàdòo nai* 'his blanket' (cf. "Standard" Hausa *gwàdò-n-sà* 'his blanket', where the effect of lengthening is obliterated by a rule shortening long vowels in closed syllables). In Schuh [1977:74] I claimed that lengthening before genitive linkers is a reflex of a more general rule which lengthened final vowels of nouns before all cliticized determiners. Nouns with lengthened final vowels must have at one time occurred with great frequency, though today many constructions originally expressed with determiner clitics have been replaced by analytic constructions, e.g. *wannàn gwàdò* 'this blanket', or the clitics have apocopated their final vowels, creating closed syllables with concomitant vowel shortening when they are cliticized, e.g the Previous Reference Marker *-n* < **nà* as in

gwàdò-n 'the blanket'. It is the reflexes of nouns with lengthened vowels that we find today as the citation forms of nouns. Evidence that lengthening before determiners is probably the source of Hausa long vowels in nouns comes from the fact that the classes of native words which typically do not have long vowels are those which would rarely, if ever, have had determiners as modifiers, e.g. adverbs, proper names, place names, etc.[1] On the other hand, Hausa now has many common nouns with short final vowels, such as 'blanket' just cited. A large proportion of these words are identifiable borrowings which have probably come into the language since the time when lengthening before determiners ceased to be a common and productive surface phenomenon.

My suggestion is that determiner clitics probably conditioned not only lenthening, but also a polarizing tone shift. Tone polarization as part of the determiner system can still be seen in the particles marking equational sentences, *nee* (m, pl), *cee* (f), themselves originally determiners, though in this case it is the determiners which polarize, not the preceding syllable, e.g. *farii nèe* 'it's white' vs. *farìi nee* 'its a drought'. If the scenario here is on the right track, then LTR would be the effect of the combination of pre-determiner lengthening and polarization of a L syllable to H after a L. Since modern Hausa nouns with final short vowels do not show the effects of pre-determiner lengthening in their citation forms, they obviously would not show the effects of polarization either in cases where they end in a L L sequence. The fact that tone does not polarize, even in cases where lengthening applies in modern Hausa, shows that this has been lost as part of modern Hausa pre-determiner lengthening (*gwàdò* 'blanket' → *gwàdòo nai* 'his blanket', not **gwàdoo nai*).

In sum, the proposal here is that LTR has never been a phonological rule. Rather, its origin is in a morphologically conditioned process which has left its mark in a (nearly) *absolute* condition on the lexical prosody of words. This condition remains a valid generalization about modern Hausa.

REFERENCES

Carnochan, Jack. 1951. "A study of quantity in Hausa." *BSOAS* 13:1032-1044.

Greenberg, Joseph H. 1978. "How does a language acquire gender markers?" In Joseph H. Greenberg (ed.), *Universals of Human Language*, Vol. III, pp. 47-82. Stanford, CA: Stanford University Press.

[1]Greenberg [1978:71-72] proposes a vocalic determiner suffix which has fused with the final vowel as the source of lengthening the final vowels of nouns in Hausa. In Schuh [1984:196-197] I suggest that this vowel was **i*. However, I no longer believe this is the source of lengthening. A vocalic determiner source would account for the final long vowels of nouns as opposed to other categories, but it would not explain why short vowels are lengthened before the genitive linker.

Hausa Language Board. n.d. "Alphabetical list of words imported into Hausa." Kaduna: Northern Region Ministry of Education.

Inkelas, Sharon, William R. Leben & Mark Cobler. 1987. "The phonology of intonation in Hausa." In Joyce McDonough & Bernadette Plunkett (eds.), *Proceedings of NELS 17,* pp. 327-341.

Leben, William R. 1971. "The morphophonemics of tone in Hausa." In C.-W. Kim & Herbert Stahlke (eds.), *Papers in African Linguistics*, pp. 201-218. Alberta: Linguistic Research, Inc.

Leben, William R. 1985. "Syllable and morpheme tones in Hausa." *Journal of the Linguistic Association of Nigeria* 3:39-52.

Newman, Paul. 1979. "The historical development of medial */ee/* and */oo/* in Hausa." *Journal of African Languages and Linguistics* 1:173-188.

Newman, Paul. 1989. "Reduplication and tone in Hausa ideophones." *BLS* 15.

Newman, Paul. 1991. "Facts count: an empiricist looks at indirect objects in Hausa." *BLS* 17.

Newman, Paul & Philip Jaggar. 1989. "Low Tone Raising in Hausa: a critical assessment." *Studies in African Linguistics* 20:227-251.

Newman, Roxana Ma & Vincent J. Van Heuven. 1981. "An acoustic and phonological study of pre-pausal vowel length in Hausa." *Journal of African Languages and Linguistics* 3:1-18.

Schuh, Russell G. 1977. "Bade/Ngizim determiner system." *Afroasiatic Linguistics* 4(3):1-74.

Schuh, Russell G. 1984. "West Chadic vowel correspondences." In James Bynon (ed.), *Current Progress in Afro-Asiatic Linguistics: Papers from the Third International Hamito-Semitic Congress*, pp. 167-223. Amsterdam/ Philadelphia: John Benjamins.