COMPARATIVE NOTES ON JUANG AND KHARIA FINITE VERBS

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Professor H. S. Biligiri's and my own attempts to provide diagrams for Kharia and Juang verb structures (Biligiri 1965; Mahapatra 1962b) respectively turn out to be rather elaborate schemes, the Juang chart alone generating some thirty basic verb paradigms. However, four morphological classes are to be considered basic for the Juang-Kharia finite verbs: *root, aspect, tense and person.* A number of other paradigms such as imperatives, causatives and negatives, are processes secondarily derived by different formational devices; for the present these are of little interest to us. As regards the relative position of the four basic morpheme classes within the verb, there is some difference between Juang and Kharia. For example, in Kharia aspect markers may or may not precede tense markers, and in Juang person markers may or may not precede roots. However, there is still plenty of internal evidence for treating these variations in order as insignificant. For example, in Kharia, only the continuous aspect -j precedes tense, while in Juang person precedes the root only when the person is non-third. Thus, a single invariant structure for Juang-Kharia verbs may be stated as Root + Aspect + Tense + Person. This is not to deny other possibilities, particularly that of Person as a class of prefixes,

: which there exists compelling evidence in Juang
l a number of other Munda languages.

In both the languages, roots fall into three
or subclasses: transitives, intransitives and
ansitive-intransitives. Transitive roots occur
ly with Set I tense-markers, intransitives with
: II, and a few roots with both Set I and Set II.
: Kharia, Biligiri admits both alternatives, *i.e.*
ots are inherently transitive, intransitive or
ansitive-intransitive, and the distinction between
em is therefore lexical or grammatical, depending
on the sets of tense markers with which the roots
-occur. It is true that Kharia has only a few
amples where roots can occur with either set. In
ang however, a number of roots are clearly exempt
om the transitive/intransitive opposition, so that
e function of the root can be determined only from
s co-occurrence with the particular set of tense-
rkers. For example,

pag-	Set I	'to break'
	Set II	'to be broken'
rag-	Set I	'to tear'
	Set II	'to be torn'
guj-	Set I	'to wash'
	Set II	'to be washed, etc.'

this connection, Matson's observations on the
assification of Juang roots are of some interest,
he proposes to call them Class I, II and III
ots instead of transitive, intransitive, etc.,
ich he feels is a semantic distinction. But,
anings apart, the latter classification has
rect structural implications in the area of
bject-object concord. Thus in Juang transitives
e + subject, + object concord; intransitives are

+ subject, - object concord; and transitive-intransitives are + subject, ± object concord. The same structural criteria might hold true for a number of Munda languages.

Furthermore, comparison shows that Juang and Kharia generally agree in the classification of roots. For example,

Transitives

Juang	Kharia	
tɔḍ-	tor-	bind, enclose
keḍab-	akeḍ- k'eḍ-	bite
peḍ-	peḍ-	blow
tin-	tiñ-	bury, cover
tij-	tej-	carry on head
kɔŋ	koŋ-	check, stop
kɔiɔm-	k'ug-	cough
sej-	sej-	cut
lai-	lay-	dig a hole
uḍ-	uḍ-	drink
kunḍug-	kunḍum-	embrace
kuñ-	kuñ-	fold
gaj-	gaj-	fry
riḍ-	riḍ-	grind
ɔŋ-	onḍor-	hear
un-	un-	keep
kiḍ-	k'irsom-	kick
kɔŋ-	koŋ-	know
larai-	laḍa-	laugh
sug-	sug-	mend
rɔj-	roj-	milk
kɔi-	koy-	shave
tamui-	tamui-	sneeze
biḍ-	biḍ-	sow
ben-	bei-	spread out
surupi-	surub-	suck
ñɔg-	ñog-	swallow, eat
jɔjɔg-	jog-	sweep
guguj-	guj-	wash

Intransitives

Juang	Kharia	
tej-	tej-	break
ḍuiḍ-	ḍiyar-	go in, enter
guḍ-	gur-	fall down
ḍɔkɔu-	ḍoko-	sit

ansitive-Intransitives

Juang	Kharia	
pag-	pag-	break
sɔg-	soŋ-	buy

sagreements are to be noted in the following gnates, although it is possible that insufficiency data may have resulted in a somewhat inflated st:

Juang	Kharia	
uag- (intr.)	uwag- (tr.-intr.)	bathe
laku- (tr.)	loku- (intr.)	bear fruit
ḍen- (tr.)	ḍe- (intr.)	come
gɔj- (tr.)	goj- (intr.)	die
kɔsɔḍ- (tr.)	kosor- (intr.)	dry up
bug- (tr.)	ebog- (intr.)	play
billim- (tr.)	belom- (intr.)	ripen
lebeḍ- (tr.)	lemeḍ- (intr.)	sleep

Another morphological process to which Juang-aria roots are equally subject is reduplication; is again is fairly widespread in Munda languages. e reduplicated base apparently contrasts with e simple base in Kharia, while in Juang it does t. The rules for reduplication are vastly mpler in Kharia, where the root irrespective of s syllabic structure is merely repeated:

kuday-	'chase'	>	kudaykuday-
ḍeb-	'climb'	>	ḍebḍeb-

Juang, excepting the polysyllabic roots which e never reduplicated, the rules for reduplication e as follows[1]:

oot	Reduplicated base	Examples		
-	VV-	i-	ii-	be
G-	VVG-	ig-	iig-	open
G-	VGVG-	uḍ-	uḍuḍ-	eat

Root	Reduplicated base	Examples		
$CV^{\bar{u}}$	$CV^{\bar{u}}CV^{\bar{u}}$	jɔ-	jɔjɔ-	see
Cu-	CuCui	ku-	kukui-	get
CVS-	CVCVS	sɔb-	sɔsɔb-	hold
CVN-	CVNCVN	ḍiñ-	ḍiñḍiñ-	give
	$CVN^{h}CVN$	jim-	jiñjim	eat

In both languages, reduplication, whether iterative as in Kharia or continuous as in Juang, implies prolonged or continuous action.

The second morpheme class, "aspect", is a two-member class both in Kharia and Juang, although Matson (1964) surprisingly introduces into the Juang system a third aspect called "imperfect", then finds it totally unjustifiable. The two aspects are "perfect" and "continuous", realized respectively in Kharia as -sig and -j and in Juang as -se and -nɔm. The main point of interest is that in Kharia the continuous aspect is concomitant with the present tense while in Juang it is concomitant with the non-present tenses. There is little difficulty treating the perfect morphemes sig- and se- as cognates, despite an apparently awkward -ḍ which Biligiri calls an "increment." The Kharia perfect morpheme has two alternants, c'ig- (only after j) and sigḍ- (only before first singular and second *singular suffixes*). The Juang morpheme has four variants:

-cer-	in the environment j / n / ñ_V
-ce-	in the environment j / n / ñ_C
-ser-	before V (if not following j / n / ñ
-se-	elsewhere.

In view of the regular morphophonemic ḍ / r alternation in Juang, the posited form for Juang should

e a final ḍ whether or not it is an "increment" in Kharia. On the other hand, the case of the tinuous morphemes -j and -nɔm is complicated by ir defective distributions: the Kharia morpheme urs only after the present suffix, the Juang pheme only before intransitive non-present (*i.e.*, t and future) suffixes.

The third morpheme class, "tense", has three bers in both languages. A fourth member, -tan, led "conditional" in Juang, structurally belongs this class, but it lacks the most important racteristic of the Juang-Kharia tenses. The ses are realized in these languages by two sets forms, one set occurring only with transitive ts and the other with intransitive roots. There three tenses, *i.e.*, past, present, and future. following table compares the forms:

nsitive tenses

	Juang	Kharia
Present-	-ke	-te
Past-	-ɔ	-og
Future-	-e	-e

ransitive tenses

Present-	-ḍe	-ta
Past-	-an	-ki
Future-	-na	-na

is clear that the non-future tense forms differ ely, and are problematic from the point of view the general Munda tense system, a two-term tem of past and non-past.

It may be of interest at this stage to take ook at Professor Pinnow's descriptions of Juang

and Kharia verbs (Pinnow 1960). Unfortunately, it is rather difficult to follow him, as his description tends to be semantic rather than formal. For example in the case of Kharia, he lists two "infective" paradigms, (1) indeterminate, habitual, future I, and (2) durative, present indefinite. These are formally indistinguishable for both transitive and intransitive bases. The same can be said of the two "perfective" paradigms, (1) indeterminate, aorist, past indefinite, and (2) aorist continuative (progressive). In any case, Pinnow's analysis of Kharia shows the opposition infective/perfective, realized as ∅ and si? respectively, or in other words a marked perfective and an unmarked "infective."

For Biligiri, the class consists of two members, sig- and -j. He states categorically that "these suffixes are mutually exclusive, *i.e.*, both of them cannot occur in the same form. One of them occurs with or without a following tense suffix whereas the other occurs only after the present suffix." This structural information is built into Biligiri's verb diagram.

With regard to the latter part of this statement, Pinnow does not disagree, for his -'j is always preceded by a present suffix -te or -ta. However, he cites forms such as si?te'jḍiŋ or si?ta'jḍiŋ 'I have been doing', which obviously violate Biligiri's rule, inasmuch as -si? and -'j occur in the same form. This discrepancy has led to different analyses of the data, which cannot be resolved without further fieldwork. As regards the tenses, the forms generally agree in spite of Pinnow's variant semantic labels. For him the

se suffixes are:

transitive	intransitive
-te	-ta
-o?	-ki
-e	-na

In the case of Juang, Pinnow lists the aspects tenses together, for according to him tenses not be treated independently of aspects. It however be inferred that he recognises two ects: perfect -sɛ with its variants, and erfect -nɔm. His listing of perfect paradigms ains incomplete without the future forms, namely re for transitives and the corresponding -sena the intransitives. For example, ga-ma-ta-ser-e would have said,' a-gaḍ-se-na 'you two will have ged'. Similarly, for the imperfect aspect now claims that Juang distinguishes between nsitive and intransitive bases by reduplicating not reduplicating the base respectively. As as my own study goes, this is rather doubtful. aspect -nɔm co-occurs only with the non-present ransitive tenses irrespective of the base. thermore, the reduplication of the base is not erned by the transitivity/intransitivity of the t but by syllabic structure. All monosyllabic ts are reduplicated before the continuous ect. As regards tenses, Pinnow also isolates sets of three tenses:

transitive	intransitive
-kɛ	-ḍɛ
-ɔ	-an
-ɛ	-na

The last and the most interesting class of verb morphemes is that of pronominal affixes. This subject has been dealt with fairly elaborately by Pinnow (1960) and Zide (1970). We may summarize some of their results here. It is true that this class of affixes cannot be fully understood without reference to personal pronouns occurring in isolation or to other pronominal affixes occurring elsewhere, as in possessives. Besides, it is generally believed that the pronominal affixes are actually "contracted" forms of the corresponding pronouns, and in Kharia according to Biligiri could be derived from the personal pronouns by dropping the first vowel. In Kharia, contracted forms occur in two positions: as subject concord suffixes and as possessive suffixes.

	Pronouns	Subject Concord	Possessives
1sg.	iñ	-ñ ~ -ŋ	
du. excl.	iñjar	-jar	
du. incl.	anaŋ	-naŋ	-ñ, -nañ
pl. excl.	ele	-le	
pl. incl.	aniŋ	-niŋ	
2sg.	am	-m	
du.	ambar	-bar	-nom
pl.	ampe	-pe	
3sg.	aḍi	-∅	
du.	aḍkiyar	-kiyar	-ḍom
pl.	aḍki	-moy -ki	

In Juang, affixes occur in four positions: subject and object concord, negatives, and possessives.[2]

	Pronouns	Subject Concord	Negatives	Object Concord	Possessives
.	añ	V^c-	∅	-ñ/-niñ	-ñ/-niñ
..	niñba	bV^n-(ba-)	b-	-ñba	-niñba/ -ñba
..	niñ	nV^c-/nV^h-	*n-*	*-neniñ*	*-eniñ*
;.	am	mV^c-/mV^h-	m-	-nɔm/ -ɔm/-m	-nɔm/ -ɔm
ı.	apa	V^n-(a-)	a-	-pa	-pa
..	ape	V^h-	e-	-pe	-pe
		mV^c- /-mV^c- /-mV^c			
ʒ.	arɔ	∅			-ḍɔ
ı.	arɔkia	-kia	-kia		-ḍɔkia
L.	arɔki	-ki	-ki		-ḍɔki

e table shows that the Juang verb is marked for ird-person subject concord; this is realized as ^{c}- before V-initial stems, -mV^c after non-duplicated CV stems, and elsewhere as -mV^c-. This ird/non-third dichotomy has no parallel in other nda languages, though the Kharia third-person ural subject suffix -moy is apparently cognate.

The major differences between Juang and Kharia onominal forms are:

i. lack of the inclusive/exclusive distinction in Juang;

ii. lack of the third/non-third person distinction in Kharia; and

iii. in Kharia, the fact that pronominal affixation is limited to one process only, *i.e.* suffixation.

Juang, prefixation, infixation, and suffixation e equally common. In fact, Juang forms fall into

three major sets, namely independent pronouns, prefixes in subject concord,[3] and suffixes in object concord.

With these data, we may now posit a tentative Juang-Kharia pronominal system. The third-person forms pose hardly any difficulty, and all forms can be derived from a single construction: *Vḍ/-ḍV + ki + a/ar, representing third person + plural + dual. The ḍ/r alternation in Juang is quite regular and requires no further explanation. The only aberrant form is the Kharia third-person plural suffix -moy. It has already been mentioned that this form is related directly to the Juang third-person marker mV- and ultimately perhaps to Zide's reconstructed Gutob-Remo-Gata? *maj 'he/she'.

It is not clear if the third-person construction would be a good model for explaining the other pronominal forms. It would presuppose an underlying singular for a derived plural and, by further suffixation to the plural, a secondarily derived dual. Thus, the construction for the second person would be Vm/mV, while the derived plural would be Vm-p, realized in Kharia as ampe and in Juang as ape. Finally, a secondarily derived dual Vmp-a/ba(r) would give in Kharia ambar and in Juang apa. The Juang dual a may not be a vestige of -bar, 'two' although there is some dialectal evidence in Juang of bilabial stops changing to h and getting lost in word-initial position. On the other hand, Sten Konow might be right in assuming that b in the form for 'two' is a prefix, and that the actual morpheme for 'two' is -a. This would at least be a more useful assumption for explaining Juang dual forms.

The remaining forms are the possessive suffixes
m and -nɔm in Kharia and Juang respectively. The
tial nasal in these forms is apparently a separate
pheme, representing 'possessive' or 'objective',
which Pinnow sets up in Proto-Kharia-Juang ne-,
and no-.

The form posited for the first person is VN.[4]
derived plural with the prefix Vn/nV gives
N/nVVN, realized in Kharia as aniŋ and in Juang as
. The Kharia exclusive plural ele is clearly
side this scheme, and so is the exclusive dual
ar. The latter form, as Pinnow rightly points
, originated secondarily from *iñ-bar, meaning
two'. The regular dual forms, derived from
N-a/ba(r), are realized in Juang as niñba and in
ria as anaŋ. The Kharia form presupposes a
struction on the order of Vn (pl.) + a (du.) +
(1st.). Again the possessive and objective
nominal suffixes with initial nasals--such
-nañ, -niñ for singular, -niñba for dual,
-neniñ, -eniñ for plural--must be treated
the same way as the second-person forms.

It is possible therefore that most of the
ng-Kharia pronouns other than the basic singular
ms did not necessarily originate from Proto-
da forms but were secondarily derived, the pattern
ng a plural with an underlying singular and a
l with an underlying plural. It is not clear if
pronominal affixes in Kharia developed regularly
m the pronouns by a process of contraction or
ther they derive from a more stable set of
nominal affixes by expansion rules.

In conclusion, those forms which can be
tatively reconstructed for Kharia-Juang

pronominal affixes are as follows:

1sg. *N (free form VN): 1 pl. *nV
2sg. *mV (free form Vm): 2 pl. *pe du. *(b)-a(r)
3sg. *ḍV (free form Vḍ): 3 pl. *ki

The free forms for the plurals are:

1pl. > *nV-1sg.;
2pl. > *2sg-pe;
3pl. > *3sg-ki.

The reconstruction of the inclusive/exclusive forms has to be based only on Kharia evidence, since Juang lacks this opposition completely. It is interesting to note that if Juang lost this opposition, it must have done so in the face of strong areal pressure, because this opposition is not peculiar to the Munda languages of this region but occurs in the neighbouring Dravidian languages and also in Oriya.

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[1] The symbols are to be interpreted as follows:
G velar consonant
$\overline{G}$ non-velar consonant
V^{u} vowel other than u
S stop consonant
N homorganic nasal before a following k or j

[2] The vowels with superscripts represent three kinds of vowel assimilation rules:
V^{c}: a fully assimilated vowel, *i.e.* the vowel is the same as the following stem vowel.
V^{h}: partially assimilated vowel, *i.e.*, vowel is high i when the following stem vowels are i or u; vowel is low e when the following stem vowels are low e, ɔ or a.
V^{n}: not assimilated

[3] The exceptions are the third-person number morphemes, which are always suffixed.

[4]The N stands for either a palatal or a velar
sal. Zide has noted the various difficulties
volved in making a choice between a palatal and
velar nasal at the GRG reconstruction stage. At
e JKh stage the matter is not any easier, particu-
rly after the vowel i. In Juang, the opposition
tween ŋ and ñ is neutralized after i and is real-
ed as a palatal only. In Kharia, Biligiri notes
ee variation between these two nasals, and ulti-
tely chooses to write ñ for both "for the sake of
nvenience."

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