
Dravidian Researches

Author(s): Edwin H. Tuttle

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DRAVIDIAN RESEARCHES.¹

1. Sounds and symbols.

Long experience has shown that subscript dots lack legibility; that if they are set properly at first, they often disappear in the course of printing; and that where they are really printed, they may be too small to be readily seen: a fault painfully illustrated in Bloch's *Formation de la langue marathe*, where the tiny dot of *l*, a much-used letter, almost calls for a magnifying glass.

I here use a prefix dot to mark reverted linguals: *.t .d .n .s .z .l .r*. The other series of consonant-symbols are labial *p b m f v w*; dental or alveolar *t d n θ δ s z š ž l r ř* (palatalized); prepalatal *c* (Bohemian *t'*) *ç* (Bohemian *p'*) *ñ* (Spanish *Ñ*) *ç* (German *CH* in *ECHT*) *j* (German *ɣ*) *λ* (Portuguese *LH*); postpalatal or velar *k g ŋ x γ*; glottal *ʔ* (occlusive) and *h*. Special symbols for voiceless sounds are supplied by capitals, as *N L R*. The glottalized occlusives of Kolarian are written *'k 'c 't 'p*.

Brâhmi *f* and *v* are said to be labiodental; in the other Dravidian tongues *v* seems to be commonly bilabial, or both bilabial and labiodental indifferently, so the letter *v* must be understood to have either value. In dealing with the literary languages, I use *c* and *ç* as transliterative symbols for the ancient simple sounds: modern speech regularly has instead affricates resembling those of English *CHARGE*. In spoken Telugu these affricates have become *ts* and *dz* before non-palatal vowels.

Tamil is here transliterated in accord with native spelling, which represents all occlusives as being voiceless. Spoken Tamil

¹ References:

- AJPh: American Journal of Philology.
BSOS: Bulletin of the School of Oriental Studies.
GC: An Elementary Grammar of the Coorg Language by R. A. Cole (1867).
GK: A Grammar of the Kui Language by W. W. Winfield (1928).
GTI: A Grammar of the Tuḷu Language by J. Brigel (1872).
KL: A Grammar of the Kannaḍa Language by F. Kittel (1903).
PGT: A Progressive Grammar of the Telugu Language by A. H. Arden (1905).
TID: Tuḷu-English Dictionary by A. Männer (1886).

has a fricative, varying from *s* almost to *ç*, for a single *c* between vowels or at the beginning of a word. Otherwise a simple Tamil occlusive-symbol now corresponds to a voiced sound between voiced sounds; between vowels the sounds are said to be commonly fricative—*ð* for *d* written as *t*, and *γ* or even *h* for *g* written as *k*. Spoken Tamil has alveolar *ndr* for written *nR*, and alveolar *tt* or *ttr* for written *RR*; intervocalic *R* has become voiced but is more strongly trilled than ordinary *r*; before a consonant either *t* or *r* may be used for written *R*. Modern Kanara and Telugu have *r* for older *R*.

The letter *ē* means a very open sound resembling our *A* in HAT, and *ø* is like our *AW*; *ë* is like the *E* of BAKERY; *ï* stands for a vowel apparently similar to Rumanian *î*; *ä* in theoretic forms represents vowels of unknown quality; a grave accent marks uncertain or variable length.

2. Tulu and Kodagu.

The well-known main divisions of Dravidian speech are north-western Brâhui, northeastern Kurukh-Malto, central Gôndi-Kui, southeastern Telugu, southwestern Kanara-Tamil, and Tulu. The last of these is spoken near the southern end of the Kanara region, but its linguistic position does not agree with its place on the map. The three dialects of Tulu are markt by the word-forms *hũ* = *sũ* = *tũ*- (see), according to Männer (TID). If it is right to connect these words with the equivalent Kanara *nõ.d-*, Gôndi *hu.d-*, *hu.r-*, Kui *sũ.d-*, *sũ.r-*, Telugu *cũc-* (< **tũ.dc-*), apparently derived from a root **snu.d* which became **sNu.d* outside of Kanara-Tamil, it seems clear that the likenesses can hardly be accidental: Tulu was formerly in contact with Gôndi-Kui, and probably also with Telugu, from which it is now separated by Kanara territory.

The Tulu change of *dr* or *.dr* to *dž*, as in *ādži* (six), *vondži* (one), beside Tamil *āRu* < **.satrā* and *onRu* < **o.n.trā* < **oro.n.t*, allows us to assume a Tulu development of **waṇkiatrā* thru **bandžedži* to *bandži* (belly, heart, inside). The same basis **waṇkiatrā* is represented by Gôndi *vandžēr* (tongue), with *r* as in *sār* = Tamil *āRu* (six), and by Kui *vaṅgosi* (tongue) < **waṇkorci* < **waṇkortia* < **waṇkiatro*, with *s* as in *sā* = Tamil *cā*- (die); whereas a form **wacetrā* < **wakiatrā*,

without a nasal, is the source of Kanara *basiR* later *basuru* and Tamil *vajiRu* (belly). Kui shares with Tulu the change of *r* to *ž*: Kui *mündži* and Tulu *mūdži* correspond to Gôndi *mũ.n.d*, Telugu *mũ.du*, Kanara *mũRu*, Tamil *mũnRu* < **mutrũ* (three).

Tulu commonly changes a simple *l* to *r*: *kār* (foot) = Gôndi *kāl*, Telugu *kālu*, Kanara *kāl* later *kālu*, Tamil *kāl*; *tare* (head) = Gôndi *talā*, Kui *tlāu*, Telugu *tala*, Kanara *tale*, Tamil *talai* < **talas* (BSOS 1928 4. 770, AJPh 1928 49. 340); *pēr* (milk) = Brāhui *pā.L*, Gôndi *pāl*, Telugu *pālu*, Kanara *pāl* later *hālu*, Tamil *pāl*. Kui has *.d* for *l* following a vowel: *kā.du* (foot), *pā.du* (milk). These similar alterations of *l*, lacking general parallels in the other Dravidian tongues, may imply a fairly recent close connection of Tulu with Kui.

As the result of stress-displacement Gôndi has lost the interrogative vowels, and has the interrogative-basis *b-*, corresponding to Kui *imb-*, *emb-*, *omb-*, *umb-*. In Kui the five vowels, *i- e- a- o- u-*, are used as interrogative-bases. Tulu has interrogatives from the *e*-basis, and also from the *o*-basis. The *o*-interrogatives have direct parallels in Kui alone; their nearest kindred in southern Dravidian seem to be the rare *o*-demonstratives of Kanara, *ō.tu* and *ōsu* (so much).

Tulu has *ār* < **ahar* (those) without a hiatus-filler; Kui has *aaru* < **ahar*, beside the variant *avaru*, with an unsettled *v* indicating a late addition of the hiatus-filler; Gôndi has *ō.r* < **awar* < **ahar* corresponding to the developments found in southern Dravidian outside of Tulu: Telugu *vāru* < **awar* < **ahar*; Kanara *avar*, Tamil *avar*.

Tulu has *ī* < **is* (you); Kui has *īnu* for **īu* < **īsu* < **īs*, with the ending of *ānu* (I), but without initial *n*; early Telugu has *īvu* < **īsu* < **īs*; but in preliterate Kanara-Tamil the nominative **ī* became *nī* under the influence of the general stem, as seen in the genitive **nā* or *nī(n)na*, the dative **nakkā*, and the accusative **nasan* (BSOS 1928 4. 771, AJPh 1928 49. 339).

Gôndi distinguishes two simple past tenses, a preterit made with *tt* or *t* and an imperfect made with *d*. Similarly Tulu distinguishes *tūte* (he has seen) and *tūje* (he saw). This distinction must have once existed elsewhere, but it has been generally lost. Telugu has an aorist and Kanara and Tamil

have a single past tense corresponding in form to one of the Gôndi tenses.

In early Dravidian apparently verbs were formed from the demonstratives *i* and *a*, and from the interrogative *e*. They must have meant 'say this', 'say that' and 'say what'; but afterward the differences were lost and 'say' became the general meaning. Kanara has two forms, *an-* and *en-*. Tamil has only *en-*, but a lost **an-* is represented in the causative *anupp-* (send = cause to say [a message]). Tulu has two forms, *an-* and *in-*, but the form *an-* may have been borrowed from Kanara, the literary language of the Tulu region. Gôndi and Kui have *in-*, in accord with the Tulu form differing from those of Kanara-Tamil.

With such agreements between Tulu and one or both of the central tongues, contrary to what is found in Kanara-Tamil, it is plain that the ancient geografic position of Tulu was nearly central, adjoining that of Gôndi-Kui.

In the fourth volume of the Linguistic Survey of India, Konow discusses various features that distinguish the Dravidian tongues, and puts Kodagu and Tulu wrongly in the middle of the Kanara-Tamil group. This mistake is repeated by Grierson in the recently printed portion of the first volume (1927). The sounds *d* and *l* in Kodagu *peda*, Tulu *pudar*, Kui *pada*, Gôndi *pa.rôl* < **polar* < **pudar* < **pitar* (name), beside derivatives of the palatal occlusive *c* in the equivalent Kanara *pesar* and Tamil *pejar* < **picar* < **pitar*, show that Kodagu and Tulu are outside of the Kanara-Tamil group. The change of **pitar* to **picar* seems to be a special feature of Kanara-Tamil, unless it is to be assumed for the Kurukh verb *pindž-* (name), which might represent **piñc-* < **pican* < **picar*, with *n* taken from Aryan *nāman*.

Tamil has *pēr* as a contraction of *pejar*. Telugu has *pēru* (name), but its history was different from that of the Tamil word. Telugu has *c* in *vacci* for **warci* (having come), beside *s* in *cēsi* for **kieci* (having done): ancient *c* was kept, and later changed to an affricate, after a consonant, but became a fricative between vowels. A Telugu change of **pitar* to **picar* would have given a form like Kanara *pesar*, and perhaps later **paseru* or **prēsu*, with vowel-displacement as in Telugu

vrēlu < **veral* = Tamil *viral* (finger). Telugu *mrōlu*, a variant of *modalu* = Tamil *mudal* (beginning), allows us to assume the development *pēru* < **prēr* < **pedar* < **pitar*, with a dissimilative loss of *r*. Telugu **pedar* represents the older form of Kodagu *peda*.

Brāhui uses *-ā* (the) as a suffix with attributive adjectives. The other Dravidian tongues have *a* or *ā* (that) as an ordinary adjective, except that in most varieties of Gōndi the corresponding pronoun is used instead. In Dravidian, as in English, two nouns may be combined with or without a genitive-ending. Apparently the oldest Dravidian genitive-ending is *-a* or *-ā*, representing the demonstrative just mentioned. In Kanara the genitive-ending is *-à*, *-dà*, *-na*, *-na* or *-ra*. Kodagu has *-.da* and *-ra*: the form *-.da* stands for **-.l.da* < **-.lda*, generalized from *ava.da* < **ava.la* (her) and the ordinary plural-ending *-a.da* < **-a.la*.

Much of the vocabulary of Kodagu is like that of Kanara or Tamil. In Kodagu *nānu* (I), acc. *jenna*, dat. *jenakī*, gen. *jē.da*, and *nīnu* (you), acc. *ninna*, dat. *ninakī*, gen. *nī.da* and *ninna.da*, we find forms similar to those of Kanara, aside from the genitives. Evidently *ninna.da* may be the Kanara genitive *ninna* combined with the Kodagu suffix. But *jē.da* and *nī.da* lack parallels in Kanara-Tamil.

The loss of final consonants is common in Kodagu, which has *peda* for **pedar*, and *ava.l*-, nom. *ava* (she), *avan*-, nom. *avī* (he), *ibbar*-, nom. *ibba* (two persons), corresponding to Tamil *ava.l*, *avan*, *iruvar*. Kodagu *nānu* and *nīnu*, with some of their inflectional forms, were taken from Kanara. The older Kodagu words were probably **ē* = Telugu *ēnu* (I), with the genitive **nē* for **nā* = Telugu *nā* < **ena*; and **i* = Telugu *īvu* (you), with the genitive **nī* = Telugu *nī* < **ini* < **ina*. The change of **ina* to *nī*, a distinctive feature of Telugu and Gōndi-Kui (AJPh 1928 49.341), led to the use of *-i* as a genitive-ending in Telugu and Kui. A differently directed influence of **nī*, beside the nominative **i*, produced Kodagu **nē* for **nā* as the genitive of **ē*. Kodagu *nī.da* is **nī* with the usual ending added; **nē* likewise became **nē.da*, and then *jē.da* under the influence of *jenna* and *jenakī*. Gōndi or Kui would explain Kodagu *nī.da*; and Kui might explain *peda*, but it would not

account for *jē.da*, unless we go back to the time when Kui had *ē* in *ānu* < **ēn* (I). Apparently the basis of Kodagu is Telugu.

Corresponding to Kanara *kī.r* and Tamil *kī.r* (under), Kodagu has *kī* and *kīda* (GC 20). We might try to explain *kī* as coming from *kī.r*, with the sound *.r* simply dropt because it is unknown in Kodagu. But it is hard to explain *kīda* from Kanara or Tamil; and as a native formation we should expect *-.da*, the common genitive-ending, instead of *-da*. Telugu has *kī* and *kīnda* (under). Kodagu *kī* may be Telugu; *kīda* looks like a blend of the two Telugu forms.

3. Voicing.

Brâhui has *ēd* as a variant of *ē* (that); in the plural *ēfk*, *k* is the regular plural-ending of nouns. The history of the word *ē* is not known, but the endings of *ēd* and *ēfk* correspond to those of the Kanara equivalents *adu* and *avuga.l*. Kanara has *avu* as the older plural of *adu*, perhaps belonging to a period earlier than the distinction of adjectives and substantives (BSOS 1928 4. 771); *avuga.l* has taken on the ordinary plural-suffix of neuter nouns.

Brâhui and Kurukh-Malto seem to agree with the other Dravidian tongues in voicing (or not unvoicing) a simple occlusive after a nasal. But from Brâhui *bi.t-* (throw), *pōk* < **pōki* (lost) beside Kanara *bi.d-* (throw), *pōgi* < **pōki* (gone), and from Kurukh-Malto *ēk-* = Telugu *ēg-*, Tamil *ēk-* (go), it appears that the northernmost tongues lack the voicing of intervocalic occlusives which is regularly found in central and southern Dravidian, including Tamil as spoken tho not as written. The neuter-ending *-d*, kept in Brâhui with a loss of meaning, just as Latin case-endings are kept with a loss of function in French *SON FILS* < *SVVM FILIVS*, shows that final consonants do not generally become voiceless in Brâhui, as occlusives and fricatives commonly do in Catalan, Dutch, German and the Slavonic tongues. The *f* of Brâhui *xaf* (ear), beside *v* in Gôndi *kavī*, Telugu *cevi*, Kanara *kivi* (ear), is analogic, taken from the plural *xafk*, which has normal *f* for *v* before *k*, in accord with *ēfk*. The normal Brâhui form of the singular would be **xau*, parallel with *kulau* (message) beside the plural *kulavāk*.

From Kui *prāu* < **prāsu* < **pràs*, corresponding to Malay

bēras (rice), we may perhaps infer a general unvoicing of occlusives in ancient central Dravidian. If we can trust the evidence of native spelling, all occlusives were voiceless in early Tamil. Apparently preliterate Kanara shared with Tamil the unvoicing of occlusives; but afterward simple occlusives became voiced between voiced sounds, so that the basic voiced or voiceless quality is hard to make out. Tamil *kutirai* (horse) is presumably derived from *kuti-* (jump). In Kanara *kudure* (horse), as in the spoken form of Tamil *kutirai*, now pronounced *kudire(i)* or *kuḍire(i)*, the former *t* has changed to a voiced sound. The old *t* of Kanara-Tamil, or of some other Dravidian tongue which had voiceless occlusives between vowels, is kept in the word-form *kurtā* (horse), found in Savara, a Kolarian tongue which has also borrowed other Dravidian words.

From Brāhui *murū*, Gōndi *malōl*, Kui *mrā.du*, Telugu *kundēlu*, Kanara *mola*, Tamil *mucal*, *mujal*, Kurukh *mūjā*, Tulu *muger*, *mugger*, *mujer* (hare), we may infer a basic **midal*. Brāhui has *ī* < **ēn* (I); apparently Brāhui likewise changed *ō* to the closer vowel *ū* in *murū*, which looks like a loan-word from Gōndi. In Gōndi *malōl* < **molal* < **mudal* < **midal* we find sound-changes similar to those of Gōndi *pa.rōl* < **polar* < **pudar* < **pitar* (name). Kui has *i.du* or *i.d.du* corresponding to Tamil *il* (house), and *ari* = Telugu *adi* (that): *mrā.du* is a normal development from **midal*, with the stress-displacement that is a common feature of central Dravidian. Telugu probably formed **madēl* < **medal* < **midal*, parallel with *vrēlu* < **veral* = Tamil *viral* (finger). In *kundēlu* < **kumadēl* the prefix may be connected with a lost equivalent of Tamil *kuti-* (jump), now represented by Telugu *kuḍiñc-* (shake up = cause to jump); the voicing of *k* to *g* in Telugu *gurramu* (horse) could have come from the intervocalic position in *nā *kutrā* (my horse), *nī *kutrā* (your horse). For Kanara we should expect **mosal* corresponding to the Tamil forms; *mola* was constructed from the plural *molaga.l* < **molaka.l*, which was taken from an earlier form of the Gōndi plural *malohk*, perhaps **molahka.l*. Gōndi is now spoken about a hundred miles from the northern end of Kanara territory. Kurukh *mūjā* seems to represent an ancient borrowing from Tamil. The loss of final consonants caused **asan* (he) and **asa.l* (she) to be confused in Kurukh, with the result that

the neuter *ād* was taken to express the feminine (BSOS 1928 4. 774); similarly *mūjā* has lost its final *l*.

The Tamil variation between *mujal* and *mucal* marks the existence of two ancient dialects: one of them voiced *c* between vowels, while the other changed *c* to an affricate early enough for it to escape voicing. In Tamil *pejar* < **picar* < **pitar* (name) and *mujal* < **mical* < **mital* < **midal*, the different vowels may indicate differing stress, altho there is little or no evidence of stress-displacement in early Kanara-Tamil; or perhaps, since the forms *mujal* and *mucal* indicate two dialects, we should assume that *pejar* represents a third ancient dialect. From the common Tulu change of *l* to *r* it is clear that Tulu *mujer* might be merely a naturalized form of the Tamil word. But *muger* and *mugger* are native developments; they agree with Tulu *avu* or *au* (that), the formal equivalent of Kanara *adu*, in showing that ancient intervocalic *d* is lost in Tulu, whereas ancient *t* has become *d* in Tulu *pudar* < **pitar* (name). Beside hiatus-filling *v* < *w* in southern Dravidian we find also *g* < *gw* < *w* and *gg* < *gw* < *w*: thus Telugu has *mūguru*, *muguru*, *mugguru* (PGT 325), as variants of *mūvuru* = Tamil *mūvar* < **muhar* (three persons). Apparently **midal* developed thru **muwal* or **muwar* to *mug(g)er* in Tulu, with hiatus-filling *w* in the place of the lost *d*. Thus Tulu, probably alone among the southern tongues, contains evidence of the ancient distinction between voiced and voiceless occlusives. Parallel evidence is perhaps to be found, for central Dravidian, in Kui *pada* < **pitar* (name) beside *mrā.du* < **midal*; but *pada* was probably derived from **pitar* thru **prda*, and the retention of *d* might be explained by the dissimilative influence of contact with *r*, if **prda* was contemporary with the change of *d* to *r* between vowels.

4. The past tense.

In Kurukh a past participle is made with *-kā*, as *eskā* from *es-* (break). The corresponding past tense lacks *k* in the third person, and in the feminine of the first person: 1 *eskan*, f. *esān*, 2 *eskai*, f. *iskī*, 3 *esas*, f. *esā*; plural 1 *eskam*, f. *esam*, 2 *eskar*, f. *eskai*, 3 *esar*, f. *esai*. Instead of the glottal occlusive, a few verbs have *i* or zero alternating with *k*, as in *ānias* (he said)

beside *ānkan* (I said), *kēras* (he went) beside *kirkān* (I went). The *i*-suffix is sometimes given with *ij* or *j*, as *ānijas* or *ānjas*. Many verbs have an added suffix between the stem and the ordinary endings: *bartškan* from *bar-* (come); *xottkan* from *xos-* (dig into), with normal *tt* for *st*; *usskan* from *ui-* (plow). There seem to be three general forms of such suffixes: we may call them the *c*-suffix, which has become *tš* or *dž*; the *t*-suffix, which becomes *d* after *n*; and the *s*-suffix. In Brāhui, Gōndi-Kui and southern Dravidian we find *s* as a derivative of *c*, but evidence of such a change seems to be lacking in Kurukh-Malto, so the *s*-suffix can hardly be a variant of the *c*-suffix. The latter, however, may represent a palatalized form of the *t*-suffix. In *otškan* beside *hò-* (take) we find a remarkable stem-variation: apparently *h* was at first added to the emphatic imperative **o*, and later extended to the entire present-future stem. The same variation appears in *khè-* (die), with the past *kettškan*. If Kurukh *x* represents an ancient *k*, the *k* of the past-suffix may stand for older *g*, or for *kk*, which seems to escape the change to a fricative in Kurukh-Malto: Kurukh *mōx-* (eat) has the past *mokk(h)-*.

Malto verbs distinguish genders in the singular of the second and third persons. If the transcriptions given in the Linguistic Survey are trustworthy, Malto has lost the glottal occlusive. Otherwise the Malto treatment of the past tense agrees closely with the Kurukh treatment. Malto has *-ken*, and often *-eken*, corresponding to Kurukh *-kan*. Probably Kurukh *usskan* came from something like **uřsekken* or **uřsegen*, *s* being kept because the contraction to *usskan* was later than the change of *st* to *tt* in *xottkan*.

Brāhui has a present participle in *-isa*, but is said to lack a past participle. The formant of the affirmative past is usually *ā* or *ē*, sometimes *s*, rarely *k* or *g*; the negative past has *t*. The *ā*-suffix probably corresponds to the *ā* of the Kurukh third person; *ē* may be a contraction of *ia*, as found in Kurukh *ānias* and other verbs. The *s*-suffix is derived from *c* in *kask-* (died), *bass-* (came), *tiss-* (gave), *mass-* (became) beside Kurukh *kettšk-*, *bartšk-*, *tšitšk-*, *mandžk-*, and in *ass-* (was) beside Gōndi *āsī* (been). The retention of suffixal *k* in *kask-* is explained by the Kurukh participle *kettškā*: the common use of

the word as an adjective favored the preservation of the *k*. Aside from the words just mentioned, the Brâhui *s*-suffix commonly follows a weak vowel, as in *bisis-* from *bis-* (ripen): it may represent *c*, or ancient *s*, which seems to be kept between vowels in Brâhui, as in Kurukh-Malto. The older use of *t* to form the affirmative past, in accord with the other Dravidian tongues, is shown by Brâhui *xutt-* (dig) < **khust-*, cognate with Kurukh *xott-*: it is a past which has been taken for the general verb-stem, like *lend* in English (for older *lene*).

In Kui the suffix of the past is commonly *t*, rarely *d* or *s*; *-i* is added to form the past participle. Gôndi has an imperfect formed with *d*; a preterit formed with *tt*; a past participle in *-tši*, *-dži*, *-si*; and another past participle, intransitive or passive, in *-tal*. The participle in *-i* may take a second suffix, *-kun*; likewise *-tal* is a compound, its older element being *t*, which is a common formant of the past participle in Kanara and Tamil. Gôndi has the preterit *hatt-* (went) from *han-*, beside the imperfect *hand-*. The suffix of the imperfect is properly *d*, but the normal loss of *n* before *tt*, in *hatt-*, *itt-* from *in-* (say), *titt-* from *tin-* (eat), and other commonly used verbs, caused *nd* to be considered the general suffix of the imperfect, and produced *kînd-* from *kî-* (do), *guhand-* from *guh-* (seize), *vând-* from *va-* (come), beside the preterits *kit-*, *guht-*, *vât-*, where *t* has replaced *tt* after a consonant or a long vowel. Gôndi verb-stems ending in *n* have extended the *d* of the imperfect to the present, the future and the infinitive. In many verbs the *tt* or *t* of the preterit may be added to the entire stem, as in *nitt-*, a variant of *nîl-* = Tamil *nîl-* (stand), and likewise in *tatt-* (bring) except for the stem of the imperative and of the negative, *ta.r-* = Kanara *târ-*. Gôndi *nitt-* (< **nîlitt-*) is the formal equivalent of the Telugu aorist *nîlut-*, where *tt* has become *t* after a weak vowel.

Brigel divides Tulu verbs into six conjugations (GTI), represented as having the following suffixes of the imperfect and perfect in the masculine singular of the third person: (1) *-te* and *-tîde*, (2) *-de* and *-îde*, (3) *-je* and *-de*, (4) *-je* and *-te*, (5) *-de* and *-te*, (6) *-ije* and *-te*. Tulu is rather closely connected with Gôndi-Kui, but has long been under the influence of Kanara, the literary language of the Tulu region. It has lost checking nasals except after a main-stress short vowel, so the

distinction of *d* and *t* in the 5th class may be said to agree with a Gôndi distinction of *nd* and *t*. The 4th and 6th classes likewise have *t* in the perfect; the *j* or *ij* of the imperfect corresponds to a past participle in *-i*, presumably connected with the *i*-participle of Kui. The forms of the other three classes seem to show a confusion of the tense-suffixes. In the 1st class the perfect is evidently a new formation made by adding one suffix to the other.

Telugu has a past participle in *-i*, from which the stem of the past tense is made by adding *t* ($< tt$); and an aorist made with *d* or *t*, corresponding in form to the past tenses of Gôndi. Many verbs have a past participle in *-ci* or *-si* (with $s < c$), and its added consonant is extended to various forms belonging to the present.

In Tamil the past participle, forming the basis of the past tense, is commonly made by adding *-i* or a *t*-suffix (*-tu*, *-ttu*, *-ntu*), rarely by doubling the last consonant of a stem. Where the past participle ends in *-i*, the consonant *n* is added before the endings of the past tense. The Kanara formations are mostly parallel with those of Tamil, except that *d* is added instead of *n* after *-i*. As the result of normal sound-changes Kanara generally has *d* where Tamil (as written) has *nt* or *t* between vowels; Kanara has *nd* after a main-stress short vowel. The doubling of a stem-consonant seems to represent two historic developments. It is found in connection with *k* (*g*) or a consonant made with the tip of the tongue, in both languages. In Kanara *nakku* = Tamil *nakku* (having laught), beside the stems Kanara *nag-* = Tamil *nak-*, the suffix seems to be a *k* corresponding to the northern *k*-suffix of the past mentioned above. With other sounds the doubling probably came from assimilation of a *t* or *d*. Thus in Kanara *i.t.tu* (having put) beside the stem *i.d-* $< *i.t-$, we see the usual Dravidian adaptation of a dental to a reverted lingual. In Kanara *eccu* (having thrown), with the general stem *is-* $< *ic-$, we may assume *ecc-* $< *icc-$ $< *itt-$ and *ic-* $< *it-$, *t* being palatalized by *i* as in *pesar* $< *picar$ $< *pitar$ (name). If the Kanara form *tavutappu* (having ended) is rightly quoted (KL 102), it is presumably an analogic innovation; no other verb with a final labial admits doubling in Kanara or Tamil.

The *k*-suffix of the past, found in the northernmost tongues, is not properly a tense-mark. In Kui the ending of the infinitive is *-pa*, *-ba*, *-va* or *-a*. From Winfield's account of Kui (GK) we learn that most verbs form a derivative indicating multiple or repeated action: I will call it the multiplex. It is generally made, where the infinitive-ending is *-a*, by adding *k* to the verb-stem; and where the infinitive-ending includes a labial, by adding that labial; a few verbs take a double suffix *pk*. Examples are *kūr-* (fall), with the infinitive *kūra*, having the multiplex *kūrka-*, with the infinitive *kūrka*; *ves-* (speak), with the infinitive *vespa*, having the multiplex *vesp-*, with the infinitive *vespa*. Every infinitive in *-pa* or *-ba* or *-va* belongs, as a matter of form, to a multiplex-stem. This is natural enough, since an infinitive commonly does (or may) include the sense of multiple or repeated action. The *k*-suffix of the past, in northern Dravidian, is evidently a mark of the multiplex; but it happened to go out of use except in the past, and thus has become a tense-suffix. In Gôndi the participial suffix *-kun*, mentioned above, is perhaps a remnant of the multiplex. In Kanara-Tamil the future tense is made with *p* or *b* or *v*, a multiplex-suffix which has, like the *k*-suffix of the northern tongues, gone out of use except for a single tense. In Tamil the labial-suffix of the future is replaced by *k* in the neuter of the third person: a puzzle which is explained by the equivalence of the *k*-suffix and the *p-b-v*-suffix as marks of the multiplex in Kui. An older state of affairs is seen in Kanara, where the suffix *-ku* or *-gu* (earlier *-kum* or *-gum*) is used for the third person without any distinction of tense (KL 146). In Tamil the infinitive-ending is sometimes *-a* and sometimes *-ka*: like its Kui equivalent, it may exclude or include the mark of the multiplex.

The Kurukh-Malto treatment of verb-forms is sufficiently illustrated above. For the other languages examples will make clearer the foregoing statement of general principles.

Brâhûi *tix-* (put), present *tixi-*, future *tixō-*, past *tixā-*, negative present-future *tixp(a)-*, negative past *tixta-*. The suffix of the negative is properly *a* (< *a*), but it has disappeared from a few forms of the present-future tenses, where *p* is the historic formant of the multiplex. Similarly *bis-* (ripen), *bisi-*, *bisō-*, *bisis-*, *bisp(a)-*, *bista-*; *ka-* (die), *kahē-*, *kahō-*, *kask-*, *kasp(a)-*,

kasta-, with the *s* of the past added to the negative. The lost past participle is represented by *pōk* (lost) = Kanara *pōgi* < **pōki* (gone).

Gôndi *kī-* (do), imperfect *kīnd-*, preterit *kīt-*, past participle *kīsī* (*kun*), passive participle *kītal*. Kui *gi-* (do), past *gīt-*, attributive past participle *giti*, infinitive *giva*; multiplex *gipk-*, past *gipkit-*, attributive past participle *gipkiti*, infinitive *gipka*.

Telugu *cēj-* (do), aorist *cējūd-unu* or *cēt-unu*, past *cēs(i)t-ini*, past participle *cēsi*; *kon-* < **ko.n-* (buy), aorist *kon(u)d-unu* or *ko.n.d-unu*, past *konit-ini* or *ko.n.t-ini*, past participle *koni*, present *kon(u)cunn-ānu*, present participle *kon(u)cunu*, attributive present participle *kon(u)cunna*, abstract noun *konu.ta* or *ko.n.ta*; *nīl-* (stand), aorist *nīlut-unu*, past *nīlicit-ini*, past participle *nīlici*, present *nīlucucunn-ānu*, present participle *nīlucucunu*, attributive present participle *nīlucucunna*, abstract noun *nīlucu.ta*. The *c* of the past participle *nīlici* has been added to the forms of the affirmative present, making the apparent stem *nīluc-*, except for the infinitive and the imperative.

Tulu *tū-* (see), imperfect *tūj-*, perfect *tūt-*, past participle *tūji*; *būr-* (fall), imperfect *būrij-*, perfect *būrud-*, past participle *būri*.

Kanara *ir-* (be), past *ird-*, past participle *irdu*, future *irp-*, indefinite third person *irku(m)*; *gej-* (do), past *gejd-*, past participle *gejdu*, future *gejv-*; *nīl-* (stand), past *nīnd-*, future *nīlv-*; *nō.d-* (look at), past *nō.did-*, past participle *nō.dī*, future *nō.duv-* or *nō.rp-*, with normal *.r* for *.d* before a consonant. Tamil *ir-* (be), past *irunt-*, past participle *iruntu*, infinitive *irukka*, future *irupp-*, with *irukkum* as the neuter of the third person; *cej-* (do), past *cejt-*, future *cejv-*; *nīl-* (stand), past *nīnR-* < **nīlnt-*, infinitive *nīRka*, future *nīRp-*; *nōkk-* < **nō.dg-* (look at), past *nōkkin-*, past participle *nōkki*, infinitive *nōkka*, future *nōkkuv-*.

From the foregoing it appears that early Dravidian had past participles in **-i*, **-si*, **-ci*; the formant of the imperfect was *t* (< *d*?), which was doubled to express a more limited past or perfect. In the northernmost tongues a loss of final *i*, as seen in Brâhui *xaf* beside Gôndi *kavī* (ear), caused *s* and *c* to become formal equivalents of *t*. Elsewhere the general loss of medial *s* reduced the three participial suffixes to two. Telugu is remark-

able in keeping both *-i* and *-ci*. Gôndi has *-tšī*, *-džī*, *-sī*, representing **-ci* as modified by preceding sounds. Kui has *-i* nearly always, *-si* < **-ci* being restricted to the few verbs that have adopted *s* as the suffix of the past tense. The southernmost tongues, Kanara, Tamil and Tulu, have lost **-ci*; the *-tšu* of the spoken Tamil past tense is unconnected, being merely a palatalized variant of the neuter ending *-ttatu* after *i*, parallel with ancient **picar* < **pitar* (name). Gôndi alone keeps up the historic formal distinction of two past tenses; Tulu keeps the distinction of meaning, but shows confusions of form.

The Telugu aorist, corresponding in form to the past of the other languages, is commonly translated 'would —' or 'might —'. This change of meaning has a close parallel in Spanish, where the old pluperfect has become a past future (DIERA = DARÍA) and subjunctive past (DIERA = DIESE).

5. Dravidian **ke*.

Brâhui *ka-*, Kurukh *khè-*, *ke-*, Malto *kei-*, *kej-*, Gôndi *sai-*, *sā-*, Kui *sā-*, Telugu *cà-*, Tulu *sai-*, Kanara *sāj-*, *sà-*, Tamil *cā-*, *ce-*, Kodagu *tšā-* (die).

The oldest of these forms seems to be *kei-*, *kej-*, or *ke-*. Kurukh has added *h* to the stem of the present and future, probably in analogy with the variable *hò-*, *o-*, explained above. Brâhui has normal *a* for *e*, as in *ant* = Tamil *enatt-* (what). Before vowel-suffixes the Brâhui stem becomes *kah-*: it is not clear whether the *h*—an extremely unstable sound in Brâhui—is a mere hiatus-filler or represents *sn* as found in the dialectal variant *kasn-*; Brâhui has initial *h* for *sn* in *hur-* (see) from the root **snu.d*. Outside of Brâhui and Kurukh-Malto the verb changed to *kie-*, *kiā-*: these forms are kept in Savara, the Kolarian tongue mentioned above. The change of a lengthened *e* to *ā* is common in Dravidian, the lengthened nominative from the *en*-basis making Gôndi *anā* (< **enēn*), Kui *ānu*, Tulu *jān*, Kanara *ānu*, Tamil *jān* (I).

The forms with vowel-breaking are represented by Tamil *ce-*, *cā-*: Tamil has the past *cett-ēn*, the past participle *cettu*, and *cā-* elsewhere. In Tamil *cāk-*, used before vowel-suffixes, *k* is derived from hiatus-filling *g* < *gw* < *w*, as in *mūkku* = Malto *muso* (nose), where the doubling seems to have come from

end-position (*mūkk* < **mūk* < **mugä* < **muwä* < **musä*). In Gôndi, Kui, Tulu, Kanara, former initial *c* has regularly become *s*. Gôndi has *sai-* before vowels, *sā-* before consonants, and similarly Kanara has *sāv-* as a variant of the future *sājv-*. In Telugu and Kanara the influence of forms with *ā* has altered *e* to *a*: Telugu has the past participle *cacci* for **cecci* corresponding to Kurukh *kettš-*, and the aorist *catt-unu* for **cett-unu* = Tamil *cett-ēn*; Kanara has *satt-* for older **cett-* = Tamil *cett-*. Kodagu has *a* likewise in the past *tšatt-*, apparently taken from Kanara; its irregular imperative *tšā.l-* has borrowed *.l* from *bā.l-* (live).

In most of the Kolarian tongues, except Savara, we find *go'c* (dead) or something similar; the isolated Kurku of central India has *gōen*. From forms used in other Austric tongues, it appears that the root was **et* or **it*, which became **goit* by combination with a prefix in Kolarian. Initial consonants seem to be free from changes of voicing in Kolarian. If Kolarian **goit* or any other *g*-form was the source of the Dravidian verb, it would seem to imply for early Dravidian in general a condition like that of modern Tamil, which lacks initial voiced occlusives in the isolated form of native words.

The initial consonant of **ke* differs from that of Brâhui *xaf*, Kurukh *xebdā*, Malto *xedvu*, Gôndi *kavī*, Kui *kriu*, *kiru*, Telugu *cevi*, Tulu *kebi*, Kanara *kivī*, Tamil *kātu* (ear), of Brâhui *xan*, Kurukh *xann*, Malto *xanu*, Gôndi *kan*, Kui *kanu*, Telugu *kannu*, Tulu *ka.n.nī*, Kanara *ka.n(.nu)*, Tamil *ka.n* (eye), and of Brâhui *xal*, Kanara *kal(lu)*, Tamil *kal* (stone). The nearer source of the northern *x* is presumably *kh*; a further source might be *gh*. Singhalese has, like most or all of the Dravidian tongues, lost the ancient aspiration of occlusives, so that Dravidian **khal* and Singhalese *gala* (rock) may have the same basis, **ghal*.

6. Dravidian **ätai*, **äti*.

Kurukh *tai-*, Malto *tei-*, *tej-* (send), Brâhui *at-*, Gôndi *ta-*, Kui *ta-*, Telugu *tè-*, Kanara *tā-* (bring), Tamil *tā-* (give); Brâhui *ti-*, Kurukh *tši-*, Malto *tši-*, Gôndi *si-*, Kui *si-*, Telugu *i-*, Kanara *i-*, Tamil *i-* (give).

Kurukh has the adverbs *ajjā* (there), *ijjā* (here), corresponding to the demonstrative adjectives *ā* and *i*. If these or

similar words were combined with **āt*, slight sound-changes could have produced the verbs in the list given here, having the apparent bases **ātai* and **āti*. In Brāhui, aside from the past *ēs*-, which might have come thru **ēts*- from **ātaic*- or **ūtais*-, we find *ata*-, *ati*-, as variants of *at*-: the oldest of the three forms is probably *ata*-. The meaning of Tamil *tā*- (give) may have developpt under the influence of Aryan *da*-, which would have necessarily become *ta*- in ancient Tamilian utterance. It is true that Kanara *tā*- sometimes means 'give' also; but preliterate Kanara probably shared with Tamil the general unvoicing of occlusives, so that the Aryan word, mispronounced with *t*, could have influenced both languages.

Brāhui *ti*- has the present *ēti*-, with a parallel imperative *ēte*: these forms may have come from **āti*, with a stress differing from that which produced *ti*-. Kurukh has *tšittš* corresponding to Gōndi *kis*, Kanara *kiccu* (fire). We should expect **kittš*: apparently **kiccā* became **ciccā* by assimilation. Likewise Kurukh has *tšittškan* (I gave) for **tittškan*: **ticc*- became **cicc*-, and produced **ci*- for **ti*-, so that the Kurukh stem is now *tši*-. The same development produced Malto *tši*-. In Gōndi-Kui the past participle **ūci* became **cici* by assimilation and changed the general stem to **ci*-, which has developpt normally to *sī*-. Gōndi keeps *sīsī* < **cici*; Kui has lost it, having *sit*- as the past of *sī*-. Savara, a Kolarian tongue, has borrowed *ti*- (give): it was perhaps taken from Kui before the initial *t* was changed to *c*.

In southern Dravidian apparently the imperfect **itid*- or **itit*-, with the first vowel assimilated to the second if they were originally different, contracted to *itt*-, which had the form of a perfect and produced the general stem *i*-. Kanara has the past *itt*-; Telugu has the aorist *itt*-, and a parallel past participle *icci*, which may be a contraction of an ancient **itici*. Tamil has changed the past to *int*-, probably under the influence of *tant*- (gave). Telugu shows many lines of connection with Gōndi and Kui, but the development of **āti* separates it from them and puts it beside Kanara-Tamil. Tulu seems to have lost **āti*; the basis of its *tarpā*- (cause to bring) may have been taken from Kanara.

From Winfield's work (GK) we learn that Kui verb-stems take a special suffix if the object of the verb is 'me' or 'us'

or 'you'. The simplest form of the suffix is *a*; a presumably older one is *ara*. The *r*-suffix is partially attached to Tamil *tà*- and several of the verbs meaning 'bring' in the list given above. Brâhui has *atar-* for *ata-* before vowel-suffixes. Gôndi has *ta.r-* in the imperative and negative, *.r* being the normal representative of ancient *r* after a vowel: Gôndi *ma.rā* = Tamil *maram* (tree). Telugu has *tē-*, with the variant *tēr-*, in the infinitive, imperative and negative. Kanara has the future *tarp-*; the imperative *tā(ra)*, plural *tarri*; and the negative *tār-*. Tamil *tà-* has the past *tant-*, and the imperative *tā*, plural *tārum*; otherwise the stem is *tar-*, not only for the future and negative, but also for the present. Tulu has *r* in the causative *tarpā-*. And Brâhui changes *ti-* to *tir-* before vowel-suffixes.

7. Dravidian **po*.

Brâhui *pōk* (lost), Kurukh-Malto *pol-* (be unable), Telugu *pō-*, *pa-*, Tulu *pō-*, Kanara *pō-* later *hō-*, Tamil *pō-* (go).

Some of the Kolarian tongues have a verb *sīn-*, *sēn-*, *šēn-* (go), apparently derived from **sln*, and the same root is represented in Dravidian: Brâhui *hin-*, Gôndi *han-*, Kui *sal-* (go). The more general Dravidian word is **po*. Its meaning is somewhat changed in the northern tongues; the *l* of *pol-* is a negative-suffix. Telugu has *po-*, *pa-*, as variants of the usual *pō-*, in the imperative. Kurku, a Kolarian tongue, has *bq-* (go), evidently borrowed from Dravidian. This word, used in a language containing few Dravidian elements, was probably based on the Dravidian imperative, and seems to imply a form with initial *b* as the older Dravidian basis. In that case we have further evidence of a general unvoicing of initial occlusives in early Dravidian, corroborating the slender evidence of **ke*.

Modern Kanara commonly has *h* for older *p* not in contact with a consonant. This development was apparently connected with the Kanara change of initial *v* to *b*. In early Kanara probably all occlusives were voiceless, as in Tamil. When initial *v* changed to *b*, the difference between *b* and *p* became distinctive in certain word-forms. In order to make the difference clearer, many persons strengthened *p* to *ph*, which later developed through *f* to *h*. A spread of the use of *h* made it so general that it was finally adopted in literary Kanara. It is noteworthy that the

neighboring Marâti, as spoken, has *f* corresponding to written *ph*: a development perhaps connected with the Kanara formation of *f* from *ph*, just as the change of *f* to *h* in Gascon and Spanish seems to be connected with the general absence of *f* in Bask.

EDWIN H. TUTTLE.

WASHINGTON, D. C.