Dogon (Berlin (post-Greenberg workshop) Feb 2010)
Jeff Heath (Michigan), schweinehaxen@hotmail.com
Kirill Prokhorov (MAE-RAS St Petersburg and Humboldt-Universität Berlin), bolshoypro@gmail.com

current Dogon and Bangime project (http://www.dogonlanguages.org)
Jeff Heath (northeastern lgs), Kirill Prokhorov (Mombo, Ampari), Abbie Hantgan (Bangime, Kindige). Laura McPherson (Tommo So), †Stephan Elders (Bangime)

wider relationships of Dogon?
overview of previous internal classifications
- Plungian & Tembiné 1994
  - Central or "So": Toro so, Dono so, Tommo so
  - South-Eastern or "Kan": Tomo Kan, Togo Kan, Tengu, Jamsay, Toro Tegu
  - Northern: All the other languages (incl. Bangime)
- SIL survey (Hochstetler et al.) 2004
  - http://www.sil.org/SILESR/2004/silesr2004-004.pdf (includes references to early classification)
- Roger Blench's websites

typical Dogon structures
NP:
- *full form:* Poss[NP or pronoun] [[[Noun Adj*] Num] Dem/Def (Pl) 'all' Topic]
- referentially restricting elements (Poss, Adj, Dem, sometimes Def) control tone contours on (at least) the noun
  - Poss usually controls {L} or {HL} on at least the following N-Adj sequence
  - Adj usually controls {L} on preceding noun or adjective (recursive) [except Mombo]
  - Dem usually controls {L} on preceding N-Adj and Num
- non-referentially restricting elements (Num, 'all', Topic, sometimes Def) do not control tone contours
  - Noun + Num: no tonal interaction, both Noun and Num have lexical tones
  - (but: Num may be target of tone contour controlled by Dem)

- *as relative head*: (Poss[NP or pronoun]) [[[Noun Adj*] Num] ... *verb-Participle* [Dem/Def (Pl) 'all' Topic]
  - i.e. head NP split, with Poss-N-Adj-Num remaining in situ, while late-NP elements migrate to postverbal position

so: NP structure expressed by a) linear order; b) tone-contour controller-target relations; c) breakpoint of relative-head NP elements

clause:

main clause: (Adv) S[NP] O[NP or pronoun] verb-TA/Neg-subject[pronominal] Past

relative clause: subject-inflected verb replaced by participle (sometimes agreeing in features with head NP)
head NP remains in situ but is identified by a) additional tone-contour marking, b) shift of NP-final elements to postverbal position
in nonsubject relatives, if subject is pronominal it is expressed by a special set of preverbal clitic pronominals

tones and "intonation"

syllables (<…> notation): <H>, <L>, <HL>, <LH>, occasionally <LHL>

except in Yanda Dom, each stem ({…} notation) has at least one H-tone element: {H}, {HL}, {LH}, {LHL}, rarely {HLH}, but not #{L}

verbs derivations: suffixal: Reversive ('un-'), Causative, some Mediopassive/Transitive pairs

tight restrictions on lexical tone contours of verb stems

lexical contour {H} with initial voiceless obstruent, {LH} with initial voiced obstruent, otherwise lexically {H} or {LH}

tone break in {LH} in trisyllabic stems is LLH or LHH, with break near right or left edge, depending on the language

tight restrictions on possible vowel sequences of bisyllabic verb stems

same non-high vowel {e ɛ a ɔ o} repeated: CaCa, CɛCɛ, CoCo, …

initial high vowel plus mid-height vowel agreeing in back/front and rounding: CuCo, CuCɔ, CiCe, CiCɛ

so: total of 9 vowel-quality types for bisyllabic verbs

trisyllabic verb stems may or may not weaken the middle vowel (becoming high)

e.g. CaCaCa or CaCiCa, depending on the language

several languages also have a distinct set of verb stems with final high vowel (CaCi, CaCiCi, etc.), with distinctive paradigms

Bangime versus Dogon

Bangime villages at the end of a long canyon (geographic isolation)

now being studied by Abbie Hantgan

Phonology: an opposition *w* / *ɥ* [high front rounded semivowel] ; *h* occurs in native vocabulary

Morphosyntax:

- ✓ main clause word order: S Aux O V X / SVO (depending on TAM category)
- ✓ isolating verb morphology

(1)

ǹ	dád	kɛ́	ñáw	à	wɛ̂ː
1SG	IPFV	thing	give	2SG	for

'I give you something'.

(2) àɔ́ dègú à jàːmbé
2PL hit DET child
'You-PL hit the child'.

- ✓ relative clause:

(3) à dúwá hù^{n} màː kóré kó péndé
DET tree on 3SG stomach CONJ explode
''The stomach that fell on the tree explodes'.

- ✓ lexicon: not more that 10% Bangime cognates in a Swadesh list with any Dogon variety (not less than c.a. 40% for a pair of Dogon languages)

back to Dogon: nominal morphology

many languages have suffixal distinctions (marked on the noun, the adjective, or both)

nominal/adjectival suffixes:	Jamsay	Ben Tey		Nanga	Yanda Dom	Toro Tegu	Tommo So	proto
	N or Adj	N	Adj					
human (or animate) Sg	-n	-m	-m	-Ø (-ŋ)	-Ø	-r^{n}u/-nu/-n	-nɛ	*-nu (cf. *nu- 'person' ?)
human (or animate) Pl	-m	-Ø	-yɛ̀	-Ø	-mu	-m(u)	-m	*-mu (or *-n-bu ?)
nonhuman (or inanimate)	-Ø	-Ø	-w	-Ø	-Ø	-Ø	-Ø	

languages with weak or no N/Adj distinctions mark Sg/Pl and animacy distinctions (more fully) in following determiners
optional Pl particle late in the NP (usually *be*), mainly for nouns that have no Pl suffix (kin terms, nonhumans)

notes:

Nanga -*ŋ* only in *yă*-*ŋ* 'woman'; some adjectives have Ben Tey-like distinctions in predicative function;

more complex systems in Najamba-Kindige (aka "Bondu") with some parallels in Mombo (aka "Kolu") and Ampari:

Najamba

objectively inanimate nouns belong to "(pseudo-)animate", E/E inanimate, or O/E inanimate classes

pseudo-animates include weapons, pointed/bladed implements, stones, vehicles, pants/shoes, fans, musical instruments, 'fan', 'apiary'

only one plant term (*Tribulus terrestris*, a prostrate herb with sharp-pointed fruits)

nouns and adjectives have either clearly segmentable suffixes, or final-vowel mutations (front/back, here "E" vs. "O")

	suffixes	final-vowel quality
animate Sg	-Ø	E
animate Pl	-mbo	O
inanimate Sg	-ŋgo (O/E class), -ŋge (E/E class)	O (O/E class), E (E/E class)
inanimate Pl	-Ø	E

note that the final-vowel alternation is Sg/Pl E/O for animates, but O/E or E/E for inanimates

adjectives agree with nouns

adjectives with final-vowel mutations are (Sg/Pl) E/O (animate), O/E, or E/E, respecting the class of the noun (or referent)

determiners also agree with nouns

the inanimate "class" system might be innovative (suffixes and final vowels reflect cliticization/fusion of particles)

O/E is the common inanimate class, compare inanimate determiners such as Toro Tegu Sg *ko*, Pl *ke*

E/E class contains

topographic terms (cf. noun *kéŋgé* 'place'), holes, dwellings, time

terms for liquids (cf. *íŋgé* 'water')

some body parts ('head', 'body', 'nose', 'wing', ...)

this class may have originated from use of *kéŋgé* 'place' and *íŋgé* 'water' as postnominal classifiers (if originally monomorphemic)

most stems with final-vowel mutations end in long vowels (suggesting historical contraction)

historical hypotheses

-mbo, -ŋgo, -ŋge suffixes may be frozen combinations of a word-final nasal plus *bo, *go (*ko), *ge (*ke)

Najamba Animate Pl *-mbo* may consist etymologically of

Human/Animate Sg suffix *-n (*-nu), perhaps itself < *nu- 'person', plus

Pl particle *bo

Human 3Pl pronoun *bó* (Yanda Dom), bûː (Beni etc.)

Human 3Pl pronominal-subject *-bɔ/-ba* on verb (Jamsay, Beni, …)

cf. widespread nominal Pl particle *be* (also 3Pl pronoun as in Toro Tegu)

Najamba Inanimate Sg *-ŋgo* (majority class), for some stems just *-go*, may consist etymologically of

a stem-final nasal consonant (resegmented as part of suffix, and partially generalized), plus

*ko/kɔ cf. Nonhuman 3Sg pronoun *ko\kɔ* (Toro Tegu, Jamsay, etc.)

originally reduced from noun 'thing': Beni *kɔ́ːⁿ*, Nanga *kɔ́(ŋ)*, Najamba *kóŋgò* (< *kóŋ gò)

also in pronominal possessives (Najamba, Nanga): Najamba *bǎː-gò [mí gɔ̀]* 'my stick'

Najamba final-vowel mutations, e.g. *nálɛ́ː / nálàː* 'good', suggest historical contraction of stem with following CV morpheme

inanimate O/E (majority inanimate pattern), e.g. *nùmǎː* 'hand', Pl nùmɛ̌ː

Inan Sg *ko/kɔ and Inan Pl *ke/kɛ contract with stem to create O/E alternation

animate E/O pattern (front vowels in Sg, back vowels in Pl), e.g *ínè* 'goat', Pl *ínàː*

Pl *bo contracts with stem to create O type

Sg polarizes to E by analogy to inanimate, if not already polarized to Pl (??)

Najamba Inanimate Sg *-ŋge* (minority class) and E/E vowel-mutations: various historical possibilities

a) Inanimate Sg class distinction *ko/kɔ versus *ke/kɛ is ancient and irreducible

b) *-ke variant of Inanimate Sg *-ko due to progressive assimilation, later morphologized

c) *-ŋge* and E/E final-vowel mutations reflect contractions with 2 nouns used as postnominal classifiers

Najamba *kéŋgé* 'place', *íŋgé* 'water'

hypothesis (a) or (b) most likely since Mombo has frozen cases (no longer segmentable) of *-ŋge* and *-ŋgo*

Mombo singular nouns: -Ø
plural nouns:
-ŋge for some human nouns, if added directly to stem
-ge for other human nouns (and all nonhuman nouns)
ge clitic (particle) if separated from noun (by adjective, etc.)
Ampari all nouns: Sg -Ø, Pl clitic *ge*

apparent frozen Mombo Inan Sg *-ŋge (arguably fronted from *-ŋgo after stem-final front vowel)

a) Najamba has -ŋgo in Sg

'(a) grain'/'millet'	Najamba Pl/Coll *sêː* 'grains', Sg *sêː-ŋgò*
	Mombo *séːŋgè* 'millet' (Pl *séːŋgè gè*)
'firewood'	Najamba Pl/Coll *téː*, Sg *téː-ŋgó*
	Mombo *téːŋgé*
'peanut'	Najamba Pl/Coll *ɛ́lɛ́*, Sg *ɛ́lɛ́-ŋgó*
	Mombo *ɔ́lɔ́ŋgé* [note disharmonic ɔ/e combination]

b) Najamba has -ŋge in Sg

'cow-pea'	Najamba Pl/Coll *númbé*, Sg *númbú-ŋgé*
	Mombo *núŋgé*
'blood'	Najamba Pl/Coll *gĕn*, Sg *gĕn-gé*
	Mombo *gèːŋgé*

apparent frozen Mombo Singular *-*ŋgo*

'tree/shrub'	Tommo So *tínú* (also Toro Tegu *tĭrⁿí*, etc.) 'firewood'
	Mombo *tíníŋgò* 'tree/shrub'
'charcoal'	Najamba Pl *kùmá*, Sg *kùmá-ŋgó*
	Mombo *kéːŋgó*
'place'	Yanda Dom *ɔ̀mɔ́*
	Mombo *óːŋgò*
'place, site'	Mombo *ɛ́ŋgɔ̀*
'(emotional) heart'	Mombo *dóŋgò*

verbal suffixal morphology (verb-TA/Neg-Subject)

a) various (tense-)aspect suffixes with distinct positive and negative forms)

Jamsay: Perfective: unmarked -Ø, marked -*tǐ*- (most transitives) or -*yɛ̀*- (most intransitives)

Perfective Negative: -*lí*-

Imperfective: unmarked -Ø (final floating L-tone), marked -*arà*- and -*tɔ̀yɔ̀*-

Imperfective Negative: -*gó*-

TA/Neg categories (suffixal, but also unsuffixed Imperative) affect form of stem:

a) stem-wide tone contour, e.g. {L} before Negative suffixes (Jamsay), or:

b) more limited tonal change, and/or:

c) stem-wide [+ATR] vocalism

b) final pronominal-subject suffixes (four structural patterns)

	Jamsay	Ben Tey	Togo Kan (Perfective)	Toro Tegu
1Sg	-m	-y	-ɛ	
2Sg	-w	-w	-ɛ	[no suffixes]
3Sg	-Ø	-Ø	-ɛ	
1Pl	-y	-y∴	-sɛ̀^{n}	
2Pl	-be	-w∴	-sɛ̀^{n}	[no suffixes]
3Pl	-ba (-bɔ)	-bɔ	-sɛ̀^{n}	

Imperfective positive paradigm often presents special morphological features (not shown)

Jamsay type: suffixes are essentially autonomous; likewise Najamba-Kindige

Ben Tey: 1Pl and 2Pl formed from corresponding singular by dying-quail intonation (∴), likewise Nanga, Walo

Sg/Pl likewise distinguished by intonation in independent pronouns

Togo Kan: reduced to Sg/Pl distinction (actual forms vary by TA/Neg category), likewise Tegu Kan

Toro Tegu: no suffixal paradigm, clause-initial particle (1st/2nd person) or postverbal clitic (3rd person); Mombo similar

history: Jamsay type might be archaic (especially core opposition 1Sg, 2Sg, 3Sg, 1Pl)

3Pl forms highly variable (across languages, and within each language by TA/Neg category)

-*ba*/-*bɔ* forms (Perfective positive) probably from a 3Pl independent pronoun

2Pl forms also somewhat unstable

-*be* perhaps from Pl *bé* particle in NP

examples of consonantal correspondences

	'skin'	'millet beer'
TT	*gùsú*	*kɔ̀^{n}sɔ́*
Jm, Pr, Gr	*gùjú, gùsú, gùsú*	*kɔ̀ñɔ́, kɔ̀njɔ́, kɔ̀sɔ́*
Be, Wa, Nn	*gùsú, gùsú, gùsí*	*kɔ̀njɔ́, kɔ̀zɔ́, kɔ̀njɔ́*
Nj, YD	*gùjú, gùzú*	*kɔ̀njɛ́, kɔ̀nzɔ̀*
Tm	*gùdú*	*kɔ̀njɔ́*
Tg	*gïyé*	*kɛ̀ñɛ́*
Mm	*gújù*	*kóndyò*

word-initial

	TT	[Jm	Pr	Gr]	[Be	Wa	Nn]	[Nj	YD]	Mm	Tm	Tg
1a (before back or low vowel)												
	g	[g	g	g]	[g	g	g]	[g	g]	g	g	g
*_usu (*_uju) 'skin' (and others)												
1b. (before high front vowel)												
	j	[j	g/j	g]	[g/j	j	g/j]	[g/j	g/j]	-	g	g
*_ɛm 'black', *_ɛmɛ 'pinch', *_esu/*_osu 'body'												

reconstruction: *g, with some palatalization to *j* before front vowel (1b)

2	z	[j	j	z]	[j	z	j]	[j	z]	j	j	j

*_e(re) 'bring', *_iŋe/*_ige 'twin', *_ɔŋu 'treat (medically)', *_ɛyɛ/*_ɔŋɔ 'fight', *_ɛ 'marry (woman)', *_iye/*jolo 'take (sth) away', *_aŋga 'pound into dough'

reconstruction: *j (or *z)

similar item with divergent reflex in TT:

y (!)	*[j*	*j*	*z]*	*[j*	*z*	*j]*	*[–*	*–]*	-	*j*	–

**_iwo/*_uwo 'fan (sb)'*

3.	s	[s	s	s]	[s	s	s]	[s	s]	s	s	s

*suŋu(ru) 'ear' (and others)

reconstruction: *s

intervocalic (nonnasal)

	TT	[Jm	Pr	Gr]	[Be	Wa	Nn]	[Nj	YD]	Mm	Tm	Tg
1.	g	[g	g	g]	[g	Ø	g]	[g	g]	g	g	g

*dɛ_ɛ 'lick', *pa_a 'tie'

reconstruction: *g (note: intervocalic /g/ pronounced [ɣ] in Jm, Be in some vocalic environments)

2.	s	[j	s	s]	[s	s	s]	[j	z]	j	d	j

2 *gu_u 'skin', *ku_u 'handle', ' *ka_u 'calabash', *u_u(ru) 'ask', *pu_o '(grafted plant) grow'; '(spring) gush out'

reconstruction: *s

intervocalic (nasal-sibilant and nasal-stop clusters)

the correspondence sets in (3ff) show nasality in at least one language (< *nj, *ŋg, *ns, *nz, and the like)

relevant medial clusters with initial nasal:

	TT	[Jm	Pr	Gr]	[Be	Wa	Nn]	[Nj	YD]	Mm	Tm	Tg
	^{n}s	[Ø	nj/ŋg	(^{n})s]	[nj	Ø	nj]	[nj	nz]	nj	nj	–

note: Wa and Jm lack any productive nasal-initial cluster, so reconstructions based mainly on other lgs

3. nasality widespread:												
nasal	√	[√	√	√]	[√	(√)	√]	[√	√]	√	√	√
	^{n}s	[ñ	nj	(^{n})s	[nj	z	nj]	[nj	nz]	–	nj	ñ

*a_u 'roselle', *kɔ_ɔ 'millet beer', *ku_u 'rough', *ɔ_ɔ 'suck'

reconstruction: *ns or similar

further sets (1 item each) resembling 3, assuming loss of nasalization before s in Gr

	–	*[ñ*	*ŋg*	*s]*	*[y^{n}*	*y^{n}*	*y^{n}]*	*[–*	*ñ]*	*y^{n}*	*ññ*	*–*

**gi_u 'odor' (note Be-Wa-Nn and Mombo y^{n}n)*

	^{n}s	*[ñ*	*nj*	*s]*	*[nj*	*z*	*nj*	*[–*	*d]*	*–*	*nj*	*–*

**ɛ_ɛ 'chicken' (YD d may be a mutation)*

	–	*[ñ*	*ŋg*	*s]*	*[nj*	*–*	*–]*	*[–*	*–]*	*–*	*–*	*–*

**nii_e 'gear'*

4. nasality in Jm(-Pr?) and Be, but not Tm (YD unclear)

nasal	?	[√	?	]	[√		]	[	?]	?	
	–	[ñ	–	s]	[nj	–	–]	[–	–]	–	d	–

*dɔ_ɔ 'butt (with head)'

	–	[ñ	–	s]	[nj	s	s]	[j	–]	–	d	j

*ki_u 'grain spike'

5. nasality in (Jm-)Pr and Tm only (YD and Nj unclar)

nasal		[?	√	]	[√	?	]	[?	?]	√	√	?
	s	[–	nj	–]	[nj	z	s]	[–	–]	nj	nj	–

*ga_a/*ga_i 'dig'

6. nasality in Jm and Tm only

nasal		[√		]	[		]	[	]	√	√	?
	–	[ñ	s	s]	[s	s	s]	[j	z]	nj	nj	–

*mu_u 'thousand'

	s	[ñ	s	s]	[s	s	s]	[–	–]	–	–	–

*m(b)ɔ_u 'bad'

rconstruction: perhaps *s with secondary nasalization to *ns in Jam and Tm due to initial *m

7. nasality in Jm-Pr only (not Tm)

nasal		[√	√	]	[		]	[?	]	?		?
	s	[ñ	nj	s]	[s	s	s]	[–	z]	–	d	–

*oo_o/*u_o 'wind; air'

8. nasality in TT and in Be-Wa-Nn group only

nasal	√	[		]	[√	(√)	√]	[	]			?
	^{n}s	[j	s	s]	[nj	z	nj]	[j	z]	j	d	–

*o_u 'younger same-sex sibling', *si_e 'draw (lines)'

9. nasality in TT only (perhaps a mutation)

nasal	√	[		]	[		]	[	]	?	
	ⁿs	[j	s	–]	[s	–	s]	[j	z]	–	d	j

*too_u 'testicles'

10. nasality in Tm only

nasal	?	[		]	[		]	[?	?]	?	√	?
	–	[j	s	s]	[s	s	s]	[–	–]	–	nj	–

*ba_a 'pull; draw (water)'

11. nasality in TT and Jm only (Tm *d* versus *s*)

nasal	√	[√		]	[		]	[	?]			?
	ŋg	ñ	s	j]	[s	s	s]	[j	–]	j	d	–

*su_uro/*su_e 'wipe'

	ⁿs	[ñ	–	–]	[–	–	–]	[–	–]	–	s	–

*u_u 'thin'

12. nonhomorganic nasal-obstruent cluster (*ms or similar)

	–	[nñ	mj	ms]	[mj	–	–]	[–	–]	–	–	ñ

*ga_a 'wing'