

AFRICA AS A LINGUISTIC AREA

Heine/Nurse (eds.), Africa as a linguistic area/Areal typology and African languages

(sous presse)

A Songhay-Mande Convergence Area? Facts, Questions, Frames.

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The existence of a typological resemblance between Mande and Songhay languages has been recognized for some time and remarked upon by several authors¹, some of whom thought to discern an area of linguistic convergence. A study of the languages in contact nevertheless leads to a markedly different interpretation of the isomorphisms² on which this hypothesis rests. The typological resemblance itself³ therefore deserves closer scrutiny, both to enhance our knowledge of the languages and the processes of language change to be found in this part of West Africa, and for the theoretical lessons to be learned from this example.

My first step will be to present succinctly the geographical and sociolinguistic frameworks within which the Songhay and Mande languages exist and the proposed genealogical relationships between them. Next, I shall provide an inventory of the primary resemblances which constitute isomorphisms. Then I shall widen the discussion to what this shows (or at least suggests) about the processes of change, the history of the languages in the region, the organization of linguistic systems, and how we rationalize them.

The framework

The geographical region

The Songhay languages and certain Mande languages coexist in the Sahel region covering the Niger River bend and bounded to the south by the Gurma region and to the north by the Sahara desert. This is a region of ancient contact between Arabo-Berber and Black African populations. The languages spoken there can be anything from vernacular forms (such as Mande Bozo or Songhay Tasawaq) to trade languages unconstrained by national borders. Their sociolinguistic functions are diverse and multilingualism is prevalent throughout the

¹ These include Greenberg (1963, SOV vs. SVO languages), Houis (1971, "economical" languages), Heine (1975, type B languages).

² By "isomorphism" I understand the relationship which can be established between two languages which have identical structures or semantic structures of different orders which display identical combining relationships. An isomorphism is a factual datum and in no way implies a direction of diffusion which would be responsible for it. It refers not to a single feature (isogloss) but to a cluster of features (isoglosses).

³ I take "typological resemblance" in the weak sense of a resemblance of immediate properties such as constituent order. While this usage is subject to criticism (cf. Lazard 1999), it can be instructive in two ways: firstly, from the standpoint of processes involved in language contact, since we can expect that when speakers in a multilingual setting use forms from one or the other of the languages they can speak less well, they will analyze or constrain them according to the model of the languages they know best; and secondly, with regard to the results of change, since concrete, material linguistic data are there for interpretation. Their "value" and any categorial reorganization in each given language are matters to be considered at a later stage. This shows the need for theoretical reflection on how an approach to language typology and an approach to the processes of language change should fit together.

region. In their traditional use, the varieties of Songhay spoken in Gao and Timbuktu are important trade languages spoken across the Niger bend and further down the river; Mande languages such as Bambara and Malinke or Mandinka are dominant to the west of the Songhay area; while Dyula, another traditional trade language, is also well represented.

There is nevertheless an evident disparity between Mande and Songhay in the sense that the number of Mande languages far exceeds the number of Songhay languages. Furthermore, the latter were until recently referred to only as "dialects", while the degree of diversity in the Mande area is common knowledge. Likewise with regard to number of speakers, Platiel (1978) stated that "the Mande languages are spoken by some ten million people spread over fifteen countries". At about the same time, my own estimates of the main body of the Songhay population (Nicolai 1980f:53-78), distributed over three countries, did not exceed 1,600,000. These figures are, however, far from precise and do not cover speakers who use these languages only as trade languages.



Mande-Songhay contact area⁴

Genealogical relationships

The internal structures of the Mande and Songhay groups is presented below. Each is problematic in its own way.

In the case of Mande, the main difficulty is the internal structure itself. Delafosse (1901) was the first to propose a division of the group into two major subgroups, northern and southern, each divided again into two lower-order groups; Kastenholtz (1996) and Vydrine (2000) provide the latest classifications. Songhay has its clearest affinities with the languages of the Soninke-Bozo subgroup (1.1.2)⁵ and the Manding group (1.2.2.2.2.2) in the Western Mande branch (1) as shown in the diagram below. Finally, let us note that the Mande languages as a branch are usually assigned to the Greenberg's Niger-Congo family. A priori, the issues relating to this latter classification have no direct link with those being dealt with here, and I shall therefore not go into them.

With respect to Songhay, different genealogical relationships have been proposed and are still a matter of controversy. Westermann made it an isolated language, but Greenberg (1963) placed it in the Nilo-Saharan family⁶. This choice was criticized⁷ (see Lacroix 1969:91-92),

⁴ This is a slightly modified version of the map in Vossen and Keuthmann (2002:219).

⁵ I use this notation taken from Kastenholtz (1996) to show the difference in depth on the proposed tree diagram (see below).

⁶ "Nilo-Saharan" was created by Greenberg. It has by definition no genealogical relationship with either Mande or the Niger-Congo family to which the latter belongs.

but convincingly enough for scholars to reject Greenberg's classification. Nicolai (1990) provided a new approach to the subject by assuming that Songhay arose from "language mixing"⁸ and suggesting multiple relationships. This hypothesis has fared no better than Lacroix's criticisms, and recent overviews of internal Nilo-Saharan classification (Bender 1995, Ehret 2001) continue to include Songhay without further ado. These subclassifications nevertheless differ so widely in the positions assigned to Songhay that a legitimate doubt remains regarding the validity of the genealogical relationship.

The latest approach (Nicolai 2003) provides a detailed critique of all attempts at including Songhay in Nilo-Saharan, widens the comparison to Afroasiatic, and thus opens the way for new hypotheses. Songhay is there "reoriented" towards Hamito-Semitic, though not genealogically. A more elaborate hypothesis than the 1990 one is developed and supported by a large body of empirical data. This envisages the generation of Songhay either through partial appropriation of a putative *lingua franca* (a lost trade language with a Hamito-Semitic base⁹), or the transformation of a local Mande language under the effect of massive borrowing in a situation of identity formation and ethnicization, knowledge of which is no longer accessible to us. The rest of my discussion here will be based on these premisses.

Classification of the Mande languages¹⁰

1. Western Mande	1.2. Central/South-western	2. Eastern Mande
1.1 North-western	1.2.1. South-western	2.1. Volta-Niger
1.1.1. Duun-Bɔbɔ	(Kpelle, Mende, Looma, Bandi, Loko)	(Bisa, Busa Cluster, San Cluster)
1.1.1.1. Duun-Jɔ	1.2.2. Central	2.2. Mani-Bandama
1.1.1.1.1. Duun-Seenku	1.2.2.1. Susu, Yalunka	(Guro, Tura, Mano, Dan, Gban, etc.)
1.1.1.1.1.1. Duun Complex ("Samogo")	1.2.2.2. Manding-Jɔgɔ	
1.1.1.1.1.1.1. Duun	1.2.2.2.1. Jɔgɔ ("Ligbi"), Jeri, Jalikuna	
1.1.1.1.1.1.2. Dzuun-Yiri	1.2.2.2.2. Manding-Vai	
1.1.1.1.1.1.3. Kpan	1.2.2.2.2.1. Vai, Kɔnɔ	
1.1.1.1.1.1.4. Banka	1.2.2.2.2.2. Manding-Koranko	
1.1.1.1.1.2. Seenku ("Sembla")	1.2.2.2.2.1. Koranko, Lele, Mɔgɔfin	
1.1.1.1.2. Jɔ ("Samogo")	1.2.2.2.2.2. Manding	
1.1.1.2. Bɔbɔ	1.2.2.2.2.2.1. Western Manding (Mandinka, Xasonga, etc.)	
1.1.2. Soninke-Bozo	1.2.2.2.2.2.2. Eastern Manding (Bambara, Jula, Marika, etc.)	
1.1.2.1. Soninke		
1.1.2.2. Bozo (Xan, Tie, Tiema, Sorogama)		

Classification of the Songhay languages

⁷ Nicolai (1990:21-29) summarizes the data used by Greenberg, Creissels, Mukarovsky; and Zima in support of their proposals.

⁸ This expression must be understood in a sense close to what Thomason and Kaufman (1988) call "non-genetic development".

⁹ I retain this general reference and will not attempt to narrow it to Berber, Ethiosemitic, Arabic, or any other, as the current state of our knowledge provides no support for such a degree of precision.

¹⁰ This classification is adapted from Kastenholz (1996), as restated by Kastenholz (2002:107-108).

1. Southern Songhay	2. Northern Songhay
1.1. Western Songhay	2.1. "Nomadic" group
1.2. Eastern Songhay	2.1.1. Tadakshak
1.3. Central Songhay	2.1.2. Tihishit
1.4. Kaado	2.1.2.1. Tagdalt
1.5. Zarma	2.1.2.2. Tabarog
1.6. Dendi	2.2. "Sedentary" group
	2.2.1. Tasawaq
	2.2.2. Emghedeshie
	2.2.3. Korandje

A few data

I shall now present a few comparative morphosyntactic and phonetic/phonological data to provide concrete illustrations of Songhay-Mande isomorphism.

Morphosyntax

Many similarities can be cited in this domain. The principal ones are illustrated by the examples below, where data from a western Mande language are set against those from a southern Songhay language.

Word formation: derivation and composition. Derivational processes are comparable overall. Productive composition is also organized according to identical formal structures. Reduplication is highly productive.

Table 1¹¹: Word formation	
Manding¹²	Songhay (Zarma)
<i>Derivation</i>	
<i>diminutives: -ndo / -no / -ndin</i> kòno ? kòno ndó 'small bird'	-iyaw cúráyze ? cúráy ziyaw 'small bird'
<i>abstract quality: -ya</i> mòko ? mòko yá 'humanism'	-taray bòró ? bòr taray 'humanism'
<i>origin: -nga</i> kìta ? kít angá 'inhabitant of Kita'	-(n)cé gurma ? gùr màncé 'Gurmanche' (inhabitant of Gurma)
<i>ordinal marker: -nan</i> wóro ? wóro nan 'sixth'	-anté íddù ? ídd anté 'sixth'
<i>Composition</i>	
jòli 'blood', síla 'road' jòlisíla 'vein'	kúri 'blood', fòndò 'road' kúrifòndò 'vein'
<i>Reduplication</i>	
hùlá 'two', sìdi 'tie' hùlahulasídi 'tie two by two'	ihí nká 'two', háw 'tie' háw ihí nkahínká 'tie two by two'

¹¹ Most of these illustrations have already appeared elsewhere (cf. Nicolai 2000e, 2001b) in publications where I deal with related questions.

¹² The variety cited here is Kita Malinke (or Maninka). My only reason for choosing this form of Mande is availability of documentation; this is also why Zarma here illustrates Songhay.

Noun modification. Noun modification procedures are often parallel, as is the use of two inverse-order phrase types: Modifying noun + Modified noun and Modified noun + Modifying Adjective, as shown in table 2.

Tableau 2: Noun modification	
Manding	Songhay (zarma)
<i>Numeral modifier</i>	
mùsú hùlā taḡadā bì woman + two + def. + leave (perf.) + today 'the two women left today'	waybòrò hìnkāa kóy hùnkunā woman + two + def. + leave (perf.) + today 'the two women left today'
mùsú hùlā taḡadā bì fem woman + two + indef. + leave (perf.) + today 'two women left today'	waybòrò hìnkā koy hùnkunā woman + two + indef. + leave (perf.) + today 'two women left today'
<i>Adjectival phrase</i>	
móngón kéréen nù '(the) green mangos'	mángu bóogóo 'the green mango' mángu bóogú 'a green mango'
mùsú 'woman', sìnjân 'long leg' mùsú sìnjân 'a long-legged woman'	wàybòrò 'femme', cè kúukú kôy 'foot long possessor of' wàybòrò cè kúukúkôy 'a long-legged woman'
<i>Genitival phrase</i> ¹³	
(mdk) dèndikoo jifoo the garment + the pocket 'the pocket of the garment'	bankaarāa zìibāa the garment + the pocket 'the pocket of the garment'
(mdk) màanoo daa the rice + the price 'the price of the rice'	mowā háyó the rice + the price 'the price of the rice'
(mdk) mìsoo sùboo the cow + the meat 'the meat of the cow'	hāwó hām'ó the cow + the meat 'the meat of the cow'

Predicative proposition.

There are clear affinities in the construction of the ordinary predicative proposition (S Aux O V Cmpl), features of the TAM system, and the negative conjugation, though in-depth studies have yet to be conducted. A few examples (table 3) nevertheless suggest the kinds of isomorphism involved:

Table 3: Predication et presentative utterances	
Manding	Songhay (zarma)
<i>Intransitive construction in verbal propositions</i>	
mùsú bòyìdà 'the woman fell'	wàybòrāa kâṅ 'the woman fell'
mùsú mán bòyì 'the woman did not fall'	wàybòrāa màn kâṅ 'the woman did not fall'
<i>Transitive construction in verbal propositions</i>	

¹³ Juxtaposition expresses "inalienable possession" in Manding. This is the structure shown here; it corresponds exactly to Songhay. The presence of the connective in "alienable possession" does not affect the parallel in constituent order. The four examples marked "mdk" are from Mandinka, cf. Creissels (2001). The choice of Mandinka rather than Malinke does not mean that the structures illustrated do not exist in Malinke; rather that the data available to me for the latter do not contain a suitable example.

sékù dí mìsì sà̀n 'Seku bought the cow'	dáwdà nà háwó dáy 'Dawda bought the cow'
sékù mán mìsì sà̀n 'Seku did not buy the cow'	dáwdà màn háwó dáy 'Dawda did not buy the cow'
Locative proposition	
sékù jé búj kònò 'Seku is in the room'	dáwdà gó fúw'ó rà 'Dawda is in the house'
sékù té bój kónó 'Seku is not in the room'	dáwdà sí fúw'ó ra 'Dawda is not in the house'
Existential proposition	
nénè yé kità 'it is cold in Kita'	hàrgù gó jámáy 'it is cold in Niamey'
hùntènì tè 'it is not hot'	hàrgù sí nò 'it is not cold'
Identificational proposition	
sékù té nùmù jé 'Seku is not a blacksmith'	dáwdà màntí zám nò 'Dawda is not a blacksmith'
Presentative proposition	
sé'kú lè 'that is Seku'	dáwdà nò 'that is Dawda'
sé'kú ntè 'that is not Seku'	màntí dáwdà nò 'that is not Dawda'
mùsú tè 'that is not the woman'	màntí wàybòràa nò 'that is not the woman'
mùsù té 'that is not a woman'	màntí wàybòrò nò 'that is not a woman'

Grammaticalization of lexical items:

In both Mande and Songhay, relational morphemes are suffixed to lexical items. Some of these morphemes are themselves derived from extant lexical forms; this, however, is a feature which falls well outside the framework of language contact. A detailed examination of these apparent notional exchanges would doubtless help to show what can be set down to diffusion, what to mere chance, and what to other types of explanation, whether universalist or localist¹⁴. It must nevertheless be said that, even when the structural organization is identical, there is not necessarily total isomorphism on the level of ordinary usage and the semantic shading of the acceptable expressions. The examples in table 4 provide a few illustrations of this.

Table 4: Grammaticalization of relational morphemes.	
Manding	Songhay (Zarma)
kóno 'belly' ? 'in' bàa(ba) wádá wúlà kònò 'father went to farm'	kúná 'vagina' ? 'in' à gó háró kúná 'he is in the water'
kùn 'head' ? 'on' mùn yé mùsú kùn? 'what is the woman carrying?'	bòŋ 'head' ? 'on' à gó títã bòŋ 'he is on the ladder'

¹⁴ See Heine (1997) for a general study of the grammaticalization of body-part terms. Also see Fédry (1976) on Sar for a detailed approach to this question from a more traditional standpoint.

kó 'back 'back' ? 'behind' wùlu ye n kò 'the dog is chasing me'	bándá 'back' ? 'behind' à gó fúw'ó bándá 'he is behind the house'
nyá 'face' ? 'in front of' káná í bìlá mòkó lù nyà 'do not put it in front of people'	jíne 'first' ? 'in front of' à gó fúw'ó jíne 'he is in front of the house'
kódo 'bottom, meaning' ? 'beneath' wùlù lánín yírì kòdò 'the dog is lying under the tree'	
	járè 'part' ? jár(e)gà 'beside' à gó ày jár(e)gà 'he is beside me'
báda 'residence' ? 'at (X's) home' tágá í bádá 'go home'	kwáará 'village' ? kwàarà 'at (X's) home' kóy ní kwàarà 'go home'
yé 'for' a ké n ye 'do it for me'	sê 'for' à té ày sê 'do it for me'
là sékù nàdá négésú là 'Seku came by bicycle'	rà 'in' àlì kàa móotò rà 'Ali came by motorcycle'

Semantics

While I have not myself done specific research in this domain, there would seem to be a considerable degree of similarity. This comes to the fore in the frequency of identical lexical creations by compounding and in the comparable structuring of notional fields¹⁵. Subject to closer study, however, such affinities in semantic organization are shared by most languages in the West African cultural region and are not restricted to the Mande-Songhay conglomerate. They are clearly a feature of a much wider cultural domain.

Finally, it is to be expected that an examination of the pragmatics of both utterances and longer discourse chains will also reveal clear isomorphisms with both cultural and linguistic significance.

Partial conclusion

1) From the typological perspective of the word-order criterion proposed by Heine (1975), Songhay and Mande can be classified as belonging to type B2 (Manding), with the exception of western and northern Songhay which have SVO word order and therefore fall into the B1 type. Table 5 below shows those of Heine's set of characteristic features for this type which Songhay and Mande share:

1) S-V	14) Pos-Adj
2) S-V-O	15) V-Adv
----- S-O-V	
3) S-V-Loc	19) PronA-V
5) N-Post	20) V-PronO
	----- PronO-V
6) Gen-Nom	21) T-V
7) N-Adj	23) PronA-PronO

¹⁵ The processes just mentioned deriving relational morphemes from nominals can, of course, also be seen as bordering on semanticity.

8) N-Num	24) PronA-T
9) Pos-N	26) T-PronO
10) N-Dem	

2) The typological homogeneity of morphosyntactic structure is marred by the fact that the Songhay languages may use either SOV or SVO word ordering. At the same time, the dialects with SVO word order are precisely the ones which are in contact with the SOV Mande languages, while those with SOV order are more distant¹⁶.

Conflicting word order in Songhay

This situation requires a closer look. Indeed, a review of the morphosyntactic structures attested in the dialects of Songhay which have thus far been described in detail (Nicolai 2003) suggests that the language originally had (and still has, with the exception of western and northern Songhay) both SVO and SOV word orders¹⁷. It can also be seen that choice of word order is governed by precise rules (which nevertheless differ from those which have already been reported in the literature for Ewe, Krongo, Mambila, etc.) and that the SVO order is not statistically predominant. The facts would seem to be these:

- 1) in all dialects with SOV order, there is a small subset of verbs with no clearly shared semantic feature, which absolutely requires SVO order.
- 2) In some dialects of this kind (in Zarma at least), a few other verbs seem to allow a choice of order, probably as a function of stylistic contrasts.
- 3) Furthermore, in dual-object constructions, specifically those of the type 'show, give X to Y' (cf. Heath 1999: 284-5), SOV order becomes S AUX CMPL₂ V O instead of S AUX O V CMPL₂. In these utterances, the direct object is postposed to the verb, thus further attenuating the obligatoriness of SOV order.
- 4) Finally, a measure of free variation has been observed (in Zarma at least) in injunctives formed with **-ándì**, which seem to allow nominal postposition.

Dialects with generalized SVO order seem, however, to allow no variation in order.

We may thus assume that variant SOV / SVO word order which originally characterized Songhay¹⁸ has been lost in western and northern Songhay leaving only the "unmarked" construction, this being a consequence of the historically attested use of these dialects as trade languages, a role which western Songhay still plays. By virtue of this role, speakers of Songhay, either at its origin or at some later stage, may be assumed to have been multilingual. Processes of reduction and simplification (e.g., elimination of SOV order, loss of noun modifiers, etc.), together with those processes of diffusion through language contact (e.g., loss of the s / z contrast) which also entail simplification, are thus to be expected, independently of any convergence or metatypical phenomena.

Finally, we may conclude from the premiss of original dual ordering that:

- 1) simplification resulting from use as a trade language occurred in western Songhay, which was unaffected in this sense by its contact with Mande.
- 2) The apparent strangeness of the geographical distribution, whereby SVO dialects are in immediate contact with SOV Mande languages, disappears if it is allowed that the situation in the western dialect is a result not of diffusion but rather of reduction associated with the functional use of this language.

Phonetic and phonological features

¹⁶ Cf. Gensler (2000) for thoughts on this point; also see Nicolai (2003) for proposed answers to the questions posed there.

¹⁷ The latter is generally considered to be "recessive", cf. Heine (1975).

¹⁸ This is not to say that its behavior in its original form must have been identical to that of modern Zarma.

Songhay-Mande isomorphism in phonetics and phonology is at least as extensive as in morphosyntax, if not more so, though there would seem to be greater dialectal variation in this realm than in morphosyntax. A stratification of phonetic/phonological distinctions can thus be observed which to some extent blurs the obvious isomorphism. This results from changes arising from specific contact situations which can be chronologically ordered and related to situations of use. The effects of these changes are limited in some dialects (e.g., Marese or Zarma) but entail a complete change of linguistic type in some others such as Dendi or northern Songhay. The contact situations are of varying types; the following list is not exhaustive¹⁹:

- abandonment of a first language and adoption of a trade language without leaving one's original sociocultural area in the case of Berber populations speaking northern Songhay²⁰ (cf. the appearance of the uvularized consonants **ʂ, ʐ, ʀ, ɭ, ɲ, ʈ, ɖ**, the spirants **ɣ, ʁ**, the stop /q/, and a short central vowel /ə/);
- change induced in the trade language spoken in the Dendi region through use by populations speaking languages of another type (strongly predominant CV structure, mid-vowel level contrasts totally absent from Songhay except in Djenne, loss of the l / r contrast, appearance of labiovelar stops);
- diffusion of features of the dominant language in the trade language employed by minority Songhay communities in Marese villages in Burkina Faso (spirantization of the voiced velar stop);
- likely retention of a labiovelarized articulations (**k^w, g^w**) in Zarma resulting from contact with Hausa-speaking populations.

Below is a list of the major phonetic/phonological isomorphisms in the Songhay-Mande region.

The phoneme /p/. This phoneme is absent from the systems of many West African languages unless only in ideophones, exclamations, and a few verbal nouns, all of which share an expressive semantic function (cf. Houis 1974: 35). This is so of most Songhay dialects and is widespread in Mande²¹. The phenomenon involves both expressivity (ideophones and exclamations) and the structure of the consonant subsystem: if we examine the combining features of /b/ in Songhay, in particular the consonants allowed in coda position, we find that in addition to /b/ only sonorants (**m, w, r, l, y, n, ŋ**) are attested. We therefore conclude that /b/ must be included in this class rather than being treated as a voiced stop corresponding to a missing unvoiced one. This behavior is corroborated by numerous intra- and interdialectal variations over m, w, and b (Nicolai 1977b) and is probably common to all the languages under consideration. There would thus seem to be two conjoint areal phenomena involved here: use of a phonetic form as an expressive feature and structural organization of a phonological subsystem²².

¹⁹ Detailed descriptions can be found in Nicolai (1980a, 1987a, 1989a).

²⁰ Phonemes are added to Songhay, but this does not involve the adoption of new sounds by speakers of this language since they have always been bilingual in Berber.

²¹ There are some languages which do not follow this rule, e.g., Soninke (Diagana 19) where p is in complementary distribution with h after a nasal and therefore seems to have a different status. See also the use of geminate p in Songhay (Nicolai 1981b).

²² It would be helpful to look further into the areal status of another marginal phoneme, /hɸ/ which I treat as a postnasalized consonant in Songhay (Nicolai 2001c) and which is attested only in lexemes with more or less onomatopoeic or interjective functions, except in a few Arabic loanwords. This may be comparable (I have not been able to determine this with certainty) to the situation in Bambara, cf. **hɸn** 'here!', take (this)!'.
Finally, there are other phonological features which Songhay shares with neighboring Mande languages such as Soninke. These apparently include consonant gemination in medial position, the possibility of syllabic nasal consonants in initial position, syllabic structure, and perhaps also restrictions on consonant clusters in medial

Absence of an s / z contrast in western Songhay. All Songhay dialects contrast s and z with the exception of western Songhay, which is typologically identical in this regard to many northern Mande languages (Soninke, Bambara, Dyula, Soso, Malinke, Maninka, Mandinka, Bobo, and others²³), some of which are in direct contact with Songhay or not far distant, while others are geographically further removed.

Dialectal comparison reveals a merger in western Songhay of /z/ and /j/, the latter having arisen from phonologization of a palatalized variant of a velar stop. The generalized confusion of [z] and [j] articulations in this dialect does not, however, appear due to any internal requirement and is not governed by any of the ordinary processes of phonetic change. An examination of the various contexts of change shows that this is indeed not simply a palatalization process, being unconnected with either vowel features such as [+front] or [+high], contact with a /y/ semivowel, or any other palatalizing feature. Furthermore, the confusion is asymmetrical, since /s/, the unvoiced fricative counterpart of /z/, does not merge with the palatal (sometimes affricate) stop /c/, the counterpart of /j/. Neither has the rare phoneme /S/, which has no voiced counterpart /Z/, merged with this palatalized stop.

What we see here is a dephonologization involving significant lexical confusions (western Songhay cannot, for example, distinguish ji 'oil' < *gi from ji 'swim' < *zi), and resulting in a restructuring of the fricative series with respect to the voice feature.

We may therefore assume that contact with populations speaking northwest Mande languages was the route by which this typological feature spread across the region. This is therefore a phenomenon of local diffusion, apparently of the same kind as the one which transformed the labiovelarised consonants (**kw, gw, Nw**) into labiovelar stops (**kp, gb, Nm**) of the kind found in the Kwa languages²⁴. It is limited in scope and perhaps recent²⁵.

The lacunary distribution of /r/. There are very few attestations of /r/ in morpheme-initial position in any of the Songhay dialects. This lacunary distribution results in a tendency (whose extent varies with the dialect) to assimilate loanwords beginning with /r/ either by adding a prothetic element (cf. the Kaado Songhay form **òróggò** 'cassava' from Hausa) or by metathesis. The same phenomenon can be observed to operate in large number of Mande languages (Soninke, Mandinka, Bozo, etc.).

This is a purely formal process, apparently unconditioned: there is no expressiveness as in the case of /p/ and no limitation to a geographical area of contact as in the case of the loss of the /s, z/ contrast.

Other resemblances. Songhay-Mande phonological isomorphism extends far beyond these three features, and is all the more remarkable in that it sets off northwestern Mande²⁶ from eastern Mande. The table below reproduces Vydrine's (2000) Mande data illustrating the typological similarity of Songhay and northwestern Mande with respect to eastern Mande.

Mani-Bandama	West Mande	Songhay
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position. All of these are properties which manifest themselves in both number of phonemes and structure of the phonemic system.

²³ [z] sounds may nevertheless appear as phonetic variants in Mande languages, cf. Bambara (Dumestre 1994).

²⁴ This diffusion has, of course, no effect on the phonemic system as a whole. Cf. Greenberg (1983) and Nicolai (1990a) for further remarks.

²⁵ See Nicolai (1980e). It may be observed that this phenomenon has not affected the variety of western Songhay used in Arawane, this being further evidence for recentness.

²⁶ I use the designation "northwestern Mande" for the following set of languages: Soninke, Azer, Bozo (Tieyaxo, Hainyaxo, Tyema-Cewe), Sorogama, Bobo-Fing; Manding (Bamana, Maninka, Jula, Marka Dafin); and western Manding (Kagoro, Xasonka, Kita Maninka). This is the set of languages which Vydrine cites when distinguishing eastern and western units on the basis of a cluster of phonological isoglosses appearing in the table reproduced in the text of this article. I owe the sharpening of my own analysis to the work of this author.

monosyllabic (CV, CLV) structure	predominantly dissyllabic structure	predominantly dissyllabic structure
9-vowel systems or larger with [+/-ATR] and [+nasal] vowel harmony	7-vowel systems (5 in western Manding and Soninke, 6 in Kita Maninka)	5- or 7-vowel systems
absence of nasal consonant phonemes	nasal consonant phonemes; non-syllabic final nasals corresponding to nasalization of the preceding vowel in some languages	presence of nasal consonants, also in final position
small set of word-medial consonants	word-medial consonant systems of varying size, particularly in the north	full word-medial consonant systems
homoresonance	no homoresonance	
no long vowels	length contrast in non-final position in many languages; in all positions in Mandinka	length contrast in all positions
3 to 5 tone registers	typically 2 tones; transition to stress systems (Mandinka, Kagoro, some Jallonke dialects); also 3-tone systems tending towards 2-tone systems (Kpelle)	usually 2 tones (H and L) + rising and falling tones analyzable as register sequences; transition to stress systems (northern Songhay); loss of prosodic contrasts in eastern and western Songhay

The hypothesis of a trade-language substrate.

Let me first recapitulate.

1) There is a recognizable phonological isomorphism between the Mande and Songhay languages; resemblances are particularly abundant between Songhay and the northwestern Mande languages.

2) The close scrutiny of a few of the features involved shows that these resemblances cannot all be set down to the same processes. The observed isomorphism is therefore stratified in a way that has yet to be fully analyzed.

3) This stratification, according to which some isomorphic features in the cluster are spread well beyond the area under consideration, while others create subsets within one unit or the other (Songhay or Mande), means that a "two-dimensional reduction" comparative reading of the facts will not properly account for the processes involved, even though it might prove "indicative" regarding the changes which have affected the languages in the area.

A closer look at the detail of the situation will, however, allow us to go a few steps further. First of all, the existence of a subdivision within Mande is important given its association with closer typological links between northwestern Mande and Songhay²⁷. The relationship between these two language groups may therefore now be seen in a new light, insofar as the simultaneous consideration of my own hypothesis whereby Songhay may have arisen from contact with a creolized Afroasiatic language and Vydrine's (2000) observations regarding phonological differentiation within Mande suggest explanatory perspectives which are both more complex and more interesting.

An initial hypothesis (which would trivially assume mere reciprocal influence of languages in contact) would thus presume that Songhay had an effect on the northwestern Mande

²⁷ Vydrine's statement of conclusions is as follows: "1) The gulf between the Mani-Bandama and the West Mande languages in what concerns their phonological structures turns to be not as wide as it may seem. West Mande languages reveal the traces of some archaic features (9 or 10 vowel system with vocal harmony; the absence of nasal consonant phonemes; the possibility of a syllabic nasal in word-final position; the mechanism of homoresonance; the contrast of fortis/lenis consonants) which make the Proto-Western-Mande close to the Mani-Bandama phonological type and allows a reconstruction of the Proto-Mande type close to the Proto-Volta-Congo model. 2) In the Mande group, the phonological type of language proves to depend much more on areal rather than genetic factors. This factor should be seriously taken into account in the proto-language reconstruction."

languages which would account for the differentiation within Mande. This would nevertheless require that we assume the pre-existence, at an ancient date, of a form of Songhay having the same phonological system as the present-day language, capable of attracting Mande. This is not impossible; it ignores, however, the both hypothesis I have articulated (Nicolai 2003) regarding the "non-genealogical" origin of Songhay and the one I have eliminated regarding its "Nilo-Saharan affiliation". Furthermore, the disparity in the number of languages in each group is an a priori obstacle to the hypothesis of simple reciprocal influence.

A far more interesting explanatory approach involves viewing the situation in terms of the hypothesis whereby Songhay might have originated from contact with a Afroasiatic trade language. We might then wonder whether both Songhay and northwestern Mande might not owe the shared and/or "convergent" features thrown up by the typological comparison of their present phonological systems to that very Afroasiatic language. Indeed, I postulate this Afroasiatic creole as being at the origin of Songhay. Correlatively, however, contacts of differing intensity must have been occurring between this language and all the other languages in the Saharo-Sahelian area. This is what could have led to the specific changes in the phonological systems²⁸ of the neighboring northwestern Mande languages which now differentiate them from the other Mande language groups (Mani-Bandama).

Support for this new hypothesis could be provided at this point by checking to see whether, in languages whose Afroasiatic origin is beyond doubt, there are any other attested cases of simplification such that the outcome is as typologically unrelated to the point of departure as, for example, the structures widely observed in the Mande group. Such cases indeed exist: an example is to be found in the creolized variety of Chadian Arabic, whose phonological system has been simplified with respect to classical Arabic to the extent that it now resembles the one used by Songhay. There is a five-vowel system with three heights and a length contrast, and a consonant system which has lost almost all the features characteristic of Semitic systems (interdentals, emphatic consonants, pharyngeals, and uvulars, cf. Jullien de Pommerol 1997:118-20) and is now similar to the one found in Songhay.

²⁸ The same situation also accounts for the presence of numerous lexical items in the languages of the area which can be attributed to the hypothetical Afroasiatic source (cf. **bâa** 'like, want'; **bàkà** 'soak; dishful'; **bisa** 'pass', etc., see Nicolai 2003 for a detailed study).

Chadian Arabic					Classical Arabic								Songhay					
lab	a	pa	vel	glo	lab	int-	ap	emp	pal	vel	uv	pha	glo	lab	ap	pal	vel	glo
	p	l		t		den		h				r	t					t
*p ₂₉	t	*tc	k	'			t	ṭ		k	q		'		t	*c	k	
b	d	j	*g		b		d	ḍ	ğ					b	d	j	*g	
f	s	c	x	h	f	ṭ	s	ṣ	š	ḥ		ḥ	h	f	s	(š)		h
	z					ḍ	z	ḍ		ğ		'			z			
m	n	*ɲ			m		n							m	n	*ɲ	*ŋ	
	r						r								r			
	l						l								l			
w		y			w				y					w		y		

The reduction of the Chadian Arabic system is hardly different from the one that can be observed in Songhay when, after allowance for our limited knowledge of the stratification of the various processes³⁰, we compare the Songhay terms of likely Afroasiatic origin with their cognates in modern Arabic or Berber.

The Songhay prosodic system: a matter of perspective.

It has generally been assumed that Songhay's original tone system has been lost in eastern and western Songhay. I myself first dealt with this dialectological correspondence (Nicolai 1981a, 1982) by setting up a number of rules which provide for the collapse of the system in terms of tone neutralizations and constraining rules. In so doing, I gave a standard "description" of the transformation of a tone system, on the assumption that, prior to dialectization, Songhay had a tone system which subsequently disappeared, thereby accounting for the data in the western and eastern groups.

Obviously, in the new context of the "trade-language substrate" hypothesis, this analysis no longer holds up. If indeed Songhay originated from this putative trade language with a Afroasiatic base, it should not originally have had a tone system. On the contrary, such a tone system, which perhaps resembled the one found today in northwestern Mande, must have been subsequently acquired, and it is therefore no longer evident that western and eastern Songhay, which do not have a tone system and are the immediate neighbors of Afroasiatic populations³¹, ever lost it. They might well never have acquired one, only the southernmost varieties ever having done so³². This would account for absence of a tone system, not by loss

²⁹ The asterisk marks phonemes which classical Arabic did not have, not reconstructions. The arrows converging on *g in the Songhay part of the table show the most frequent sources of this consonant.

³⁰ d ? z, ḍ, d, ḍ, ṭ, k ? q, k, ḥ, ġ, (ḥ), etc.; cf. Nicolai 2003:285.

³¹ These two dialect groups border geographically on the Afroasiatic languages Hassaniyya, Arabic, and Tuareg.

³² Note however that the tone system of the southern languages shows traces of consonants which could not be realized in the Songhay phonemic system by the presence of a contour (generally rising) tone, not only in the part of the lexicon which is supposedly composed of "Arabic loanwords", but also in other parts (cf. Zarma **lěbù** 'be paralyzed' (yb), **săy** 'sow by casting; flow (as liquid); pour' (š'y)). These facts may help to refine our hypotheses.

through contact with Arabic (with no justification beyond induction from the empirical fact that tones are not used), but rather by acknowledging on the grounds of a reevaluation of the contact situation as a whole that, within the region now occupied by eastern and western Songhay, the initial prosodic structure of the substrate has not itself been reinterpreted to fit the structural mold of Mande prosody.

I draw the following lessons from these considerations:

- The phonemic systems of the Songhay and northwestern Mande languages are essentially structurally homogenous and very like the "simplified" system found in modern Chadian Arabic.
- The attested process of change by which the original Arabic system was transformed into the present Chadian one is consonant with the hypothetical process assumed to have moved the system of an older creolized Afroasiatic language to the one found in Songhay.
- The distinction internal to Songhay whereby some languages have tones and others do not can be more easily explained by the development of tones from an earlier creolized Afroasiatic language than by the relatively recent loss of tones as a result of language contact.
- This same creolized Afroasiatic language might easily have (less comprehensively) left its mark on other languages of the region. This is the explanation for a variety of contact phenomena such as lexical influences on Wolof and Mande and structural changes in the phonemic systems of northwestern Mande languages.
- Uniformity is surely not an a priori attribute of language change, though it may be presented as such by scholarly representations of change, themselves founded solely on the a posteriori results of research. Hence, the conclusions authorized by this postulate may or may not correspond to the facts.
- Widely accepted a priori conditions applied in descriptions of language change may lead to misapprehensions, as comparison of my earlier analysis of the Songhay prosodic system with the one presented here will suggest.
- Generally speaking, it will always be possible to use some current theoretical approach to develop a system of rules capable of "describing" any given process of change, whether this process has actually occurred or not.

To conclude, let us remark that we have here both

- an empirical situation which provides an "example" of apparent change from one system to another of an entirely different type, and
- an "explanatory model" which justifiably deviates from the established view that hypotheses of language change should be based on principles of uniformity, a view undermined by the arbitrary nature of its own assumptions and the blinkered nature of the consequent results.

Recapitulation

As we approach the end of this discussion, let us recapitulate once again.

- 1) There are numerous typological similarities between Songhay and Mande ranging over all aspects of these languages: phonology, morphology, morphosyntactic categories, word order, semantics, and structure of the lexicon.
- 2) The isoglosses representing these similarities do not form homogeneous clusters. Several of them cut across Mande (see Vydrine 2000) or across Songhay (SOV/SVO, *s ~ z*), while others still spread far beyond the boundaries of these two units (cf. the function of /p/). Such divergencies suggest that the full extent of the phenomenon cannot be ascribed to a single historical process. So doing with no prior justification leads to the construction of a non-existent object of study, the consideration of which does nothing to advance the state of linguistic knowledge³³.

³³ This situation is, however, of particular interest for a consideration of the ways in which scholars manage to provide themselves with a posteriori rationalizations of their procedures. See Nicolai (1999) for remarks on how

3) The Manding-type languages (Heine's 1975, 1978 type B2) are today found in two distinct geographical and linguistic areas, Senegal-Niger and Dosso-Nikki. If type-B1 western Songhay can be assumed to have formerly belonged to type B2 and to have undergone change as a result of sociolinguistically determined functional constraints, the prior existence of a homogenous Manding-type language area may be assumed. Furthermore, on the basis the phonological typological resemblances, the "center" of this area could plausibly be situated to the west of Mande, in the Songhay and Songhay-Mande contact areas.

4) The Songhay language structures which do not correspond to the Manding (B2) type, as observed in the western and northern dialects, could be explained by processes of change taking place subsequently to this "initial" phase.

The offshoots of genealogical hypotheses

The example of Songhay-Mande contact shows that, where historical documentation is unavailable, the linguistic aspects which are most sensitive to external historical influences, such as the lexicon³⁴, should be considered before any hypotheses are formulated concerning the nature of structural isomorphisms. Thus, insofar as Songhay could be taken as a Nilo-Saharan language, it could be logically inferred that Mande and Songhay belonged to two distinct genealogical units. Thereupon, any isomorphism could also logically be interpreted as the result of convergence between two groups of languages in close contact and the process involved could conveniently be described in terms of simple cognitive operations such as metatypy³⁵. This reasoning is nevertheless only as valid as its assumptions are accurate, i.e., if we are indeed dealing with change affecting languages of different genealogical origin and type. But if the Nilo-Saharan affiliation of Songhay is uncertain, incorrect even, then the present form of the language can easily embody something other than the mere result of convergent change, or at most, convergence is only a secondary factor in its historical development.

I stress that, given the tentative postulate of a *lingua franca* as the ultimate source of Songhay, there are two as yet undecidable alternative possibilities, given current knowledge: either the *lingua franca* disappeared after both "giving rise" to Songhay by bringing about major changes in its ancestor and relexifying at least one other language in the area (an earlier variety of Mande), or the *lingua franca* "was" what is now Songhay³⁶. In the latter case, Songhay would have "originated" simply as a vernacularization of that *lingua franca*.

the definition of areas of convergence or linguistic affinity can be seen as an a posteriori construct; also see Campbell (2002).

³⁴ It is my impression that a lexicosemantic approach tends to be "methodologically" marginalized in the study of areas of convergence, doubtless owing to the unsystematic nature usually ascribed to lexical change, which is thought a priori to be incompatible with the putative strictness of morphosyntactic or phonological considerations.

³⁵ This notion has been defined by Ross (1997:241) as follows: "*The class of language changes which is diagnostic of contact-induced change includes (a) the reorganization of [a] language's semantic patterns and 'ways of saying things', and (b) the restructuring of its syntax [...]. This reorganization and restructuring is truly diagnostic of contact-induced change only if we can show that new patterns bring the language closer to a putative inter-community language. I have coined the term 'metatypy' for this reorganization and restructuring [...], as this kind of language change leads to a metamorphosis in structural type.*" It derives from a generalization of the notion of *calque*, is intended to comprehend sets of *habitus*, and entails the homogeneity which leads to simplification of communication. This is perhaps a fundamental "copying" operation in the process of development of areas of convergence.

³⁶ Consequently, without further work, any attempt to treat Songhay as an abrupt creole rather than a language having undergone intensive lexical borrowing would be both premature and unwarranted. Nevertheless, we may applaud the enlightening overview provided by Wolff and Alidou (2001), which deals with the question of "mixed" languages and goes on to summarize and place in perspective the hypotheses and controversies surrounding the "creole" nature of Songhay.

Whatever future research may show, it is henceforth impossible to interpret the isomorphisms represented in Songhay as the result of change affecting languages which were at first of different origin and subsequently became typologically closer through hundreds or thousands of years of contact and multilingualism (or any variant of this explanation).

The stratification of isoglosses

Once overall isomorphism has been recognized, an examination of its stratification will lead us to observe that the structural processes operating in the subsystems of the language are differently conditioned by the historical factors in play:

- phonological change seems more sensitive to the effects of contact than morphosyntactic change,
- morphosyntactic change seems more sensitive to functional phenomena of simplification deriving from the use of the language as a trade language,
- the structure of the lexicon provides useful information from the historical standpoint and with regard to the genealogical origin of the language.

At the same time, the contexts of language use (which may also change over time) give rise to processes which can modify prior configurations. Thus, we can see, in Songhay-Mande contact, an intensification of apparent convergence on some points through the development, as of a given time, of a Sprachbund. This is apparent from a detailed study of the geographical and linguistic stratification of the shared traits (e.g., the geographically bounded merger of /s/ and /z/ in western Songhay). Elsewhere, however, we find disguise of convergence by subsequent change resulting from the use of the languages in contexts requiring simplification (e.g., the loss of SOV word order in western and northern Songhay). For all of these reasons, the phenomena of stratification require particular attention; otherwise, should they be ignored, the resulting "two-dimensional reduction" input will necessarily lead to mistaken interpretations.

Finally, from the methodological standpoint, the criteria and features used to characterize the area under consideration must be properly evaluated and interrelated. Are there criteria / features, perhaps representable as isoglosses, which are truly specific to the Songhay-Mande region? Can this area be characterized in a principled way on the basis of clearly defined features?

There are in fact no isoglosses which are specific to the Songhay-Mande region³⁷, and any clustering is always happenstance³⁸. Specificity results only from an a posteriori choice of a few features chosen in an ad hoc manner to give substance to a perceived state of affairs, i.e., a classificatory operation which allows an "object" to be characterized. It would hence be unadvisable to go further and use the resulting characterization as a heuristic tool, instrumentalizing, as it were, the isogloss cluster. It would likewise be circular reasoning to accord any categorial value to this characterization. An isomorphism may come about as a result of varying factors which may not be related in any way to what are ordinarily thought to be convergence phenomena, as is clear from our discussion here.

Historical implications

These results give rise to a number of questions. What conclusions can we draw from isomorphism with regard to the history of languages and populations and with regard to linguistic change as such when we have no more than limited historical information extending

³⁷ Having a tone system or not, using prepositional or postpositional order, marking inalienable possession by juxtaposition or not, ...clearly none of these criteria is specific. The cluster itself, however, whether arbitrary or involving interdependence of features, is specific.

³⁸ It may also happen that an isogloss which is apparently specific (e.g., the lacunary distribution of /r/) corresponds to a feature which is not of general typological import.

hardly more than a millenium into the past? What does it teach us regarding language contact and the cognitive processes which accompany typological change?

We have explored a crucial example showing that isomorphism must not be automatically ascribed to what is known as a Sprachbund or area of convergence. Thus,

- isomorphisms which cannot be explained through genealogical relationship may just as well arise from processes of change which give rise to codes and languages as from those which influence or modify existing codes and languages;

- the identification and characterization of what may seem a priori to be an area of convergence is intrinsically linked to the anthropological and cultural framework within which the languages are used. Forms of systemic change and presence within a given area are thus insufficient grounds for identifying the process of change which produced the given state of affairs, particularly when documentary historical evidence is lacking.

At the same time, this approach underlines the value of lexical investigation concurrently with analysis of formal parallelisms. In the case of Songhay, support for kinship hypotheses has been obtained essentially from repeated in-depth study of the lexicon. Such study may also contribute to the formulation of more highly contextualized hypotheses whose impact on historical studies is likely to be considerable.

Lexical stratification has, in fact, already been established to some extent with the identification of recent imports from Arabic, items with Berber and Ethiosemitic sources, items from an ancient Afroasiatic stock, items with distant cognates (in Cushitic, Egyptian, etc., none of which are proof of any linear genealogical relationship in the classical sense, cf. Nicolai 2003), items which are not Afroasiatic, items which are present in Songhay but not in Mande, items used only by populations in the contact zone, and technical vocabularies. Lexical comparison with Mande also shows what kinds of vocabularies are shared: a layer of recent banwords, an ancient lexical stock attributable to the putative *lingua franca*, clearly Niger-Congo items, and so forth.

The continued study of these data in correlation with typological and structural considerations will, it may be hoped, ultimately allow us to reach some kind of historical understanding of the Songhay-Mande area as we see it today, i.e., two-dimensionally and in the unavoidable a posteriori reconstituted form obtained with the only theoretical and empirical explanatory devices currently available to us.

The current state of research in this domain can be read on two different levels.

- 1) On one level which I would call "protohistorical", those hypotheses which tend to see modern Songhay as the outcome of a variety of Mande which underwent far-reaching relexification under the influence of a creolized Afroasiatic language (a *lingua franca*), or the vernacularization in Mande surroundings of a pidginised form of this language, seem most likely to be correct.

- 2) On the second level which I would call "quasi-historical", a study of dialectization and stratification furnishes information on processes of language contact and reveals situations which, though not fully identical to the ones I have assumed to exist on the protohistorical level, are nevertheless sufficiently comparable to allow the latter to be treated as valid empirical possibilities. They thus provide guidelines for the formulation of hypotheses on the protohistorical level and help to invest them with plausibility.

- Northern Songhay (a Songhay-Tuareg "mixed language") is apparently the outcome of the vernacularization of a *lingua franca* form of Songhay, perhaps at a date prior to the development of the Songhay empire, i.e., somewhere towards the middle of the second millenium B.C.

- Dendi too may have evolved from the vernacularisation of a *lingua franca* form in a different linguistic and social context. The two processes are nevertheless quite different

insofar as there would have been no change of language as there must have been in the case of the population speaking the ancestor of northern Songhay.

The examination of broadened lexical data and new work on areal features now point to a creolized Afroasiatic language, probably the pre-Songhay *lingua franca*, as having influenced a number of sub-Saharan African languages through contact³⁹.

This paper shows how linguistic and historical hypotheses can be made to fit together, but at the same time counsels prudence. Clearly, a new linguistic approach to this contact area in the light of the proposals made here could produce a new understanding. Yet it is equally clear from the case under discussion that the formal models for understanding language change need to be used cautiously. In addition, exploration of this new field must begin before any attempt can be made to tell what it will show.

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³⁹ I refer here not only to my own work (Nicolai 1984, 1987a, b, 1989a, b, 1990, 2003) but also to the recent overview by Wolff and Alidou (2001).

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