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Non-Tuareg Berber and the genesis of nomadic Northern Songhay

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Abstract: With massive borrowing resulting in systematic suppletion, the nomadic Northern Songhay languages, Tadaksahak and Tagdal, are some of the most striking products of intense language contact in Africa. While the importance of Berber in their formation is obvious, published comparisons have focused almost exclusively on Tuareg, the currently dominant Berber language of the region. This paper, however, demonstrates that Tuareg-Songhay contact alone cannot adequately account for their emergence. Tadaksahak at least seems to have as its substrate not Tuareg, but rather a Western Berber language closely related to Tetserrét, a small minority language of Niger; such a language also played a role in the development of Tagdal. Western Berber influence, however, is not reconstructible at the proto-Northern-Songhay level, despite being attested in most Northern Songhay languages individually. A closer look at the Western Berber stratum in Tadaksahak indicates that language shift there was accompanied by broader cultural changes, including a shift away from the regional norm of cross-cousin marriage towards the North African preference for patrilineal parallel cousin marriage. These linguistic and cultural changes may have been part of an effort to assert an identity as specialists in Islamic learning, following regional political shifts around the sixteenth century.

Keywords: Language contact, Berber, Songhay, borrowing, regular correspondences

1 Introduction

Northern Songhay is a small group of closely related languages of the Sahel-Sahara region with a Songhay core vocabulary and basic grammar, but a lexicon overwhelmingly composed of Berber loans, bringing with them a good deal of Berber morphology. Two members of the family, Tadaksahak and Tagdal, are spoken by nomadic groups that are culturally close to, and often regarded as

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Tuaregs – the Idaksahak and Igdalen, respectively. The degree of Berber influence in these two languages is even higher than in the rest of Northern Songhay. In particular, they have causative and passive morphology which is not only entirely Berber, but can only apply to Berber roots – forcing systematic suppletion of almost all inherited Songhay stems (Christiansen and Christiansen 2002), and resulting in what some would define as mixed languages (Wolff and Alidou 2001; Benítez-Torres 2009). This is reflected not only in the vocabulary but also in the typology, which mixes prepositions and postpositions, pre- and postnominal numerals, etc.

Ever since the Igdalen and Idaksahak first came to Africanists' attention, there have been repeated suggestions that they are probably neither of Tuareg nor of Songhay origin but rather descended from the Sanhaja, ie Western Berber (Barth 1857; Nicolaï 1984: 153), or more generally from the earliest Berber populations, possibly non-Tuareg, that reached the area (Calame-Griaule and Lacroix 1970; Bernus 1981; Nicolaï 2009: 195). Linguistic research, so far, has not seriously addressed this claim. The Berber element of these languages, and of Northern Songhay more generally, has rather consistently been compared to Tuareg alone without reference to any other Berber variety (Lacroix 1971; Nicolaï 1979a; Wolff and Alidou 2001), despite Basset's (1948) perceptive comment that "among the Tuaregs, in Niger, in the mysterious Idaousak group, appear [...] lexicographical variants which are surprising here and immediately recall Zenaga, Ksourian or Maghrebi facts" (author's translation). While obviously untenable for Korandjé (Tilmatine 1996; Souag 2010a), the notion that Tuareg was the only source for Berber elements has appeared superficially plausible for the rest of Northern Songhay, whose speakers are commonly bilingual in Tuareg and live in what is now a solidly Tuareg-dominated region. For Tadaksahak, Christiansen-Bolli (2010) offers only two non-Tuareg comparisons, and none appear to have been published for Tagdal or Tasawaq.

However, Tuareg is not the only Berber language spoken in the region. Some subgroups of the Ayttawari and Kel Eghlal in Niger continue to speak two varieties of a sharply distinct Berber language called, respectively, Tetserrét (Khamed Attayoub 2001; Lux 2013) and Tameseghlalt (Drouin 1984). These varieties are more closely related to Zenaga, the seriously endangered Berber language of southwestern Mauritania, than to Tuareg, as shown by a number of shared innovations (see in particular Lux 2013). Historical evidence suggests that Western Berber groups have been present in the area since at least the twelfth century (Hunwick 1980; Moraes Farias 2001: cxi), suggesting that these language represent a relatively old stratum rather than a recent immigration.

Breaking away from the usual Tuareg comparisons, this article will attempt to show that a Western Berber variety closely related to Tetserrét has played a

crucial role in the development of Tadaksahak, and to a lesser extent Tagdal and Tasawaq. Western Berber influence is also significant in Korandjé (Souag 2010a). It has thus played an important role in the development of Northern Songhay. Since Western Berber is nearly extinct, and has not had significant prestige for centuries, this role must have been relatively early. Nevertheless, comparison across the family of the items borrowed proves that most of this influence postdates the breakup of Northern Songhay. In particular, substantial Western Berber influence appears to be associated with the emergence of Tadaksahak as a separate language.

2 Non-Tuareg Berber material in Tadaksahak

Following the publication of Christiansen-Bolli (2010) Tadaksahak is currently the best-described Northern Songhay language. The cultural and linguistic integration of Tadaksahak speakers into Tuareg society is such that the first linguistic materials published on Tadaksahak mistakenly treated it as just another dialect of Tuareg (Basset 1934). Most of the vocabulary seems to be Tuareg, varying between Tamasheq forms (eg akáršay 'head scarf', Christiansen-Bolli 2010: 97) and Tamajeq ones (eg tínžar 'nostrils', Christiansen-Bolli 2010: 232). However, as illustrated by a couple of examples in Souag (2010a), one can also discern influence from a non-Tuareg variety closely related to Zenaga and Tetserrét/ Tameseghlalt. Christiansen-Bolli notes "Zenaga" as a source for the preposed modifier agar 'bad' (Christiansen-Bolli 2010: 112) and the numeral táašinda 'twenty' (Christiansen-Bolli 2010: 134), but these are the only non-Tuareg Berber comparisons she makes.

Based on the very limited materials available for Tetserrét and Tameseghlalt (mainly Lux 2013 and Khamed Attayoub 2001), we can observe a number of systematic differences between them and Tuareg (Heath 2006 for Tamasheg; Alojaly 1980 for Tamajeq). Many of these differences are paralleled in Tadaksahak forms.

- In Tetserrét, the geminate counterpart of **d** is **dd**, rather than Tuareg **tt** (Lux 2013: 117); contrast Tadaksahak **imáddan** 'tears' (Christiansen-Bolli 2010: 16), Tetserrét **məddawən** (Khamed Attayoub 2001: 90) with Tamasheq iméttawăn; or fərdədde 'bat' (Nicolaï 1981: 237) with Tamasheq afărțățta.
- z and zz are rare in Tetserrét except in loans; instead, we have s, ss (Lux 2013: 113-115). Cp. Tadaksahak yibbəş 'to chew' (Christiansen-Bolli 2010: 10), which corresponds better to Tetserrét **t-obbəs** than to Tamasheq -əffǎz-; or ṭaaṣá 'nine' vs. Tamasheq tǎzza; or tamúṣekk 'milking animal'

- vs. Tamajeq **amuẓǎg** 'milker' (cp. Tetserrét **oṣəg** 'to milk' (Khamed Attayoub 2001: 103)
- Pan-Berber non-geminate s, z usually correspond to Tetserrét š, ž (Lux 2013: 133). Thus the š in Tadaksahak šammúš 'five', šaadíš 'six', iššà 'seven' corresponds to Tetserrét (eg šadiš 'six') but contrasts with Tuareg (eg Tamasheq/Tamajeq sódis 'six'); similarly, Tadaksahak taašá 'liver', tíšit 'cough', awdəš 'ox', ašábdor 'sacrifice', t-úkuš 'be taken out', š-íššin 'cause to know', š-áydaš 'cause to cut' and t-áydaš 'be cut' (Rueck and Christiansen 1999; Christiansen-Bolli 2010: 112, 94, 63, 286, 287) match in this respect Tetserrét taša, tušut, awdoš, ašodər, okkəš 'take out', təmušna 'knowledge', aydəš 'cut' (Khamed Attayoub 2001: 89, 93, 101, 100, 68, 100, 107)), rather than Tamasheq tăsa, təsutt, awdes, asəbdar, -ătw-ăkkăs. -ăsosăn, -əqqətăs 'snap'. Likewise, the usual causative prefix in Tuareg is s-, unless the root contains a different s(h)ibilant; compare Tadaksahak **š-əddər** 'make fall' (Christiansen-Bolli 2010: 55), with no Tuareg cognates found for the causative or the stem alone, to Tetserrét ədar 'fall' and Zenaga vä-šš-īđar 'make fall' (Taine-Cheikh 2008). There are many examples of causative šwith roots not containing §-, as discussed below, suggesting that this represents a non-negligible stratum. One suspects that the unexpected $\check{\mathbf{z}}$ and \mathbf{i} in inžín 'like' (Christiansen-Bolli 2010: 117), compared by Christiansen-Bolli to Tuareg **zun**, reflects something similar.
- y is frequently missing from Tetserrét words whose cognates in Tuareg and elsewhere contain it, with compensatory emphasis (Lux 2013: 119, 128). This is exemplified in Tadaksahak by təmáari 'locust' (Rueck and Christiansen 1999), identical to Tetserrét təmari; cp. Tashelhiyt tamuryi (Destaing 1920). Likewise, táwrəd 'shoulder blade' (Nicolaï 1979b: 128) contrasts phonologically as well as semantically with Tamajeq tiyərden 'area between the shoulder blades', but corresponds perfectly to Zenaga täwrəD 'shoulder blade'.
- In other cases, particularly in the first consonant of a root, γ sporadically becomes Γ in Tetserrét (Lux 2013: 129). Cf. Tadaksahak yáΓad 'go straight' vs. Tamasheq -oyăd-; a-ſadid 'be naked' (Nicolaï 1979b: 131) vs. Tamasheq yəlul- 'be in need of new clothes', Zenaga yoʔyiy < *yoɣlil 'be naked'.
- Tuareg final semi-vowels sometimes correspond to Tetserrét k: eg Tetserrét ənok 'ride' vs. Tamasheq -ənăy (Lux 2013: 536). This is attested in Tadaksahak more than once: eg š-inək 'to make ride' (Christiansen-Bolli 2010: 185) (Tetserrét ss-ənək, Tamasheq -ăs-năy-); təffak 'tomorrow' (Christiansen-Bolli 2010: 164), cognate with Tamasheq tifawt 'early morning'. Chaventré (1983: 32), in a loose transcription, gives (n')tayaq as

'sister's child'; unfortunately, there is no data on this aspect of kinship terminology for Tetserrét, but Zenaga has m. āž(ž)uh pl. āž(ž)ūn, f. tāžžägt. Zenaga ž(ž) regularly corresponds to pan-Berber v (cp. ä?ž(ž)ər 'moon' vs. Tadaksahak ayár), so this is to be derived from *āyū, f. *tāyagt. The regular Tamasheq cognate of this term is ahaya f. tahayawt 'grandchild', so not only the final **k** but the meaning indicate non-Tuareg origin.

Sporadic phonetic differences are also paralleled:

- Tamasheq **zz** < ***zw** corresponds to Tetserrét **zb** in 'noon prayer': Tetserrét tažbaran (Lux in progress), Tamasheq tezzar. Cp. Tadaksahak tažbrin 'noon prayer' ("Idak Sahak" p.c. via Facebook in Arabic script, vowels uncertain). While the Tuareg form has undergone an irregular development - contrast Tashelhiyt **tizwarn** (Destaing 1920) - the correspondence of **zw** to **zb** seems to be regular; cf. Kossmann (1999: 34).
- 'Maternal uncle', originally 'son of-mother of-mother' (*ag-mat-ma), has developed irregularly in both Tuareg (**ǎŋŋǎtma**) and Tetserrét (**aymatma**); Tadaksahak has **aymatmá** (Rueck and Christiansen 1999), corresponding to Tetserrét. Similarly but less strikingly, Tadaksahak imáaran 'parents' (Nicolaï 1979a: 309) corresponds better to Tetserrét amarən (Khamed Attayoub 2001: 98) than to Tamasheq imarawan/imarwan.

Moreover, much of the Tetserrét/Tameseghlalt vocabulary has no known Tuareg counterparts, eg awwod 'mountain', asənək 'woman's veil', andəlbas 'yesterday', tafulet 'egg', afagan 'person' (Drouin 1984). Many such forms are matched in Tadaksahak:

Tadaksahak has **táafult** 'egg' (Christiansen-Bolli 2010: 291), **tángud**, pl. támgadən 'girl' (Christiansen-Bolli 2010: 100), tawážat 'chicken' (Rueck and Christiansen 1999), **t(ə)maadəš** '8pm in the evening' (Isha prayer time), tašándod 'mirror' (Nicolaï 1979b: 131, 133), and tássod 'axe' (Christiansen-Bolli 2010: 127), matching Tetserrét təfult, təmogəd, awažad 'rooster', tašondəd, tinwatš, taşəd/tóşəd (Khamed Attayoub 2001; Lux 2013: 539) but unattested in Tuareg. The non-Tuareg Tadaksahak form **mošaddí** 'paternal uncle' (Christiansen-Bolli 2010: 79) must be compared to Tetserrét **əməssad** 'younger brother', used in the compound **əməssad** n **ədd** 'father's younger brother' for 'uncle' (Khamed Attayoub 2001: 98).

Finally, there is some evidence for calquing:

The Tadaksahak word for 'woman' is **surgóy**, to be derived from Songhay surgu 'Tuareg' + way 'woman, female' (not Gao sooga 'young adult', pace Christiansen-Bolli 2010: 313; the medial correspondences would be entirely irregular). The Tetserrét/Tameseghlalt plural 'women' is **t-ṣnag-in**, likewise to be derived – as noted by Walentowitz and Attayoub (2001: 32) – from the feminine plural of a Berber ethnic name, 'Senhaja/Zenaga'.

Berber has massively influenced Tadaksahak grammar. Unfortunately for current purposes, it is in most cases impossible to determine which variety the influence came from, since most consonants show identical reflexes and since vowel reflexes are not yet well-understood. The common Tadaksahak feminine plural ending **-in** (Christiansen-Bolli 2010: 98) agrees better with Tetserrét **-in** (Lux 2013: 426) than with Tuareg **-en**, but this is hardly conclusive, and plural endings in both languages have a wide variety of allomorphs. Two important bound morphemes seem to be closer to Tetserrét than to Tuareg:

- The Tetserrét centrifugal particle is -an, rather than -in (Lux 2013: 417).
 Tadaksahak likewise has the form -(n)an (Christiansen-Bolli 2010: 68), and Christiansen-Bolli notes the mismatch of the vowel with Tuareg.
- Tadaksahak agár 'bad', compared by Christiansen-Bolli (2010: 112) to
 Zenaga, is identical to Tetserrét agar (Khamed Attayoub 2001: 92) but
 quite different from Tamasheq erk.

Among functional morphemes, we may also more speculatively note the preposition **inžín** 'like' (discussed above).

However, there is one area of the grammar where considerably more can be said. For linguists, Tadaksahak's main claim to fame is its exclusive use of Berber diathesis morphology, resulting in systematic suppletion for non-Berber verbs (Christiansen and Christiansen 2002; Christiansen-Bolli 2010). The criteria above – in particular, the use of \S -/ \check{z} - for the causative in roots not containing \S / \check{z} in Tuareg – suggest that at least a large minority of these suppletive forms – including two Islamic religious terms – are to be derived from a Tetserrét-like language rather than from Tuareg, as illustrated in Table 1 (Christiansen-Bolli 2010; Heath 2006; Alojaly 1980; Taine-Cheikh 2008). All but the last five of the underived bases are etymologically Songhay. Unfortunately, almost no causatives are attested in the very limited Tetserrét data available; Zenaga provides an imperfect and incomplete proxy here. (The few available examples of another sibilant morpheme, instrument noun formative sV-, show no such variation with \check{s} - (Christiansen-Bolli 2010: 109).)

The vocalisation of these forms usually reflects the Berber preterite stem rather than the aorist, although the latter is the usual citation form. Many of these forms show other anomalies relative to Tuareg aside from the \check{s} -, notably ς

Table 1: Tadaksahak non-Tuareg diathesis.

| | Verb | Causative | Passive | Tamasheq caus. (preterite, aorist) | Tamajeq caus. (aorist) | Zenaga caus. (preterite) |
|-----------------------|--------------|---------------------|----------------|---------------------------------------|---------------------------|-----------------------------|
| Cut | kós | š-áydəš | t-áydəš | _ | s-əɣtəs | _ |
| Know | báy | š-íššin | (túw- əsan) | -ằs-osăn-, s-ùsən | s-usəņ | _ |
| Pound | dút | ž-íidiž/ ž-iygiž | t-ádiž | - | z-udəz | - |
| Take out | káw | š-úkuš | t-úkuš | _ | s-uķəs | _ |
| Tie up | háw | ši-šúw- aqan | túw- aqan | -ăs-s-ayən-, s-éss-uyən | s-uɣən | - |
| Withhold | _ | š-úḍuf | t-áḍəf | -àss-oḍăf-, s-ùḍəf | s-uḍəf | _ |
| Steal | záy | ší-šš-əkəṛ | t-əkər | _ | s-əss-iķər | _ |
| Give birth | háy | ší-šš-əṛu | - | - | s-əss-irəw | _ |
| Hit, guide pushing | kár taŋgá | š- áwwat/ š-áwat | t-áwwət | -ăs-wăt-, s- à wət | s-əwət | - |
| Be placed | keení | š-inšá | - | -àss-ənsa-, s-ằns | s-ănsu | -äšš-inšä |
| Enlarge | bér | š-ámyar | t-ámyər | -àss-əmyăr-,s-àmyər | s-əmyər | -äš-ma?r |
| Say | cí | šá-ššuw- an | túw-əṇṇa | - | s-ăss-ăṇṇu | _ |
| Do | dá | š-íga | t-ága | -ằsw-ăjja-, sə̀ww-əjj | s-əss-ugu | _ |
| Sit | gorá | š-áyam | - | -às-yayma-, s-èqqim | s-əyyimu, s-əqqimu | -äšš-a?mä |
| Love/want | báaya | š-éeṛa | túw-əṛa | - | s-ăŗu | _ |
| Fall | káŋ | š-ə́ḍḍər | - | - | _ | -äšš-īđạṛ |
| Be pure (religiously) | yáħala | š-áħala | - | -àss-əħlăl-, s-àħləl | s-əxləl | - |
| Be straight | yáʕad | š-áʕad | _ | - | s-əss-iyəd | _ |
| Create | yíxlək | š-áxlək | - | -àss-əxlăk-, s-àxlək | _ | -äz-γayäg |
| Be cheap/ easy | rayís | šá-ryaš | - | -àss-əryăs-, s-àryəs | s-ərγəs | -äšš-uryaš |
| Divorce | léf | ší-lef | _ | _ | _ | _ |

for y in 'be straight' and i for expected u/o in 'know' and 'pound'; such irregularities are to be expected if these reflect borrowing from a non-Tuareg language rather than sound shifts within forms from Tuareg. The passive of 'know' has a root with ${\bf s}$ instead of the $\check{\bf s}$ of the causative, suggesting that in some cases a non-Tuareg causative has been retained while the passive has been adopted from Tuareg. However, in two other roots containing š/ž, 'pound' and 'take out', the passive is consistent with the causative, suggesting that some passives too were taken from a non-Tuareg source.

3 Widening the comparison

The first question that arises is whether this substantial contribution from a Tetserrét-like language is unique to Tadaksahak, or general across Northern Songhay. Comparison with other varieties (Table 2) immediately reveals that much of this influence is specific to Tadaksahak, and must postdate the breakup of Northern Songhay, because other Northern Songhay languages, including in some cases Tagdal, retain the original Songhay term, underlined below (Rueck and Christiansen 1999; Kossmann 2003; Barth 1851; Heath 1998; Bernard and White-Kaba 1994):

Table 2: Western Berber influence in Tadaksahak compared across Northern Songhay.

| | Tadaksahak | Tagdal | Korandjé | Tasawaq | Emghedesie | Gao |
|------------------------|-----------------------------|--|--|---|---|---|
| Egg Chicken Ox | táafult tawážat awdəš | táful garangó ázgar (Nicolaï 1979b: 120) | tsaff ^w ərts gung ^w ą (hawi) | g ^w àng ^w àrí g ^w àràngó (ázgàr) | góngorí gurango as'agéri, haui | guuri gorgo haw |
| Tomorrow Mirror | táffak tašándod | <u>bə</u> səba – | <u>bi</u> bya tsasən ḍ ŭd | síbàx déégí | súbbach sokhólëen | <u>bii</u> 'yesterday' diji |
| Axe Paternal | táșșəd mošaddí | - | agərzəm Sammi | dískì bààbà | tás'uf am bába n | daaši baaba-kačču |
| uncle | | | | káynà | kaïna 'cousin' | |
| Maternal uncle | aymatmá | - | xari | nàànà káynà | an <u>nana</u> kaïna | hase [NS form by analogy to 'paternal uncle'] |
| Chew | yíbbəş | _ | yimdəy | qáyàm | _ | kaama |
| Bad | agar N | _ | N <u>fttsu</u> | N làyáánàn | N <u>futú</u> | N <u>futu</u> |
| Make fall Make ride | š-əḍḍər š-inək | kanda – | kən-ndza ţʕạ- <u>ndza</u> | - - | - - | kaŋ-andi kaar-andi |

Likewise, much of the Western Berber influence already documented for Korandjé (Souag 2010b), in which Western Berber loans are almost equally prominent (Souag 2010a), is not reconstructible for Northern Songhay, and some are even unique to Korandjé within the family, as shown in Table 3.

Therefore, significant Western Berber influence on Tadaksahak and Korandjé, at least, took place after the breakup of Northern Songhay. This does not rule out the possibility of Western Berber influence having begun before the breakup, but in practice, there is little to no evidence for it.

| | Tadaksahak | Tagdal | Korandjé | Tasawaq | Emghedesie | Zarma |
|-------------------|------------------|--------------------|------------------|--|--------------------------|--------------------|
| Goat He-donkey | hinčiní bíngi | hinšiní (fárka) | tsəksi ayyər | hànsini - | hánkeni (fárka) | hìncìn bínjí |
| In-law Cowpeas | aḍágaḷ - | - | aḍəbbəṛ azrəg | <u>àlzírày</u> dùngúrì ('haricot') | ánn <u>ir s'oré</u> – | ànzúrày dúŋgúrì |
| Half | - | - | ifri, ufri | géérè | gére | <u>járè</u> 'part' |

Table 3: Western Berber influence in Korandjé compared across Northern Songhay.

No unambiguous Western Berber loan is pan-Northern Songhay, while few are detectable in Tagdal, and even fewer in Tasawaq, despite the much more extensive data available for the latter. None have been observed in Emghedesie. The following cases may be noted:

- In Tetserrét, the geminate counterpart of **d** is **dd**, rather than Tuareg **tt**; contrast Tagdal a-yiddəz "to tire" (Nicolaï 1979b: 134) with Tamasheq -attăs- 'sleep'. (Tasawag has inherited fàryá, itself possibly an Arabic loan.)
- Tuareg final semi-vowels sometimes correspond to Tetserrét k. A possible example of this is Tagdal təzərzək 'skewer' (Nicolaï 1979b: 130), also in Tasawaq tàzírzìk; cp. Tamasheq tazárzit 'safety pin'.
- y is frequently missing from Tetserrét words whose cognates in Tuareg and elsewhere contain it, with compensatory emphasis. In Tagdal, this is exemplified by aswan 'cord for tying animals' (Nicolai 1979b: 119); contrast Tamasheq asayon. In Tasawaq, it may be exemplified by tummar 'elbow'; cp. Tetserrét timirt (Lux 2013: 535); contrast Tamasheq táymərt, Tadaksahak táymurt, Tagdal táymur.
- Tagdal (Benítez-Torres 2008: 8) and Tasawaq use the centrifugal particle -nàn/-nan respectively, more similar to Tadaksahak -(n)an and Tetserrét centrifugal -an than to Tuareg, but not straightforwardly explicable in terms of any known Berber source. (The Korandjé form -nna is more similar to Zenaga than to any of the other languages under discussion, as discussed in Souag (2010b).)
- Tagdal (Rueck and Christiansen 1999) uses the non-Tuareg form táful 'egg', like Korandjé, Tadaksahak, and Tetserrét but unlike Tasawag (see previous table). It also has talla 'cushion', shared with Tetserrét but not reported for Tuareg or Tasawaq (Walentowitz and Khamed Attayoub 2001: 29).

In particular, the Tagdal numerals from five up (Rueck and Christiansen 1999) are identical to Tuareg, while those of Tasawaq are Arabic; neither show any signs of Tetserrét influence. Tagdal, like Tadaksahak and unlike Tasawaq, forms causatives almost exclusively using Berber morphology – but, in the limited data so far provided, no signs of Tetserrét influence are visible there either. In fact, 'make fall' in Tagdal is an isolated Songhay retention, **kanda** (Benítez-Torres 2009: 8) whereas Tadaksahak has a Tetserrét-specific prefix and root for the same verb. Therefore these especially strongly grammatically integrated elements of Tetserrét influence are unique to Tadaksahak within Northern Songhay.

The Western Berber elements in Tagdal require further research; the lexical data so far examined is too limited to paint a full picture. However, it would not be surprising to learn that they (like the Idaksahak, as will be discussed below) had shifted from Western Berber to Northern Songhay. The Igdalen are thought to be one of the first Berber populations to arrive in the region, and have often been connected with the Senhaja/Zenaga (Bernus 2001); like the Idaksahak, they appear to be of Berber descent. If so, the fact that Western Berber items in Tadaksahak often correspond to Songhay items in Tagdal indicates that the Igdalen did not adopt Songhay from the Idaksahak (although no clear-cut evidence against the opposite hypothesis is available).

The paucity of Western Berber influence in Tasawaq is at first sight surprising, since one subgroup among the speakers of Tasawaq, the Inusufan, appears to correspond to the Masūfa, a Berber tribe found much further west within historical times, who would probably have spoken Western Berber (Bernus 1972: 16; Souag fc). However, their role should not be exaggerated: the majority of speakers belong instead to the lower-class Isawaghen, whose origins are considered obscure, and the majority of the upper class belong to the Imesdghaghan (Bernus 1972: 24). The name of the latter, 'people of the mountain', suggests a relatively long stay in the region. It seems likely that Songhay was inherited by the historically sedentary lower classes, and adopted by the historically nomadic upper class minority as part of their sedentarisation. If so, the simplest explanation for the paucity of Tetserrét-like traces in Tasawaq is that Western Berber speakers did not play a major role in the emergence of this language: the Isawaghen probably spoke some Songhay variety from the start, and the Inusufan, when they arrived, adopted this variety without greatly influencing it. The relative conservatism of this variety, which retains phonemic tone and many Songhay words lost elsewhere in the family, is consistent with such an account.

4 A closer look at kinship terminology

Northern Songhay direct kinship terms include no Western Berber loans. However, such loans are found among basic collateral and affine terms – and since a prescriptive preference for marrying collaterals is general in the region, the two are best examined together. The influence is especially clear in collateral terminology: as already seen, Tadaksahak has taken both its 'uncle' terms from a Tetserrét-like Berber variety.

Across the languages influencing Northern Songhay, collateral terminology reflects marriageability. In particular, Tuareg and Songhay speakers both use an Iroquois kinship system and have a prescriptive preference for cross-cousin marriage – although, among the Tuareg at least, this stated preference works out in practice to be little more than a preference for marrying within the broader matrilineal descent group (or tawsit), most members of whom will be classificatory cross-cousins (Keenan 2004: 127). Tuareg and Tetserrét accordingly have a special term for 'mother's brother' (Tamasheq annatma, Tetserrét aymatma) – a man's ideal wife's father – while using compounds or Arabic loans for other parents' siblings, and addressing them all as parents (Walentowitz 2003; Khamed Attayoub 2001; Murphy 1967). Mainstream Songhay more even-handedly has special terms for both 'mother's brother' (Gao hase) and 'father's sister' (hawey), while using compounds for other parents' siblings (Olivier de Sardan 1969; Bornand 2006; Heath 1999; 369). By the same token, among one's nephews and nieces, a man's sister's child (his ideal son-in-law), alone has a simplex name both in Songhay (Gao **tubey**) and in Tuareg (Tamajeg tegăze > Tasawag téégàzè). North Africa, on the other hand, has a Sudanic kinship system and a prescriptive preference for the common Arab system of marriage preferentially to the father's brother's child. This system is rare worldwide outside of the former territories of the Umayyad Caliphate (Korotayev 2000), and it often generalises in practice to a preference for marriage within the patrilineal descent group (or tribe, qabīla). Arabic accordingly draws a primary distinction between 'father's sibling' (Samm, f. -a) and 'mother's sibling' (xāl, f. -a), widely borrowed in Northern Berber and less profoundly influencing Tuareg and Tetserrét; it has no simplex terms for nephews/nieces.

Within Northern Songhay, no traces of the Songhay special terms for 'mother's brother', 'father's sister', and 'sister's child' are reported, even in Lacroix's data (Nicolaï 1993). Tasawaq speakers seem to have kept the normal Songhay/Tuareg marriage preference for cross-cousins, in particular for father's sister's daughter (Bernus 1992: 222), and have likewise kept the original Songhay method for referring to 'father's brother'. Nevertheless, they appear to have replaced the Songhay term for 'mother's brother' with a compound 'mother's (younger) sibling' (nàànà káynà), in keeping with the general Northern Songhay tendency to use periphrasis to reduce the size of its Songhay lexicon. Emghedesie terminology is probably identical, insofar as can be judged from the imprecise data in Barth (1851: 170–171). For Tagdal, the only data available to me is Rueck and Christiansen's (1999) gloss for '(maternal) uncle', Tagdal **ba šaná** and Tabarog **ba berá**. If the gloss is correct, then Tagdal has extended the classificatory parent terms by gender of referent rather than by gender of parent. For none of these languages is there reliable data on terms for aunts.

Much more data is available for Tadaksahak (Chaventré 1983; Champault 1969: 284) and Korandié. Both speech communities contrast with the Tuareg-Songhay norm in showing a preference for the more Arab system of father's brother's child marriage (although, in Korandjé at least, Samm n izi 'father's brother's son' refers by extension to any member of the same extended patrilineal family or tribe, not just to the son of one's literal paternal uncle). Where the ideal is not realised, this does not generalise to a general preference for parallel cousin marriage, but rather to a preference for uncle's daughter marriage, strengthening male-male kinship ties. Champault (1969: 284) also cites a Korandjé proverb indicating a fuller preference ranking of father's brother's child, followed by mother's brother's child, followed by mother's sibling's child; the same ranking is given by "Abdelaziz Mohamed" in a Facebook post, dated 13 December 2013 on Idāksahak mad uwwūna lilhiwār ("Idaksahak invited to dialogue" - https://www.facebook.com/groups/ 613167438723669/) condemning the marriage of relatives: "it is rare to find one among us who is not married to the daughter of his father's brother, his mother's brother, his father's sister, or his mother's sister." (In both cases, this is probably to some degree a social ideal realized through the extension of kinship categories, rather than a literal state of affairs.) This cultural difference, combined with bilingualism, pressures the languages to create separate terms for the father's brother, while reducing the importance of the father's sister, who is now only third place in the preferred in-law rankings. In both languages, the result is neither full shift to a North African ('Sudanic') system nor retention of a Tuareg-Songhay ('Iroquois') system. Rather, parents' sisters are merged together under a single term 'aunt' - extended from 'mother's sister' in Tadaksahak naaná (ceená), borrowed from Northern Berber in Korandjé **ləlla** (also used for 'eldest sister') – while a new specialised term is borrowed for father's brother (Tadaksahak mošaddí < Western Berber, Korandjé Sammi from Arabic/Northern Berber). (The gloss tamošaddít 'maternal aunt' in Christiansen-Bolli (2010: 79), contradicting Chaventré's data, suggests that there is language-internal variation in the coding of aunts, perhaps indicating a change in progress towards a fully North African-like system.) In addition, Tadaksahak borrows the preferred Tuareg-Songhay father-in-law, aymatmá, from Western Berber. The situation is summarised in Table 4.

| | Tetserrét | Tadaksahak | Tagdal | Korandjé | Tasawaq | Emghedesie | Timbuktu |
|------|---------------------------|------------|----------------------|----------|----------------|--------------------------------|--|
| FaBr | (əməssaḍ n) ədd/alʕam | mošaddí | ? | Sammi | bààbà káynà | am bába n kaïna 'cousin' | baaba beer, baa beer baaba čiina, baa keyna |
| MoBr | aymatma | aymatmá | ba berá ba šaná | xari | nàànà káynà | annana kaïna 'uncle' | hasey |
| FaSi | təməssad n ədd/təxalat | naaná | ? | ləlla | ? | ennésëo 'aunts' | hawey |
| MoSi | (təməssad n) əmm | (ceená) | ? | iolia | ? | [sic?] | ñaa beer ñaa keyna |

Table 4: Kinship terminology across Northern Songhay, with external Songhay comparisons.

Despite Chaventré's report that cross-cousin marriage is not preferred there, Tadaksahak, like Songhay and Tuareg, has a special term for a man's sister's child, transcribed by Chaventré as (n')tayaq. As seen in Section 2, both the form and the meaning indicate a Western Berber rather than Tuareg origin. Korandjé, as might be expected for North Africa, has no specific word for this concept, and no relevant data is available for other Northern Songhay languages.

The regular Tuareg cognate of the Tadaksahak term (n')tayaq, ie, Tamasheq ahăya f. tahăyawt, has not only a different form but quite a different sense, 'grandchild' (like Tasawaq ááyàw m/f; the Songhay equivalent is haama). Tadaksahak also has a reflex of the masculine equivalent, (n')ayan according to Chaventré, cp. íhayan 'descendants' (Christiansen-Bolli 2010: 10), comparable to Tagdal áahay (Al Jazeera English 2013). However, the Tadaksahak word <(n')ayan> seems to have a broader sense paralleled neither in Tuareg nor in Zenaga: it includes one's brother's children, one's own grandchildren, and one's mother's sister's grandchildren. Unfortunately, its form does not allow us to decide between a Tetserrét-like or Tuareg origin.

A spouse's parents or a child's spouse are, symmetrically, Songhay (Gao) anzura = Tuareg adåggal f. tadåggalt, Tetserrét ədabbal f. tədabbalt (proto-Berber *ww regularly corresponds to Tuareg gg and to Western Berber bb - cf. Kossmann (1999: 43)). In the patrilocal North African system, by contrast, a sharp distinction is drawn between relatives within the husband's domain and ones outside of it, and the parent-sibling distinction is neutralised in the former. Thus, in Algerian Arabic, a man's wife's parents and siblings are not distinguished: m. nsīb, f. nsība, but a woman uses entirely different terms (varying regionally) to speak of her husband's parents and siblings. Both Tasawaq and Emghedesie appear to have retained the Songhay term **anzura** (realised as **àlzírày**, (**ánn**)**ir s'oré** respectively) and its meaning, showing that it is reconstructible for proto-Songhay. Korandjé has borrowed a Western Berber term (**aḍəbbəṛ**, f. **tsaḍəbbəṛts**), but given it the meaning 'spouse's parents/siblings', dropping symmetry and generation-specificity to fit the North African model better. Tadaksahak uses the specifically Tuareg form **aḍágaļ**, pl. **iḍúulin** (Christiansen-Bolli 2010: 42), but no detailed data on its semantics are available.

Among collateral and affine relations, Tadaksahak has thus borrowed at least 'paternal uncle', 'maternal uncle', and 'man's sister's child' from Western Berber, while Korandjé has borrowed from the same source only 'male in-law' and 'female in-law', with semantic shift to fit a North African model. No other Northern Songhay language is known to have borrowed Western Berber kinship terms, although data for Tagdal is inadequate. In particular, no Western Berber kinship terms are reconstructible for proto-Northern Songhay. This reinforces the impression that Tadaksahak-Western Berber was substantially more intimate, extending to the sphere of close family relationships, than Western Berber contact with other Northern Songhay languages – consistent with the hypothesis that Tadaksahak speakers originally spoke Western Berber.

It also suggests a more specific hypothesis. The Tadaksahak term for 'maternal uncle' has that exact meaning both in Tadaksahak and in Tetserrét, and is cognate to terms with the same meaning in Tuareg. The Tadaksahak term for 'sister's child' is equally exact, as is its Zenaga cognate, even though such a term has no relevance to parallel cousin marriage. The Tadaksahak term for 'paternal uncle' is exact in Tadaksahak, but is cognate to Tetserrét and Zenaga terms whose core meaning is 'younger brother', with 'paternal uncle' as only an extension. Assuming that the Idaksahak retained these terms from their previous language, this suggests that Tadaksahak took shape in a context where crosscousin marriage had been preferred for long enough to shape their prior kinship terminology, while parallel cousin marriage was just becoming prominent – ie, during, or not too long after, a shift from a Tuareg ('Iroquoian') kinship system to a North African ('Sudanic') one.

5 Identifying a substrate

Any account of the origins of Tadaksahak must explain the fact that a Tetserrétlike language has contributed basic vocabulary such as lower numerals, kinship terms, familiar domestic animals, and even causative morphology. The "white" physiognomy of the Idaksahak suggests that their ancestry includes important

non-Songhay components, while their blood group frequencies appear strikingly different from those of their Tuareg neighbours (Chaventré 1983: 29). Tuareg influence can easily be explained by the current dominance of Tuareg as a lingua franca of the region, and much of the Tetserrét influence cannot be reconstructed for proto-Northern Songhay. It would therefore appear most economical to assume that the Idaksahak originally spoke Tetserrét (or some closely related Western Berber language), and then shifted to Northern Songhay. One would hope that such a claim would be supported by data from other disciplines, and a little bit of such data is already available, in the form of reports on oral history.

In the Sahara, the primary idiom for expressing both ancient origins and current connections is genealogy; the very name Idaksahak means 'sons of Sahak (Isḥāq/Isaac)'. The great importance attached to genealogy there, paradoxically, makes it a fertile field for fabrications intended to gain prestige for the group making the claim, or to cast contempt on its enemies. The few available scraps of Idaksahak oral history, mutually contradictory, are unlikely to be an exception. Nevertheless, despite differing widely on the Idaksahak's ultimate origin, all available accounts suggest that the Idaksahak reached their current location as a proximate result of migration from the west. Four different claims may be identified, all listed in Chaventré (1983: 28):

- That they are Maghrebi/Saharan Jews pushed south by the Hilalian invasions, hence descended from Ishāq (Isaac). Grémont (2010: 118) comments that this claim appears frequently in the accounts of neighbouring groups, such as the Kel Essouk, but never in accounts he gathered from Idaksahak themselves; he interprets it to have the primary function of stigmatising the group. Christiansen-Bolli (2010: 3) also notes that this account is given only by their neighbours.
- That they are descendants of a sharif named Hayta/Aïtta, who came from Tafilalt and ultimately from Medina. This account was preferred by the Idaksahak interviewed by Grémont, and fits well with the less detailed account reported by Christiansen-Bolli, as well as with postings by Idaksahak online (eg http://ejabat.google.com/ejabat/thread?tid = 497 c5a74bcd8e274, posted 28 November 2011.) This Aïtta is sometimes identified with the purported ancestor of the (more prestigious) Ifoghas Tuaregs, Mohammed El Mokhtar Aïtta, who is reported to be a sharif from "Morocco", via Tafilalt, Touat, Timbuktu, or even Tabelbala (Badi 2001; Grémont 2010: 105).
- That the Idaksahak are descended from Hayta, son of Isaac, son of Ibrahim; Ibrahim also had a son named Ismaril, ancestral to the Kel Essouk, and another son Yakuba, possibly ancestral to the Dia (Chaventré 1983: 30). I

would interpret this as a virtuoso compromise between the first two accounts. Presenting Aïtta as the son of Isḥāq son of Ibrāhīm (Isaac son of Abraham) explains the Jewish connection, but simultaneously presenting Yaʕqūb (Jacob) as falling outside of their genealogy signals that they are not really Jews after all, but rather descendants of ʕAyṣū (Esau).¹

4. That they are cousins of the Zarma descended from "Baramboti" (Bolombooti), a paternal uncle of the Zarmas' ancestor who joined forces with the Tuaregs during the Zarma migration to the east (for details, see Hama (1967: 106), Olivier de Sardan (1982: 111), Gado (1986: 195), Mounkaïla (1989), and Bornand (2009)). This account, drawn from the Zarma ethnogenesis epic, is rejected by Chaventré, and Grémont and Christiansen-Bolli do not report hearing it.

Accounts 2 and 4 both unambiguously postulate a westward migration – via the western trans-Saharan trade routes connecting Sijilmasa (Tafilalt) to Timbuktu in 2, directly down the Niger river in 4. Account 1 is less geographically specific, but must be read in the context of 2, of which it constitutes a value-inversion: Tafilalt (the northwestern terminus of the Saharan trade), Touat, and Medina are all well-known in the Sahara for having been home both to many Muslim holy men and to many Jews. Insofar as 3 appears to derive from 1 and 2, it suggests the same trajectory; moreover, its most idiosyncratic feature, the tentative inclusion of the "Dia", whether in reference to Dia in the interior Niger delta or to the Songhay royal line of Za, again links them to the west. The repeated appearance in these accounts of places associated with the western trans-Saharan trade ties in well to a point discernable in Hunwick (1999: xxvii): that the Berber groups managing the western trans-Saharan trade between about 1200 and 1600, who played a major role in the emergence of Korandjé (Souag fc), were by and large not Tuareg, but Sanhaja groups such as the Masūfa, with representatives at each terminus. The oral history, like the linguistic evidence, is thus suggestive of a non-Tuareg, westerly origin for the Idaksahak.

If both linguistics and oral history suggest that the Idaksahak originally spoke Western Berber, why would they have shifted to Northern Songhay? It must be emphasised that their target was the Northern Songhay still spoken at In-Gall and formerly at Agades and Teguidda, all oases surrounded by desert, not the far more populous varieties currently spoken along the river such as Gao Songhay or Zarma, as indicated by many shared innovations (Souag 2012). To make sense of this shift, we need to examine a topic on which written sources

¹ I am indebted to Abdulhasieb "Koozeeni" Sharif (pc) for drawing my attention to the role played by γΑγṣū in Islamic Sahelian genealogies.

cast more light than oral tradition: the emergence of a regional caste of Islamic scholars.

6 Language shift and identity construction

It is not difficult to discern possible motivations for shifting away from Tetserrét; the number of its speakers has been falling since at least the start of the twentieth century, and no doubt much earlier (Walentowitz and Khamed Attayoub 2001). What is harder to explain, at first sight, is why Northern Songhay should have been the target of language shift. Its current role in the region is not such as to motivate outsiders to learn it; up to the nineteenth century it was the primary language of Agades, but Agades is a long way from current Idaksahak territory.

A somewhat speculative answer can be obtained by attempting to reconstruct the role of Songhay in the language ecology of Sanhaja groups. The earliest traceable centre for Northern Songhay is the town of Teguidda/Azelik in Niger, from which Ingall was founded, which preceded Agades (Bernus and Cressier 1990). Western Songhay, its closest relative, has Timbuktu as its most important urban centre (Heath 1999). Songhay would have been the language of cultivators – those who had to stay in town year-round – and the interface with sub-Saharan Africa, while Berber was the language of the nomads and the interface with North Africa. Towns like Timbuktu and Taghaza (though not Teguidda) were dominated by Sanhaja (Masufa) elites, according to the explicit testimony of Ibn Battuta (Hopkins and Levtzion 1981); this might have motivated bilingualism in Songhay. But the Sanhaja's position in these towns was connected to their highly lucrative ability, attested to by Ibn Battuta, to guide caravans through the desert spaces between the towns. To maintain the geographical knowledge and political connections required to cross the desert safely, even permanent town-dwellers would have had to cultivate close links with their nomadic cousins, who in turn would have to maintain some level of control over those spaces. There would have been little motivation for either group to abandon a language that emphasised their most prestigious role.

However, with the rise of the Songhay empire and the westward expansion of the Tuareg, the Sanhaja were gradually politically marginalised. By about 1600, their main claim to prestige came from a different domain – the religious scholarship of families such as the Aqīt (Hunwick 1999: xxvi). Their scholars' pursuit of learning was in large part undertaken in Songhay-speaking cities where they could meet other scholars, notably in Timbuktu but also in Agades and around Teguidda, as described in Norris (1990). At the same time, those cities retained their commercial significance: their livestock markets (still active today) would have attracted herders, while for would-be entrepreneurs they remained important nodes in the trans-Saharan trade. This would have reversed the social meanings of the languages: Western Berber was associated with political weakness, while the Songhay of the towns had become a useful asset for the pursuit of religious knowledge and profit alike (and the Classical Arabic of education was strictly confined to the classroom).

Some Western Berber-speaking nomads must have sought to identify themselves with the new Tuareg holders of nomadic political power, or at least to find a subordinate role within their political units; either process would have been facilitated by adopting their language. An alternative strategy was available, however: those with a reputation of Islamic scholars could claim a higher status than ordinary vassal groups, and demand a modicum of respect from the powerful. Such a strategy is well-attested further west for Moorish society, where groups defeated in the battle of Sharr Bubba seem to have avoided a complete loss of status in part by emphasising their identity as religious specialists (Ould Cheikh 2008: XXV), and a similar scenario is postulated for the Kel-Essouk in the seventeenth century by Moraes Farias (2001: cxxxvii). Given the new emergence of scholarly circles centred on the towns, we may postulate that the spoken language that could most effectively assert that identity was the Songhay of those towns. For the Igdalen, the most immediately accessible urban Songhay variety – which they probably already spoke as a second language, if only for use at markets – would certainly have been that of Teguidda and then Agades. For the Idaksahak, centred further away from major urban centres, the choice would have been less obvious, but might well have been influenced by that of the Igdalen. Both groups would thus have adopted Northern Songhay as part of their effort to emphasise their maraboutic status. The Idaksahak's shift to patrilineal parallel cousin marriage, a practice associated with Arab tradition, would have been part of the same effort to express a new, more Islamic identity.

This hypothesis presupposes a context rather different from the present, of course. Agades has shifted to Hausa since the late nineteenth century, and Northern Songhay is no longer a lingua franca. More problematically, at present, the most prestigious maraboutic tribe close to the Idaksahak seems to be the Tuareg-speaking Kel Essouk. Whether they were Tuareg-speaking from the start or shifted from Western Berber to Tuareg, their current position might lead one to expect that the Idaksahak might have followed their lead, switching to Tuareg rather than to Songhay. The fact that they did not suggests that their closest

religious ties were with other centres. This should be testable in principle by examining Idaksahak religious leaders' silsilas (intellectual genealogies), but no such data is vet available.

Much other work remains to be done. Archeological investigation - abundant further east for the Ingall region (Bernus and Creissier 1983) and becoming available even for Tadmakkat/Essouk proper (Nixon 2009), but still in its infancy for Idaksahak territory - might provide evidence for or against a change in the role of the towns in surrounding nomads' lives. Genetic sampling might be able to test and quantify the hypothesised links with Western Berber groups, although such sampling would probably be inadvisable until questions of ancestry become less politically sensitive in the region. Better data on the vocabularies of Tetserrét and Tadaksahak might make it possible to apply a Wörter und Sachen approach to cast more light on the cultural changes associated with language shift among the Idaksahak. Until such cross-disciplinary data becomes available, however, the hypothesis outlined in this section can only remain a speculation useful for the research questions it suggests, rather than a conclusion to build on.

7 Conclusion

Western Berber has played a significant role in Northern Songhay history alongside Tuareg, but this role is quite different from language to language: in Tadaksahak and possibly Tagdal it is the primary substrate, and in Korandjé the earliest superstrate, while in Tasawaq and Emghedesie it appears to have had no significant impact. This article demonstrates that the emergence of Tadaksahak cannot be accounted for in terms of Tuareg-Songhay contact alone, and proposes a model for the emergence of Tadaksahak in terms of language shift away from a no longer prestigious Tetserrét-like Berber variety followed by extensive contact with Tuareg, a process which seems to have been accompanied by broader cultural change including a shift in marriage preferences from cross-cousins to patrilineal parallel cousins. It also, more tentatively, proposes a motivation for these linguistic and cultural changes: the desire to reinforce a valuable but vulnerable identity as specialists in Islamic learning. The linguistic and sociolinguistic environment indicated for the medieval Sahel shows important differences from that of the nineteenth century – a reminder that, in Africa as elsewhere in the world, any study of language contact needs to take historical change seriously, rather than projecting back an idealised anthropological present.

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