1 Methodology
- a lot of previous work on language contact in Africa, but mostly on
  (a) “micro-level” contact, hardly ever with continental scope - exceptions: Greenberg (1959, 1983) and Heine (1975, 1976)
  (b) contact between languages unrelated in Greenberg's (1963) lumping classification

1.1 Feature classes
- in the order of importance:
  (1) "cross-linguistic quirks"
    - typologically highly marked (e.g., clicks)
      - cf. Gensler (2003) regarding their potential for historical linguistics
        > decreases recurrent chance occurrence
  (2) "continental diagnostics"
    - corroborate hypothesized area
      - typologically far less remarkable, but with a clear areal patterns in Africa, e.g.,
        word order (Heine 1975, 1976), sound features like nasal vowels
  (3) subareal features
    - significant and confined to the wider area
      > potentially define local centers of innovation

1.2 Feature criteria
(a) sufficient amount of clustered geographical distribution in at least one area
(b) empirical evidence of transferability
(c) must not correlate with genealogical boundaries
  - crosscut/extend over family boundaries
  - divide languages of the same family
> identification of areally significant isoglosses is in the first place a function of the
genealogical language classification
> modern genealogical classification in and outside the discipline (cf. Heine and Nurse 2000) based on Greenberg (1963) - just 4 super groups - MAP, Figure 1
  - against common assumption, as defective in many respects as his classification
  attempts in other areas of the world (Pacific, Americas, Eurasia)
CONGO-KORDOFANIAN (= Niger-Kordofanian) (1500/>10)
Niger-Congo
(= West) Atlantic
Mande
Voltaic (= Gur)
Kwa
Benue-Congo
Adamawa-Eastern (= Adamawa-Ubangi)
Kordofanian
NILO-SAHARAN (200/20)
Songhai
Saharan
Maban
Fur<sub>SL</sub>
Chari-Nile
Eastern Sudanic
Central Sudanic
Berta<sub>SL</sub>
Kunama<sub>SL</sub>
Koman
AFROASIATIC (300/6)
Semitic
Egyptian<sub>SL</sub>
Berber
Cushitic
Chadic
KHOISAN (30/5)
Southern African Khoisan
Northern
Central
Southern
Sandawe<sub>SL</sub>
Hatsa<sub>SL</sub>

Note: SL = single language, (...) approximate number of (languages/family level units)

Figure 1: Greenberg's (1963) classification of African languages

- major problems of classification > MAP
  - Khoisan (KS) not a proven unit, rather 3-4 independent lineages
  - Nilo-Saharan (NS) not a proven unit,
  - Niger-Kordofanian (NK) only safe in a more narrow sense of Niger-Congo (pace Williamson and Blench 2000), excludes Mande, Atlantic, Dogon, Ijoid, Kordofanian (cf. Stewart 1976, Bennett and Sterk 1977)
  > no super-group NS+NK (Gregersen 1972, Blench 1995)
  - large linguistic area is alternative to unproven genealogical "super-group"

1.3 Feature survey

- identified features surveyed across all sufficiently known lineages of the continent
  > classification: frequent, occasionally present, absent
- major problem: lack of data on individual languages and whole families
> particularly serious in eastern and east-central Africa (many small lineages and larger fragmentation zones: genealogically diverse, isolates) and the domain of Nilo-Saharan

1.4 Identification of areas

+ linguistic area:
  wide sense = distribution of features according to a "compact" geographical entity
  > independent of historical explanation
  narrow sense = distribution of features according to a "compact" geographical entity, which is not well explained by genealogical inheritance > "contact area"

Step (I) Identify a geographical linguistic distribution!
Step (II) See whether you can explain it (historically)!

+ two types of areas
  (1) genealogically and typologically homogeneous areas > (recent) spread zones
  (2) large-scale clustering of isoglosses across unrelated languages/language families
    - quirks > continental diagnostics
    - avoid feature interdependence (e.g. word order correlations, medial~final verbs in verb final languages, etc.)

2 The proposed macro-areas of Africa

(I) Berber spread zone
(II) Chad-Ethiopia
(III) Macro-Sudan belt
(IV) Bantu spread zone
(V) Kalahari Basin

+ linguistic profile of a contact area unlikely due to a single historical process
> feature spread usually not clearly tied to a single/dominating lineage
> feature may be present from very early on by founder effect seeping up from substrate into colonizing layer > "features sit, populations move in"
> macro-areas determined by historically more stable factors:
  - trajectories of spread/diffusion (where/in what direction is contact facilitated or not?)
  - availability of potential sources/"hotbeds" of change

+ one larger area unaccounted for: southern Sudan, Uganda, Kenia, northern Tanzania:
  expansion area of the Nilotic family "framed" by 3 fragmentation zones
- serious lack of data
- some apparently diagnostic features, but areaally largely inconclusive:
  - verb-initial languages (Heine 1975, 1976)
  - consonant features (Schadeberg 1987)
  - marked nominative case system (König 2008)
Map: Modern linguistic Macro-areas in Africa
2.1 Macro-Sudan belt
Güldemann (2008), = Greenberg's (1959, 1983) “core area”

2.1.1 Genealogical composition

<table>
<thead>
<tr>
<th>Family</th>
<th>Stock</th>
<th>Greenberg's supergroup</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE</td>
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<td>Kwa</td>
<td>Niger-Congo</td>
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<tr>
<td>Benue-Congo (except Narrow Bantu)</td>
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<td>Adamawa-UBangi</td>
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<td>Nilotic</td>
<td>East Sudanic</td>
<td>NS</td>
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</table>

Table 1: Families partaking in the Macro-Sudan belt

2.1.2 Features
+ labial-velar consonants (Maddieson 2005c) > MAP
+ ATR vowel harmony (Hall et al. 1974, Dimmendaal 2001, Maddieson 2005g) > MAP
+ logophoricity (Güldemann 2003) > MAP

(1) Kera (Chadic, Afroasiatic)
a. \( w \) minti \( tó \) kőoré vs. 3M.S. QUOT 3M.S.LOGx go.away
b. \( w \) minti \( w \) kőoré
3M.S. QUOT 3M.Sy go.away
Er sagte, daß er weggehe [he said he would go] (Ebert 1979: 260)

+ word order S-(AUX)-O-V-X (Gensler and Güldemann 2003) > MAP

(2) Koranko (Mande)
\( ù \) sì wò là-bùì yì r Ǝ
1S PROSPECTIVE that.one CAUS-fall water in
I'm going to throw her into the water (Kastenholz 1987: 117)

+ three and more level tones (Clements and Rialland 2008, Maddieson 2005d)
+ vowel nasalization (Hajek 2005)
+ implosives, does not separate off the Bantu spread zone (Maddieson 2005a)
+ sub-areal features, i.a.:
  East: word order V-O-NEG (Dryer forthcoming) > MAP
  labial flap consonants (Olson and Hajek 2003)
  West: verb serialization
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<thead>
<tr>
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Notes: Family column: grey cell = families of the wider area; bold = families of the core area
Feature columns: dark grey = frequent, medium grey = present, light grey = rare, blank cell = absent or unknown

Table 2: Distribution of Macro-Sudan features across African lineages
2.2 Chad-Ethiopia

= Heine's (1976) “Chad-Ethiopia”

+ least secure, necessary search for more features
  - but difficult to survey due to lack of data on isolates and small families
+ Ethiopia (Ferguson 1976) only as a sub-area
  > questionable as area in the first place (Tosco 2000)
  > unlikely a "residual zone" in terms of Nichols (1992)
  > genealogically homogeneous: Cushitic + Semitic

2.2.1 Genealogical composition

<table>
<thead>
<tr>
<th>Family</th>
<th>Stock</th>
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</table>

Table 3: Families partaking in the Chad-Ethiopia area

2.2.2 Features

+ complex predicates with generic auxiliary (Güldemann 2006) > MAP
  - a final, semantically generic auxiliary verb ('do', 'be (like)', 'become') as inflectional base converts a content sign "expressive", short quote, loan, noun, adjective, adverb, verb) into a predicate/verb
  - tendency to merger into one phonological word

(1) Afar

a. tässé-iyy- become happy
b. kowkäw-iyy- chatter

ON: chatter-AUX-

c. fäk-ka hay-’e open-CF AUX-2S/3F.S-PERF
   vs. fäk-’e open-2S/3F.S-PERF
   you/she opened  you/she opened
   (Hayward 1996: 541)

- auxiliary verb often used also as quotative verb
+ verb-final syntax, largely with associated features > MAP
  > continentally diagnostic: only four other isolated cases in Africa (Dogon, Ijoid, Sandawe, Khoi-Kwadi)
+ three or more cases on nouns = peripheral case in the sense of Blake (1994)
  (Dimmendaal 2005: 72-3, Iggesen 2005)
  > continentally diagnostic despite correlation with verb-final syntax (Nichols 1986):
    all other verb-final lineages in Africa (see above) without peripheral case
+ other candidate features:
  - polar question marker as verb affix (Dryer 2005)
  - missing /p/, does not separate off the Berber spread zone (Maddieson 2005f)

2.3 Kalahari Basin
Güldemann (1998): linguistic area before Bantu expansion

2.3.1 Genealogical composition

<table>
<thead>
<tr>
<th>Family</th>
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<th>Greenberg's supergroup</th>
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<tbody>
<tr>
<td>CORE</td>
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<tr>
<td>Khoe-Kwadi (includes &quot;Central KS&quot;)</td>
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<td>KS</td>
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<tr>
<td>Ju- Hõa (includes &quot;Northern KS&quot;)</td>
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<td>Tuu (&quot;Southern KS&quot;)</td>
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<tr>
<td>Narrow Bantu (Benue-Congo)</td>
<td>Niger-Congo</td>
<td>NK</td>
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</tbody>
</table>

Table 4: Families partaking in the Kalahari Basin

2.3.2 Features
+ clicks as phonemic speech sounds, backbone of consonant system (Maddieson 2005c)
+ preferred phonotactic pattern of root: \( C_1 V_1 C_2 V_2 \) (clicks in \( C_1 \) (Güldemann 2001)
+ ejective and aspirated stops (Herbert 1987, Güldemann 2001)
+ vowel nasalization (pace Hajek 2005)
+ register tone languages
+ head-final genitive irrespective of clause order (Güldemann 1999)
+ productive noun compounding \( > \) noun suffixes, mostly host-final morphology
+ no subject cross-reference on the verb
3 Discussion

3.1 Long-term stability
- Nichols' (1992) idealized area types (spread vs. residual zone) with a certain amount of expected historical stability > but questionable for African macro-areas
- language spreads (and other factors like, e.g., climatic changes) can seriously affect size and shape of an area (and possibly even change an area’s profile)

3.1.1 Chad-Ethiopia
- large wedge due to Arabic expansion
  > synchronically questionable
- size at margins due to expanding families: Saharan in the west, Cushitic in the east
  > area originally smaller?

3.1.2 Macro-Sudan
- features repeatedly in some areas/families in the east: Nuba mountains, Omotic, separated by Nilotic+Surmic
  > area originally larger?

3.1.3 Kalahari Basin
- recent shrinking with Bantu expansion (since 2000 BP)
  > synchronically questionable
- recent expansion of Khoe-Kwadi a little earlier; leaves just Ju- Hõa and Tuu, which might turn out to be genealogically related
  > Earlier character as spread zone?
- Bantu expansion separated Kalahari Basin from East Africa > §3.1.4

3.1.4 Eastern + southern Africa
- eastern Africa (+ partly Afroasiatic) and southern Africa share diagnostic features >
  MAP
  - clicks (Maddieson 2005c)
  - uvular plosives (Maddieson 2005e)
  - ejectives (+ Chadic) (Maddieson 2005a)
  - lateral obstruents (+ Chadic) (Maddieson 2005b)
  - head-final genitive and related morphology (Güldemann 1999)
  > former macro-area along and east of the Rift valley down to southern Africa?

3.2 Correlation with geography
+ Campbell (2006: 16) denies geography to be a determining factor of linguistic areas:
  “... it is the diffusion that is of prime importance, and ... the geographical aspect of putative ‘linguistic areas’ is derivative.”

+ inconsistent results in Africa in line with Campbell (2006)?:
?YES: Kalahari Basin and Berber spread zone = dry areas of southern and northern Africa
? Chad-Ethiopia, Bantu spread zone, Macro-Sudan
3.2.1 “Tropical diversity”
- northern and southernmost parts of Africa are overall less diverse in terms of:
  - number of languages
  - number of genealogical lineages
> conforms with a world-wide pattern of tropical diversity (Nettle 1999)

3.2.2 “Macro-topography”
- major topographic “barriers” like the Rift valley influence trajectory of movement of and contact between populations (cf., also Rocky Mountains and Andes in the Americas)

3.2.3 “Latitudinal spread”
- Macro-Sudan belt delimited by:
  - the Atlantic Ocean and the Congo Basin in the south
  - the Sahara and Sahel in the north
  and less clearly by:
  - the Atlantic Ocean in the west
  - the escarpment of the Ethiopian Plateau in the east
- geographical east-west axis pattern largely corroborated by other African macro-areas
- agrees with Diamond's (1999) model for global human history, particularly regarding the considerable differences between continental areas
> historical dynamics in the long term decisively determined by an area's orientation of its geographical axis, due to climatic and ecological conditions
> spreads are facilitated in an east-west direction, but inhibited in a north-south direction

+ possible measurement of a language's axis of typological proximity by means of WALS
> above profile partly corroborated: Macro-Sudan + "turbulence" at Rift valley > MAP

References


Iggesen, Oliver A. 2005. Number of cases. In Haspelmath et al. (eds.), 202-205.


