BK1 alias ‘Proto-Potou-Akanic-Bantu’— a study of diachronic syntax*

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Guarda le cose anche con gli occhi di quelli chi non le vedono più!

[Try to look at things through the eyes of those who don’t see them anymore]

Pirandello, Calligrafie e personaggi (1915)

1. From diachrony to synchrony

John Stewart followed up his SOAS doctoral “thesis on the Akan (Fante) verb” with studies on “phonological topics in Kwa languages” and “the reconstruction of Kwa and beyond and related topics in related languages” (Mous 2008, 71). So far so good—setting aside tendentious use of the term Kwa in a sense that Stewart rejected—for the Leiden obituary, which gives top scientific billing to the 1967 discovery of cross-height vowel harmony, out of a list of three dozen publications plus a famous preprint. But the writeup’s conclusion can’t resist belittling Stewart’s radical streak with faint and false praise:

In many of his articles and conference contributions he would posit an original and challenging hypothesis and work it out with utmost rigour, not hesitating to reject some of his own earlier proposals. He enjoyed the academic debate, appreciated challenges to his proposals while he felt frustrated when there were no reactions. Particularly in the field that was very dear and important to him, the reconstruction of Volta-Congo and ultimately Niger-Congo, he regretted the fact that so few people joined him in the strict application of the comparative method to the reconstruction of West African languages. In the later years of his academic life he concentrated on this immense task and continued to publish on it until his body gave up. His fascination with this topic dates back to his SOAS years and can be seen as an extension of the work by Guthrie but at a higher level and with superior methodology.

(Mous 2008, 72)

It would be wrong to accept this condescending caricature of an obsessed and quirky toiler whose self-assigned Herculean labors surpassed his physical stamina. (It probably applies better to me.) Stewart’s most appreciable contributions, briefly revisited in this section, make a serviceable tripod supporting a compelling alternative to conventional Africanist wisdom. As sketched in §2, they coincide in a model of Benue-Kwa history and synchrony consistent with the so-called epigenetic theory of grammatical self-organization—an attempt to reconcile the logical necessity of universal grammar with the empirical existence of a large, nonisomorphic parameter space of natural languages (Gianollo & al. 2008, cf. Niyogi & Berwick 1996; Keenan & Stabler 2003). Finally §3 samples a few testable consequences for individual Benue-Kwa clusters and §4 accounts for the parameter.

1.1 Rejection of “New Kwa”

If “so few people joined [Stewart] in the strict application of the comparative method to the reconstruction of West African languages”, a good guess as to why is that his research contradicted Williamson (1989). Under the labels “New Kwa” versus “New Benue-Congo”—from both of which the disambiguating “New” was dropped by early adopters—Williamson demarcated an exclusive subgroup comprising Akan and Gbé. This nonstarter revision of the Niger-Congo family tree relied on wordlist counts based on Swadeshian cognation, some of which even fall below the invalid method’s own margin of error (Bennett 1979; Armstrong 1983, 146f.; Campbell 1998, 186). So, “Wha daur bell the cat?” (Hlisop 1868, 314). Stewart’s original discovery of massive Neogrammarian sound change—the gold standard of historical linguistics—proved that ‘Bantu’ is much closer to Akan than to Gbé. “[It] has proved extremely difficult to find regular sound correspondences across Edo and Akan…It has in fact proved much less difficult to find regular sound correspondences across Akan and Proto-Bantu…” (1994, 176, cf. Cape 1985).

Williamson also described herself as a Neogrammarian and eventually conceded the point, dissolving “New Kwa” back into “Benue-Kwa”, the union of Greenberg’s Kwa and Benue-Congo treated once again as a “dialect continuum” (Williamson & Brench 2000, 17f.). This was in fact the correct position of the field as late as April 1982 at the 15th West African Languages Congress at the University of Port Harcourt, when the Benue-Kwa Working Group chaired by Prof. Gerhardt agreed that no revision of Benue-Kwa be made unilaterally or without strong evidence. But Williamson’s muted backtrack from “New Kwa” eleven years after its launch was less effective than the withdrawal of “New Coke” and splashy relaunch of the “Classic” version. Some of the current confusion can also be blamed on the entrenched prior commitments of others, for example Professor Schadeberg who managed to ‘disappear’ (in the Latinamerican, causative sense of this word) Williamson’s recantation from the current Bantuist handbook, drawing a Niger-Congo stemma which repeats the New Kwa/New Benue-Congo division of Williamson (1989) in a graph shly labeled as “Adapted from William & Blench (2000)” (2003b, 155).

Such covert resistance is predictable, and it’s sneaky for Mous to impress that Stewart’s “strict” results had scant impact, when Williamson herself was ultimately convinced.


Transcription is orthographic (an old generative tradition) and colonial spellings are normalized if possible; some imprecise forms appear in double quotes. Tonemarks are [‘] = high, [’] = low, but marking conventions differ by Benue-Kwa (BK) subgroup correlated to prosodic type as discussed in §2. In BK2 (Gbé, Yorùbá, Nupe, Ido) with 3 lexical tones, no mark = mid, but in BK1 (Akan, Edó, Igbo, Tiw, “Bantu” &c) with only 2 lexical tones, no mark = same as preceding and a sequence of two high marks = downstream starting on the second (Christaller 1875), e.g. Edó oníôkín. If necessary to distinguish the two conventions when juxtaposing BK1 and BK2 forms, the pitch labels H, L, and M (downstep juncture) are added. Following Bainbridge (1966) and Ámaya (1976), downstream preceding nonhigh is marked by a word-internal period, e.g. Yorùbá ìòókàn ‘possessor of ìòó [the ocean]’ and the same convention generalizes to a non-spreading juncture between high and a following low, e.g. Yorùbá ìòókàn ‘possessor of an ìòó [clay cauldron]’ vs. ìòókàn ‘possessor of an ìòó [oracle sign]’, Édó nádá ‘yesterday’.

1. Scarce quotes around Bantu are justified even by the current Bantuist handbook, which frankly admits that it’s “impossible to draw a clear line between Bantu, however defined, and non-Bantu Niger-Congo” (Nurse & Philipsson 2003a, 5, cf. Bennett 1983; Marten 2006).

2. Williamson & Blench added a second label “East Volta-Congo” for this protolanguage, as a muted shout-out to Stewart (1976).

3. But maybe the deception was unconscious and Schadeberg did not intentionally betray the previous occupant of his own Leiden chair.
1.2 Discovery of tonal feet

Equally radical, and equally diverted from the mainstream in the interest of maintaining Kuhnian “normal science”, was Stewart’s “unified approach to (intonational) downshift or automatic downstep and (phonologized) downstep” (Mous 2007, 72). As revealed by Schachter’s and Welmers’ uncomfortable individual comments appended to the tone manuscript, an analysis positing a syntagmatic “relation between two successive highs” (Stewart 1965, 66) independent of any intervening low goes beyond the class of entities expressible under a taxonomic approach (Pike 1948). Nothing changed in this respect when the paradigmatic toneme was reclothed in generative roles (Goldsmith 1976), because autosegmental melodies don’t dispense with pitch-change diacritics and can’t predict their distribution (Clark 1988). Stewart’s syntagmatic approach inspired a dissident literature anchoring tones to metrical structure in various ways (Huang 1980; Odden 1988; Sietsema 1989; Bamba 1991; Ladd 1993; Manfredi 1993; Idsardi & Purnell 1997; Akinlabi & Liberman 2001; Dilley 2005), but most tonologists avoided this implication by demoting tonal feet to a post-grammatical, phonetic scaling effect of “intonation” or “tonal register” rather than as evidence for underlying representations (Clements 1979, 1981; Connell & Ladd 1990; Làniran 1992, Bird & Stegen 1993; Ladd 1993; Liberman & al. 1993; Leben 2001).

Stewart’s invocation of typology for comparisons of this kind constructively entails a theory of possible tone system—something alien to modern phonology which prides itself on being “different” (Bromberger & Halle 1989)—and Benue-Kwa evolution as discussed in §2 confirms the that tone patterns respect general cognitive constraints on concatenation of lexical items, e.g. as argued for vowels by KLV (1985). As with Stewart’s historical reconstructions, so too his postulation of abstract structural similarities between prosodic systems is not as eccentric as Mous wants to think. Although the comparison of Ākan and Hausa downstep was explicitly rejected by Schachter (Stewart & al. 1965, 38-40) it soon became uncontroversial (Fromkin 1972; Inkelas & Leben 1990), and the suggestion that Yorùbá also be considered as a “terraced level language” (1965, 65) was strongly adopted by one of Welmers’ own students (Courtenay 1968) following the independent arguments of Båthgöse (1966b; cf. also Armstrong 1968).

1.3 (Re)discovery of serial object sharing

If the generative framework of Stewart’s tone paper could be missed by casual readers, the same can’t be said of his paper on serial verbs, which despite the lack of explicit formalism deploys trademark terminology like subject and object deletion, “semantically empty derivation” and “zero object pronoun” (1963, 147, 149). Again it’s not hard to fathom why the antigenerative Mous makes no mention of Stewart’s leading role in introducing Chomskyan theory to African universities, opening the way for indigenous generative papers on Benue-Kwa syntactic structures with Boadi (1968) and Awóbúłáyí (1969). As often happens with early work in a fresh paradigm, the ratio of ideas to words was high in Stewart’s note of scarcely five pages, observing a long list of object-sharing effects which had escaped collective scholarship since Christaller (1875). These remain problematic for core assumptions like the uniform base hypothesis, even after decades of notational inventiveness (e.g. Baker 1989; Collins 1997; Larson 2005; Ògie 2009).

2. Another crossroads: the speciation of grammar

Expanding the metaphor from geometry to geography, Stewart’s three aforementioned discoveries were encountered on three eccentric paths. Pursued just a little further according to their own internal logic, these ways converge in a proposal which I made in a 2005 handbook chapter, or more precisely a draft which—coincidentally or not—also remains a “preprint” today. I suggest that Stewart’s three lines intersect at a scenic viewpoint on Benue-Kwa languages in which historical relationship, prosodic type and format of VP concatenation are not independent or modular properties of grammar as standardly assumed. Instead they can be treated as causally related correlates of a more elementary cognitive mechanism: the human computational system hypothetically includes phased cyclic spellout (Chomsky & Halle 1968; Chomsky 2001; Scheer 2008b), which acquires primary language data from an initial state (protolanguage) whose specific structural properties are filtered for the learner by a range of grammar-external forces including the widespread process of inflectional erosion (Kiparsky 1971; Keenan 2002). Unless the correlations cited here are only accidentally repeated across a vast area and population at the core of the world’s most diverse language family, their learnability poses a theoretical problem for which the crossroads of Stewart’s triple roads affords a plausible perspective.

2.1 BK bifurcation revisited

Since Westermann it’s been an open question how to reconcile the strong morphosyntactic diversity of the linguistic area eventually covered by the labels Kwa and Benue-Congo (Greenberg 1963; Williamson 1989), collectively Benue-Kwa (Givón 1975; Elugbe & Williamson 1977) and hereafter BK, with the weak traces of quantal discontinuity detectable by standardized, translation-based tests of superficial lexical resemblance (e.g. Bennett & Sterk 1977). Westermann’s Kwa was initially based not on shared lexicon but on the typological property of isolation, i.e. prevalence of bare roots taking the role of a minimal free forms (1927, 20). The dichotomy “Sudanic = isolating, Bantu = agglutinative became fundamental for African linguistics” when it was observed that the western side of the BK zone shows “an advanced state of decay and the extensive loss of affixes” (Greenberg 1963a, 37). Three proposals to accommodate these facts are contrasted in (1), in which individual language names abbreviate cacophonous cluster labels in “-oid”.

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4. As before let’s ignore a tendentious morsel of conventional wisdom from Mous, in this case that all downsteps are phonetic in origin.

5. Cf. Troubetzkoy’s conjecture to the effect that “Avec une même structure grammaticale ne peuvent se combiner qu’un nombre limité des systèmes phonologiques” (1939, ccxii). [Only a subset of possible phonological systems are compatible with a given grammatical structure.]
Large scale dialect continua presumably exist, hopefully arising under replicable demographic conditions, and as mentioned above Williamson’s ultimate hypothesis jointly with Blench (2000, 17) treated the entire BK agglomeration in that way, notably retracting from Williamson’s “New” (1989) lexicostatistic split. But a continuum is less plausible in view of nonlexical data. For example, longstanding observations of a roughly west-to-east cline within this enormous zone, between the agglutinating and isolating extremes of word formation, suggest that systematic restructuring must have occurred at some point, even under the extreme view that this change could be limited to the enriched PF component of Halle & Marantz (1993). The empirical question is where and when the innovation(s) occurred, and the theoretical question is what brought it about (cf. Williamson 1985; Hyman 2004). A second reason to doubt the continuum comes from historical phonology, that “strict” topic of Stewart’s “immense…fascination” (Mous 2008, 72).

2.2 Restructured roots

An important distinction in (1) is that both of the earlier classifications assume a simple linear segmentation of BK, but this is not the only possibility, and it turns out that Stewart’s phonological evidence demands a different kind of explanation. Lexicostatistics is easy but can’t tell an archaism from an innovation even on good day, whereas reconstruction is hard but when rigorously carried out can reliably say whether, e.g., the higher level of cognition observed between Akan and ‘Bantu’ than between Akan and Gbè is due to shared retention or to mutations shared by Akan and ‘Bantu’ of which Gbè knew not (or potentially to a combination of both). Standard drift theory already requires the former state of affairs, because a noncontiguous common innovation is statistically righ impossible, and this inference is independently confirmed by the phonetic patterns of Stewart’s “Potou-Akanic-Bantu” (PAB).

Taking just one of the simplest correspondences sets from Stewart’s big database (1993, 2002), and supplementing it with outcomes in a few other major BK clusters which he did not reconstruct to PAB, (2) shows for coronals that PAB’s reconstructed 4-way stop contrast was reduced by half in BK2: both Gbè (BK2) and Yorùbá (BK2) preserve only a 2-way split in the root onset. But Igbo (BK1) preserves the historic distinction between four consonants in this position.8

\[
\text{Bantu-Potou-Tano} = \text{Potou-Akanic-Bantu} \\
\{ \text{\`s voiced, \`g glottalized} \text{ e.g.} \{ \text{\`t, \`d, \`j, \`g} \}
\]

(2)  

The least that can be concluded from this distribution is that Akan and Gbè share no common history after dissolution of the BK protolanguage, whose archaic members can be conveniently referred to as the remnant BK1. Note that the bare facts in (2) don’t suffice to explain phonetic evolution in the respectively innovative group BK2, but the subjective picture is clear of massive BK2 restructuring of inherited roots in the simplifying direction where segmental shape is concerned. This much already reaffirms the doubts expressed by Capo (1985) and endorsed by Stewart (1994) about the utility of Williamson’s (1984) vowel merger theory for Yorùbá, since it’s not surprising for ‘catastrophic’ phonetic change in roots to erase vestiges of ancient vowel harmony sets, and Capo seems right to insist that high unexpanded root vowels may be an archaic in some BK clusters, but that this is not the case in Yorùbá where the phenomenon has a secondary and more recent origin.9 Sound shifts crosscutting BK1/2 have not been found.

Additional direct evidence disproving “New Kwa” includes a velar-to-labial shift uniquely shared by Gbè and Yorùbá.10

\[
\begin{array}{ccccccccc}
\text{Gbè} & \text{Yorùbá} & \text{Nupe} & \text{Idomà} & \text{Akan} & \text{Igbo} & \text{Edó} & \text{“Proto-Bantu”} \\
\hline
\text{hunger (v.)} & \text{-wù} & \text{-gùn} & \text{-mù} & \text{g(h)ù} & \text{-g(h)ù} & \text{-gù} & \text{“s圭’d ‘seize’} \\
\text{hunger (n.)} & \text{ehi} & \text{ezi} & \text{éè} & \text{f(h)é} & \text{*-g(h)à} & \text{-gù} & \text{*-gò} \\
\text{‘journey’} & \text{bò} & \text{-wù} & \text{òò} & \text{-gà} & \text{g(h)à} & \text{-gà} \\
\text{‘needle/thorn’} & \text{ábi} & \text{ábèbè} & \text{ékin} & \text{ìgù} & \text{g(h)ìg(h)à} & \text{-gì} & \text{1993, 34, 2002, 219}, as is the palatalization in the Nupe and Igbo forms of ‘journey’ and the Idomà form of ‘thorn’.

Not illustrated above, along with consonant simplification BK2 underwent corresponding enrichments in the prosodic contrasts on a single root syllable, for example in the number of “tonemes” counted in the most conservative way possible. The various members of the Gbè cluster chose a highly varied set of compromises between ‘full tonification’ and other lexical prelinkings of

6. At a presentation of a draft of Manfredi (2010) on 1 November 2008, Professor Mous objected to my inclusion of Kru in BK1 as in (1), but failed to cite falsifying data or to respond to later email requests for same, in the absence of which I conservatively follow Greenberg (1963a).

7. The expectation, which I must insist confirms in both Nupe and Idomà, the other BK2 clusters.

8. Igbo falls outside the western penumbra of ‘Bantu’ by the traditional definition of that fuzzy set, even though it has the supposedly Bantu feature of a present perfect in ‘iže’ (Nurse & Philipsson 2003b, 176f). The question stays moot until unique ‘Bantu’ innovations are identified.

9. Reconstruction of pharyngeal (also known as “ATR”) harmony to PAB was first argued by Stewart & v. Leynseele (1979).

10. Here dotted -g(h)- denotes aspirated [g], whereas dotless -g- is fricative [ʃ], and the nonroman vowel symbols of Gbè and Akanorthographies have been Nigerianized with subdots. All Gbè data in (5) are Eué. The Akan devoicing is regular (Stewart 1993, 34, 2002, 219), as is the palatalization in the Nupe and Igbo forms of ‘journey’ and the Idomà form of ‘thorn’.
2.3 Restructured grammars

The phonetic restructuring hinted in (2) and partly illustrated in (3) accompanied a fourfold mutation of grammar, comprising two inaudible interpretative traits (4a-b), one piece of audible morphology (4c) and something traditionally seen as narrow phonology (4d) but which looks more like prosodic linking as stated in the immediately preceding paragraph. I’ve claimed (2003b, 2005, 2009) that the trigger for the lot, and thus for bifurcation of PAB=BK(1) into BK1#2, was suffix erosion, a language-external process interfering with the learnability of (4c).

(4a) A finite eventive predicate with minimal inflection is either present-perfect or past.
(b) Aspectually unrelated events are excluded from a single clause.
(c) Minimal finite inflection is an aux/proclitic particle, not a suffix or root-borne tone pattern.
(d) At least three surface tones contrast on roots of the same category.

4 minu settings: \{Kru (74a), Akán, Êdó, Igbo, Bantoid…\} = BK1
4 plus settings: \{Gbè, Yorùbá, [Nupe (74a), [Idómá (74b)]…\} = BK2
mixed settings: \{ \emptyset \}

The following paradigms contrast all four traits at once.12

Yorùbá (BK2)

(5)a. Ṯògè-è ṭò ìgé (*jáldè).
N.-FIN ask I. exit
‘Ngègè (has) asked ìgè (*and then left)’
LLL-H M LL (*HLM)

b. Ḯgè-è Ḹè gbè agbón (bááyà).
L.-FIN lift basket thus
‘Ilè (has) lifted [a/the] basket (now)’
LL-H H ML (HLLH)

Igbo (BK1)

N. ask.FIN-CL I. (exit-AFF).
‘Ngège asked łe (and then left)’
LLL L-I. LL (L-H)

b. Ỉgè vu-ru ábó (*ǹghụ á).
I. lift.FIN-CL basket now
‘Ìgè lifted [a/the] basket (now)’
LL L-I. HH (L-H I)

As stated in (4a), BK languages differ in the tense outcomes of a minimally inflected clause: (5) but not (6) allows a present perfect reading in addition to simple past (Awọyálé 1991, 201). The extra option in (5) can be foregrounded by adverbs (bááyà ‘thus’, ni itún yí ‘right now’) or preverb particles (gègè ‘just’, ń ‘from’) of temporal deixis (Abraham 1958, 99, 320, 614, 639f).13 For an accomplishment like ‘lift a basket’, (5b) is true even if the basket remains held aloft (Ş. Adéṣòjól, O. Ajóbòjú p.c.), but the same entailment is blocked in (6b) where inclusion of ǹghụ a ‘now’ yields ungrammaticality (I. Ìbíòjú, C. Ìbíchùkú p.c.).

The difference just described eludes a syntax-free, E-language analysis of similar sentences in these two languages, whereby “[p]erfective forms (simple nonstative verb) are interpreted as referring to the past” (Comrie 1976, 82, citing Welmers 1973, 346f). Short of conveying a ‘semantic parameter of Aktionsart, the contrast proves that the mapping from aspect to tense is not a direct default to semantics (Comrie après Reichenbach) nor to pragmatics (Dowty 1986). Neither is it possible to appeal to a crosslinguistic difference in tense-marking, because the suffix pronounced -ny in (6) lacks temporal content: as is well known, it fails to deliver a past interpretation in case the lexical predicate is static, e.g. adjectival -ńń țiń ‘fat’ or psych/P-based -kópò ań ‘hate’.14 I conclude that the only relevant, audible asymmetry between (5) and (6) is scopal: (5) but not (6) is auxiliated, cf. (4c).

In standard Yorùbá, the aux element glossed FIN is pronounced as a pitch accent (lexically spurious H tone) on the right edge of a nonclitic subject (Abraham 1958, ǹc; Awóbùláyí 1975). Linearization of FIN consistent with the spellout of the phase head T

11. For logistic reasons most of this subsection and the following are cribbed unadulterated from Manfredi (2005a, 2009).
12. At risk of redundancy, the tonemarking conventions adopted in this paper can be reviewed with these data. In <Yorùbá> MLH, unmarked syllables are mid. The H tone glossed FIN is normally written on the last syllable of the subject, thus in (6) <Ngège> LLLH, but this is not phonetically distinct from a more analytic transcription [ŋɛ́dɛ̀] LLLH thanks to regular tone spread (Akinlabi & Liberman 2001). In the BK1 convention due ultimately to Christaller (1975), an unmarked syllable has the same pitch value as the previous mark, thus in (7) <Ngège> represents [ŋɛ́dɛ̀] LLL. A downstep precedes the second H mark in sequence, as in the Igbo nominal <ǹgɛ̀jɛ̀> ‘sky’ representing [igion] HH.
13. In (5), ñ/ń has been described as marking “perfective tense” (Bàńǹgbọ́ẹ̀ 1966a, 94f, cf. Abraham 1958, 639), however a homophonous item shows up obligatorily with certain adjuncts (Abraham 1958, 640; Carstens 1986b), be they in- or ex-situ (ii, iii), suggesting an analogous structure for (i) with a null deictic reference time foregrounding one of the readings described in (5).

(i) Ngège-è tìjọ [“now”].
N.-FIN TI go
‘N. has already gone’

(ii) Ngège-è [ti Èkó ] lọ.
N.-FIN TI Lagos go
‘N. left from/via Lagos’

(iii) [Ní ǹghụ wọ́] ní Ngège-è tìjọ [tı]? at time which COMP N.-FIN TI go
‘When did N. go?’

14. To label the item pronounced -ny in (6) a past tense suffix (Green & Igwé 1963, 54; Nwàchùkwụ 1976) is to posit a homophonous nonpast item in complementary distribution. Better a non-tense analysis of this morpheme, either as null aspect (Welmers & Welmers 1968, 76; Eménnánjó 1978; Manfredi 1991), affirmative polarity (Carrell 1970; Williamson 1983; Òlánláà 1988; Déchéhà 1992) or an aspectually active argument-type elide (Déchéhà 1991; Manfredi 2005b). The choice of label is irrelevant to (4c) so long as the item has finite distribution.
(Manfredi 2010b) suffices to explain the tense difference at hand, as shown by an independent fact also cited by Comrie: in Yorùbá as well as (northern) Igbo the bare durative aux is compatible with either past or nonpast topic time. The items in question are Yorùbá à and Igbo ná (Abraham 1958, 433 ex. 1e; Eménarjọ 1978, 174).15 But many southern Igbo dialects form progressives with a suffix not an aux, and these unauxiliated progressives are never ambiguous as to tense (Eménarjọ 1985, 122-25; Déchaine 1991). Conclusion: H glossed FIN in (5) is indeed an aux, not a sprinkle of phonology, and counts as a scope-taking element, because it stands in complementary distribution with the set of irrealis auxes including future and clausal negation (Oyèláran 1982; Awóyále 1991; Déchaine 1992, 1995). In Standard Yorùbá the same irrealis auxes which block auxiliary H also trigger 3sg subject pro-dnp, perhaps diagnosing a Case split since 3sg accusative happens to be segmentally null (Manfredi 2003a, 2010c).17 Affirmative FIN takes prosodic shape also in Igbo, but its position and pronunciation are opposite from what was just described for Yorùbá: Igbo FIN synchronizes with the predicate root itself, and its effect is suppression of root H, not addition of nonlexical H. This difference can be understood as Igbo deaccenting of the roots àjí ‘ask’ and àÌù ‘carry’, versus Yorùbá accenting the head of TP.18 In this way, (4c) captures the fact that Yorùbá but not Igbo locates the clause’s point of greatest morphological redundancy (Kaye 2003) to the predicate’s left, causing Yorùbá- but not Igbo-learning infants to conclude that the minimally inflected clause contains a tense-related aux—an ‘extra’ scope gallop which can freely anchor to topic time, even though the verb’s event is construed in the past.

(4d) is uncontroversial (Green & Igwé 1963; Bàmìgbọsé 1966b; Akinlábi 1985), setting aside asymmetries in toneme distribution (Manfredi 1993, 1995, 2003, 2004). (4b) refers to the ungrammaticality of the parenthesized serial predicate in (5), versus its counterpart in (6) which is fine. Bàmìgbọsé (1974, 28) was the first to discuss this difference, observing (7a), (7b) is parallel, with the second predicate transitive. The Igbo equivalents of both are fully grammatical (8a-b) and no less “serial” (Uwaláåka 1982; Manfredi 2005a) notwithstanding the popular E-language label of “consecutive construction” (Hyman 1971, Lord 1973, Stewart 1998; Baker & Stewart 2002).

3. Predictions

(4) claims that all the BK languages sort themselves into one or the other camp, Yorùbá-like or Igbo-like, as to the four traits. This is true to the limit of available descriptions. (4a) holds in Ìdómọ (Armstrong 1963, 143f). It’s unclear in Standard Nupe, but seems to hold in the north of the cluster in Gbagyi (“Gwari”), where “yesterday” and “before yesterday” forms are built on a morphological present perfect (with object shift) plus modifying auxes (Hyman & Magaji 1970, 57). In BK, by contrast, the recent/remote past distinction is orthogonal to the difference between past and present perfect in Àkan, Èdọ and Igbo, and probably also in traditional “Bantu” (Welmers 1973, 348). (4b) holds in both Fn-Gbè (da Cruz 1997, 31) and in Nupe (Stewart & al. 2000, 3):

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<tr>
<th>Yorùbá (BK2)</th>
<th>Igbo (BK1)</th>
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<tbody>
<tr>
<td>7a. Mo ta iṣu (<em>wa</em>). 1S sell yam come I(‘ve) sold [the] yams (<em>and came/come</em>)</td>
<td></td>
</tr>
<tr>
<td>b. Mo se ẹran (<em>ta báta</em>). 1S boil meat sell shoes I(‘ve) boiled [the] meat (<em>and sold [the] shoes</em>)</td>
<td></td>
</tr>
<tr>
<td>(8a). Mí rè-re ji (wè-è) bya. 1S sell.FIN-CL yam take-AFF come.AFF ‘I sold [the] yams and (then) came’</td>
<td></td>
</tr>
<tr>
<td>(8b). Mí shel-ri ànu (wè-è) re-è shuù. 1S sell.FIN-CL meat take-AFF sell.FIN-CL shoe ‘I boiled [the] meat and (then) sold [the] shoes’</td>
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<td>10, 11. Ṣokú sọ àṣìn ikí yi axí mt. K. take crab PL go market interior ‘K. has brought the crabs to the market’ Musa du etsi (<em>gi nakàn</em>). M. cook yam eat meat ‘M. has cooked [the] yams (<em>&amp; eaten [the] meat</em>)</td>
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</tr>
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</table>

15. In Yorùbá, Awóyále (1991, 201f) reports that any past reading of bare à must be habitual, not progressive, but this does not alter the aux’s basic durative meaning, on which habitual is parasitic. A second example of the same effect is the element màà, which in a non-finite context cannot occur without accompaniment of an explicitly durative aux, yielding either [à màà] or [màà à] (Oyèláran 1989).

16. Relying on Comrie’s summary of Welmers, Hornstein imagines that “in some languages the same morpheme marks the past and the present tense” (1990, 216 fn 25) and takes this to support Reichenbach’s rich temporal meaning postulates, but that’s mistaken: real tenseslessness (temporal ambiguity) in BK requires auxiliary scope, i.e. it’s a configurational property not attributable to morphological ‘marking’ by itself. Perhaps recognizing this, Comrie’s second draft on “tenseless languages” (1985, 50-52) drops all Niger-Congo data.

17. Overt FIN is blocked, in the Yorùbá examples in (7), by the overtly nominative subject clitic. After a nonclitic subject, Yorùbá orthography usually glosses over the presence of FIN, whose phonetic linearization is subtle and requires instrumental study: for example, after nonclitic subjects of certain tone patterns such as ML, it may be less audible on the subject to its left than on the predicate root to its right (F. Adékéyé p.c.)—perhaps as an effect of foot structure (Manfredi 1995). Another example could be the “optional” (Bàmìgbọsé 1966a, 35) occurrence of FIN before à, the prospective aux:

(i) Èró/Èró à pọ. crowded PROS plentiful ‘There will be many people’

(ii) Won/Won à pọ. 3P PROS plentiful ‘They will be numerous’

18. The analysis of FIN’s lowering effect in Igbo as phonology somehow triggered by the clitic –ru (Goldsmith 1976, following Welmers 1970, 51) can’t be true, because the distributions are independent: the appearance of CL is compositionally determined by predicate Aktionsart and sentential aspect (Manfredi 2005a), whereas FIN marks a unauxiliated, finite indicative affirmative with any aspectual content, so Igbo has unlimited examples of FIN-lowering in the absence of CL.
(4b) has the BK1 value throughout the macro-Ákan cluster (Christaller 1875; Stewart 1963; van Leynsele 1979; Dolphyne 1988; Campbell 1988; Sáah 1992, 1995; Larson 2005), and the same goes for “all [Bantu] languages for which there is adequate data” thanks to a “consecutive tense”—comparable to the non-initial predicates in (6) and (8)—with the requisite properties of being a finite “dependent form” (morphologically distinct from an infinitive) in which “tense distinctions are neutralized” i.e. supplied by the preceding verb (Nurse 2003, 101f).

(4c) is challenged in Gbè by a range of suffixed main verbs (Fabb 1992; Kinyalolo 1992; Abob 2004), but on second thought all these are either overtly auxiliated progressives (Mïñá-Gbè, Fn-Gbè), or else generic/nonreferential (Gên-Gbè, Èvè-Gbè). To refer to either past or future, the generics need a suppletive aux—a stative modal lexically related to a predicate meaning ‘remain’ (Westermann 1930, 75f)—but such suppletion is absent in the suffixless generics of Yorùbá. Overall, the fact that Gbè sentences can have zero overt inflection—prosody included—is more consistent with a positive value for (4c) than a negative one, assuming that infants allow null finite inflection as a last resort, localized by scopal considerations in the Middle Field. Apparently this bias can be undone by slight audible counter-evidence like the Igbo version of FIN described above, or the “final vowel” which is “part of [Bantu] inflectional morphology” (Schadeberg 2003, 71) in complementary distribution with finite aspectual -ile (Meinhold & al. 1932, 45). In sum, Gbè shows that the unmarked value of (4c) is the one chosen by BK2.

Potential counterexamples to (4d) are few and unconvincing. Mambila (Bantoid) is called “a language with four level tones” (Connel 1996), but uninflected roots of predicate type choose from only two distinct pitch values (Connel 2000, 167). Similarly, Kamba and Chaga (of “narrow Bantu”) possess “four tone levels” only by counting “secondary superhigh and superlow” (Kissebirth & Odden 2003, 59, my italics). In certain varieties of Gbè, as mentioned above, the M/L distinction is fully reducible to phonation type (Ansre 1961) but only if syntactic phrasing is taken into account (Stahlke 1971; Manfredi 2004). In BK2, ‘tones’ are more typically underspecified relative to position (Yorùbá onsetless prefixes can’t bear H, Gbè prefixes don’t contrast M and L) than they are to lexical category (as is the norm for BK1, see above). Such asymmetries matter, because the generalization in (4) cannot hold unless paradigmatic properties like tone contrasts are systematically related to morphosyntax.

Absent synchronic evidence for mixed values of the subrules of (4), I conclude that BK contains only two parametric states, BK1/2. Given the large population of BK languages, such a result is beyond the coincidence of drift, and is irreducible to gradient borrowing. The remaining possibility is common origin.

4. Explanations

The BK bifurcation hypothesis above claims that all the observed effects are consistent with a single shift in the domain of phase spellout, from relatively late (complement of C = TP) in BK1 to relatively early (bare VP) in BK2, consistent with the finding in other language families that that the timing of spellout can vary across closely related varieties (Barbiers 2009). This shift could easily also be formalized as loss by TP of the status of “extended phase” (den Dikken 2007), leaving VP as the default, except that phase extension technically assumes n—phase technically assumes n

The two inaudible—and probably not directly learnable—traits in (4) can be derived from late spellout, very briefly, as follows. For (4a), if tense in BK2 necessarily fills the Aux position glossed FIN in (5) above, and if semantic and phonetic phases run in parallel (Chomsky 2004, 107) then BK2 languages with minimal finite inflection get ‘two bites at the apple’ of temporal reference via pragmatic default: a ‘bare’ eventive VP receives a past denotation (Déchaine 1991 following Welmers & Welmers 1968, 76), but additionally null T can anchor to topic time (Enè 1987), and past plus topic time straightforwardly yields present perfect. For (4b), the generalization is that “a sequence of aspectually unrelated events cannot be expressed in a single clause... unless each root is either local to Tense or audibly tensemarked” (Manfredi 2005a, 13). In BK2 the second root fails this condition, hence its temporal reference is parasitic on the event structure of the first root, failing which it is uninterpretable.19

The inheritance of syntactic parameters such as the one whose effects are summarized in (4) has been independently argued to be possible in Indo-European and in general (Longobardi & Guardiano 2009). Note that the particular cluster of effects in BK need not ever repeat outside of BK: Perlmutter’s “null subject parameter” (1971) alias “pre-drop” works well for Romance minus French, relating null subjects to free inversion, absence of the comp-trace effect and presence of rich agreement, but it breaks down outside Romance in various ways, as extensively discussed by Biberauer & al. (2010), hence it’s not literally a parameter of UG anymore than (4) is. Pre-drop nevertheless has explanatory adequacy so long as it’s reachable from an initial state related to the independent inherited grammar of Indo-European with unification of agreeing clitics; in other Indo-European branches like Germanic it’s substantially lost through extrametric triggered change, though it remains very similar in others like Greek. As in BK, so in Indo-European, the respective parametric change was triggered by inflectional erosion, but with manifestly different consequences because of the different content of inflection in the initial state: if BK had ‘agreement’ at all (Kinyalolo 2004 vs. Baker 2008), it was morphologically speaking in a proclitic and not an enclitic position and hence much less erodable as such, whereas erosion of the bare finite affix triggered the default to small phases in BK2.

19. For some reason, irrealis/infinitival interpretation of the second root is impossible both in BK2 and in “Atlantic creoles” (Mufwene & Dijkhoff 1989, 326 fn. 26), although the situation in Mandarin is apparently different (Paul 2004).