In the Linguistic Paradise

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Ozo-mekuri Ndimele (Ed.)
Department of Linguistics & Communication Studies,
University of Port Harcourt, NIGERIA.

National Institute for Nigerian Languages, Aba
P.M.B. 7078, Aba NIGERIA
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56. The Inverse Construction in Yoruba

Victor Manfredi
Boston University
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Abstract
Bàígbọ́gè 1995 has drawn attention to a productive “middle ground” between theory and description in African linguistics. A potential example, which forms the basis of this paper, is the familiar paradigm of Case, Person, Number and Tense in Standard Yoruba (section 2 infra). My argument is that the licensing of person agreement in pronominal clitics, subject and object, reflects the interaction of agreement and Case at a representational level which determines both pronunciation and interpretation. Such a level, which Rizzi & Savoia 1992 dub phonosyntax, is hypothetically excluded in Minimalist frameworks (Chomsky 1995). Thus, regarding inferences from data to theory, Yoruba may be taken to support Rizzi’s non-Minimalist architecture of grammar (section 1.3), together with extensions of Hale and Keyser’s (1993) category framework which I believe to be incompatible with Minimalism (section 1.2). Equally crucial, my account, though more neutral between phonosyntax and Minimalism, is a large corpus of work in the phrase structure of closed-class elements, a.k.a. functional categories (section 1.1). As for theory-to-data inferences, which are also indispensable to Bàígbọ́gè’s middle ground, there are far more questions than answers for now, but I hope to have reduced the set of problems which Yoruba inflection poses to learnability. At a sociological level, this paper has the goal of reducing the alienation between phonological and syntactic communities, as well as between AAA linguists (African Africanists in Africa) and theoreticians.

1. Theoretical context
Analogous changes have appeared in phonology and syntax since the first major syntheses of generative, rule-based work in the two areas (SPE = Chomsky and Hale 1968, LGB = Chomsky 1981). In both cases, derivational complexity was swiftly traded in for enriched structural representations, in the form of autosegmentalism and functional categories respectively. In the past decade, despite growing professional distance between syntacticians and phonologists, economic pressure from the privatization of research and tertiary education sectors has driven both subfields into more computer-friendly frameworks guided by (appropriately-named) economy principles, yielding OT (optimality theory, associated with Paul Smolensky and Alan Prince in a burgeoning literature of the email-samizdat) and Minimalism. Along with this ongoing decampment into AI labs and cognitive science programs, however, have come a number of retreats from explanatory goals which classically defined the dialectical tension between theory and data. For example, the concept of underlying representation, which is inconvenient to implementation by massively parallel distributed processors, is fully dispensed with in OT and – at least “virtually” – in Minimalism while the latter has shed a list of empirical domains such as morphology, head-movement (which had become the same thing by the late 1980’s) and relative clauses, to name the first few bags tossed over the side.

This paper asks whether the above parallelism is accidental, i.e. driven: purely by sociological considerations, or whether the representational revolutions in the two fields
opened the beginnings of an alternative path which can be tested through the *Igbo* irúmáli of data. Consider some recent developments in syntax.

### 1.1 Phrase structure

The goal of LGB —following Edmonds 1976, Jackendoff 1977, Stowell 1981—to reduce phrase structure to the projection of grammatical categories required a fuller theory than the skeletal *V, *N of Chomsky 1970. Fukui 1986 and Abney 1987 exploit the divide between open-class (lexical) and closed-class (functional) items. Abney develops insights of Lyons 1977 and Brame 1981, 1982 on similarities between articles and pronominal clitics, leading to the DP-hypothesis: English possessive NPs are both endocentric and clausal, directly expressing the homology between nominalizations and their sentential counterparts without violating lexical assumptions, cf. (1)

(1a) SPEC DP D

(1b) SPEC TP T

the enemy's destruction of the city

Fukui on his part married functional categories to parameters, holding that lexical categories (*V, *N, *A, *P) are universal, but functional categories differ cross-linguistically in the ability to license specifiers, giving a principled difference between *John's book* and its Japanese counterpart *hon... John-no*, cf. (2)

(2a) SPEC DP D

(2b) SPEC DP

John's book

Fukui also broached a generalization across the lexical-functional divide, to the effect that Case (assigned to a lexical complement) and agreement (assigned to a functional specifier) are manifestations of a single property Kase.

Work of this kind stimulated the search for more f-cats, preparing the way for Pollock's (1989) exploded-IP treatment of affix-hopping in English and French in terms of distinct maximal projections of Tense, Agreement and Negation, cf. (3)

In English, a lexical verb always follows negation in finite context (*do-support*), and adverbs precede a finite verb or follow the *V P*, but in French all finite verbs precede negation (*pas*) and adverbs, a lexical infinitive follows negation and precedes or follows adverbs, but a non-lexical infinitive also optionally precedes negation. This distribution follows in (3) if movement to finite *Agr* is abstract in English, whereas movement to finite *Agr* and *T* is concrete in French, crossing both the head of NegP and the presumed adjunction site of VP-adverbs. French lexical infinitives raise overtly and optionally, in this schema, to *Agr*, while infinitive auxes can raise overtly all the way to *T*. In this way, the intricate differences in linear order of verbs, Neg and adverbs in two languages can be expressed in terms of simple differences in overt movement, which in turn are reducible to 'strength' parameters: English finite *Agr* is weak, French nonfinite *Agr* is weak but finite *T* and *Agr* are strong. The price of this marked simplification is accepting that the left edge of the sentence contains more than one or two phrasal projections of closed-class items.

Such a price was driven down in the syntactic market of the late '80s and early '90s as newly-coined f-cats flooded in: ForceP, FiniteP, FocusP, TopicP, PredicateP, AssertionP, ModalityP, OuterAspectP, InnerAspectP, SubjectAgrP ObjectAgrP, Indirect ObjectAgrP & c. With less proliferation, including DemonstrativeP, NumberP, DegreeP, and KaseP, the nominal extended projection looks underdeveloped by comparison. Another popular option was to let functional phrases iterate, suggesting to Elan Dresher (in his column in the newsletter GLOT) a comparison with so-called junk DNA, those apparently meaningless gene sequences which enfold informative genetic material.

Fukui's original idea was to restrict specifiers to a parametric subset of f-cats, but a countervailing drive to uniformity begot the VP-internal subject hypothesis, which has the subject of VP project in its SPEC, whence it raises to surface subject position (e.g. SPEC of IP). Commensurately, Case theory was uniformitized to apply only in the SPEC-head configuration (later, Chomsky's "checking domain"), wiping out Fukui's Kase theorem aforementioned. At a stroke, syntactic government lost a major *raison d'être* as the head-complement relationship became irrelevant to Case. The most pressing motivation for VP-internal subjects (4a) was the proper formulation of theta theory, representing the valency (argument structure) of a predicate as an ordered list of theta roles attached to a lexical head (4b).
1.2 Origins of argument structure

Stowell's project had been to derive D-structure from theta-roles. The embarrassment was that the list of such roles remained arbitrary, open-ended and resistant to clear ordering such as was indispensable to asymmetrical projection. Turning the problem on its head, Hale & Keyser 1993 deny the primacy of theta-roles vis-à-vis syntax, in the view that it may be easier to catalogue them as surface interpretive labels. This leads them to reinvigorate Fukui's principled dichotomy between the X-bar properties of lexical and functional heads. Their category theory attributes lexical SPECs only to prepositions and adjectives, which are thereby (+predicate). A second lexical feature (+complement) picks out P and V. The resulting matrix is non-isomorphic to Chomsky's, cf (5a) vs. (5b).

(5a).

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  r  c  d  e
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p complement verb
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  +  -  P  A  n +  A  N
  +  -  V  N  o  u  n -  V  P
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(b).

Something forces the subject to project higher than the object within VP, so that this base asymmetry can be reproduced in the functional domain (i.e. above VP) via Case-driven movement. The standard solution was to posit a universal hierarchy of roles, plus a battery of (partly language-specific) linking rules to effect alternations like dative shift. Clearly, the drive to X-bar uniformity across the lexical/functional divide placed an ever-greater burden on theta-theory, and opened a new vista of A-movements from SPEC to SPEC. Paradoxically, however, this move made D-structure increasingly irrelevant, since it became an arbitrary way-station between lexical properties and functional superstructure. Before reviewing these implications, let me present an alternative.

1.3 Streamlining the T-model

As with cars, so with grammars: it doesn't matter where the engine is, so long as the wheels turn. But also like automotive design, not every new model is different under the hood (bonnet). Continuing the logic of section 1.1, Minimalism denies the existence of properties which would motivate the derivational Levels of DS and SS (recall Hale's dismissal of the phoneme 40 years before). Linear order is a phonetic property determined without regard to scope (c-command), so that (6a) is synonymous to (6b), while by Adéwojé (1993), (7) is ambiguous. This move is computation-friendly, and was anticipated by GPSG, a counter-move by Kayne 1995 would reduce linear order to scope, since after all the two correlate unproblematically most of the time.

(6a). Kini ó rí mbẹ?

b. Ò rí kini mbẹ?

(7) Gbogbo wa kọ délẹ

At stake is the flow-chart which succeeds to the T-model of LGB (8a). If the specifically syntactic levels (DS, SS) are to go, the result is a horizontal reduction as in (8b), where the derivational terrain shared by pronunciation and meaning ends at an arbitrary point Spellout (SO). But if the lexicon contains the syntax of lexical heads (informally, "little syntax") then the syntax of functional heads ("big syntax") defines a second, specifically syntactic, representational level. Embedding Hale and Keyser within Minimalism brings us back to (8a), whereas detaching it gives (8c).
The further claim, that phonological and syntactic licensing are interwoven, rebuts a very productive research tradition which assumes that the relationship is indirect (Nespel & Vogel 1988). Rizzi & Savoia 1992 tie the distribution of [u] in Italian dialects to the relation of syntactic government, and not to some mediating prosodic categories. More radically, an influential non-mainstream tradition (practiced mainly in Montréal, Leiden, London & Vienna) holds that phonological representations are not merely influenced by syntactic government, but that they are themselves constituted by government relations among phonological elements. Vigorously contested by Hale, this doctrine that “phonology is not different” also underpins (8c).

Summarizing, while 1970’s generativists were much exercised over the status of inaudibility (of e.g. [u] and other phonetically empty items), in the 90’s it is audibility (SO) that carries the largest conceptual burden. Where deletion rules once ruled, now it is the era of defaults, resumptives and other last resorts. These at least are among the theoretical concerns which orient the following discussion. From this perspective, the best outcome would be if evidence from Kwa languages can be brought to bear on the choice between (8b), (8c) and other modularization of the language faculties.

2. Descriptive Issues

Consider the pattern in (10) - (13) below. With a bare verb root (10) or a verb-like aux (11), a non plural first person subject is pronounced mo, but this is not possible with other auxes as in (12) and (13). In the latter instances, the same subject

specification spells out as mi or its ordinary reduced variant (u)n -- a presumptive accusative which is correspondingly impossible in the former context. Correlated with this split in 1s is the absence/presence of pro-drop in 3s, as well as the presence/absence of tonal subject agreement (H) in 3p. The second singular, by contrast, is uniform across this inflectional divide. The asymmetry is explicitly stated in (14).

1s go I go 3p.ago go ‘I went’ ‘you went’ ‘they went’

1s fut go 1s fut go 3s. agr fut go 3p. agr fut go ‘I’ll go’ ‘you’ll go’ ‘she’ll go’ ‘they’ll go’

1s fut go 2s fut go 3p. fut go ‘I’ll go’ ‘you’ll go’ ‘their’ll go’

1s neg go 2s neg go 3p neg go ‘I didn’t go’ ‘you didn’t go’ ‘they didn’t go’

(14) a. Nominative 1s subject = overt 3s subject = 3p. tonal subject agreement
b. Accusative 1s subject = 3s subject pro-drop = no 3p. tonal subject agreement.

The empirical status of this pattern can be approached from several angles.

2.1 Synchronic generalization

According to Oyelaran 1982/92, the contrast between máa and yóó/kó exemplifies a more systematic bifurcation among standard Yoruba auxes, on the basis of which Décheine (1992, 1993) proposed a structural distinction. One set (15a) is apparently compatible with material in T (the head of TP), assuming that this is the location of subject tonal agreement (traditionally called HTS), while a second set (15b) would by this reasoning occupy T. A third type (15c) excludes all clitic subjects, for reasons yet obscure.

(15a). future máa
progressive a
perfective ti
modals: potential lè
obligatory gbódó
b. future yóó, (á)
negative kó
‘never’ kíí
conditional l bá
habitual a máa
Typological claims

Three theoretical puzzles have been alluded to thus far, based on (10) – (13):

(16) a. Why does accusative appear rather than nominative in (12) and (13) with a 1s subject?
   b. Why does it appear only with the putative T* auxes?
   c. Why does it appear only with a 1s clitic subject?

To begin with, the appearance of any accusative subjects at all in a language falsify the claim that it has a conventional, Latin-esque nominative-accusative case system. Unlike Latin, Yoruba lacks overt case forms of any kind with lexical arguments (as opposed to clitics), at least where structural case is concerned (genitive is audible before a consonant-initial noun). Thus, for the learner, evidence about the Case type of Yoruba is sparse indeed, so its assignment to a type is not obvious. This circumstance should encourage us to be radical in approach.

Talking up (16c), a first observation is that not every pronoun clitic has distinct accusative form. If 3s is in essence epenthetic, then the phonetic difference between nominative and accusative should be derivable entirely from context, at least the phenomenon of 3s object contraction (Mo: ri 'I saw 3s') encourages this view. As for 2s, the difference in vowel harmonic class between nominative o and accusative a may not be very strong, given that harmony has a syntactic dimension, and that one hears this things like O dâa (e.g. in Òyà). I have already speculated that 1p and 2p clitics are parasitic on their nonclitic counterparts, so cases is not needed to account for the distinction. And there is no distinction in 3p to account for.

If we are prepared to go this far, then we are effectively claiming that any available accusative appears with a T* aux, which brings us to (16b). Why could it be the other way around, i.e. accusative appearing with set (15a) and nominative with (15b)? Now, we already accept that the T* auxes are the ones which block default agreement (HTS), so suppose that it is default agreement which assigns nominative to SPEC, TP, then the failure of subject agreement blocks the licensing of nominative. Then, the appearance of accusative is consistent with several scenarios. Perhaps a nominative subject simply inherits the case-domain of the verb. The same outcome would also follow if we rehatchet Yoruba as an ergative-absolutive system, wherein absolutive is always the default. Some independent evidence along these lines includes the generalization of mi subjects after the ki complementizer (Awólóbólùyí, p.e). A more conventional view of the latter effect would be to say that imperative simp itself assigns accusative analogous to English for, but it is also true that imperative complements are nonfinite, mimicking the effect of a T* aux. This begins to answer (16a) or its reformulation in ergative-absolutive terms.

A residual mystery is why everything boils down to 1s as opposed to 2s in particular. Here I have no answer, but some consolation in that Yoruba is not alone. Algongian languages like Cree are famous for the inverse construction, where a 1 subject with a 2 object, or a 3 subject with either a 1 or 2 object is morphologically marked (apologies if I am misrepresenting the facts). This reduces to a person hierarchy of 2>1>3. We have seen that Yoruba 3s acts like a zero, and 2s is oppositely robust or uniform in its phonosyntax across all tense configurations. The sensitivity of 1s to the content of T* is less dramatic than that of 3s, but important in a different way because it opens the only morphological window into structural case in the language.
Notes

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