In recent years, discussion of language endangerment has reflected a largely quantitative turn. The popular press has fixated on number of remaining native speakers. Academic circles have focused on the reduced number of situational contexts in which a language is spoken. These come together in the Vitality Index of the questionnaire produced by the LSA Committee on Endangered Languages and Their Preservation. In a recent electronic mail message, Nicholas Ostler (1996) identified what might be called the Quantitative Paradox:

So we are left with the paradox that although everyone with hands-on experience of working with small languages believes that the majority of them are in danger, we can't actually demonstrate quantitatively that there is a general direction in which the juggernaut of world language populations is moving.

Quantitative measures, while revealing an overall schema of loss, may thus be too restrictive to identify new instances of language endangerment. Number of native speakers or number of usage contexts may not be our most reliable guides to endangerment, at least in Africa. Other signals of potential language loss need to be identified and recognized, such as qualitative structural changes across generations of speakers. This paper explores how structural innovations, in particular structural additions, may designate a significant level of language endangerment.

Before proceeding, let us consider another paradox, this time one affecting the languages of Africa. According to Brenzinger, Heine and Sommer (1991), minority African vernaculars are not in danger of being replaced by European languages, however, they are being replaced. If this is so, what is the nature of endangerment in Africa? According to Brenzinger et al., minority languages in Africa are being abandoned at an alarming rate in favor of more prestigious, major African languages. Partial support for their position arises from the fact that only 10% of the rural African population, which speak primarily minority languages, exhibit competence in European languages like English or French (Myers-Scotton 1982). Additional support comes from anecdotal assessment of the diminishing use of minority vernaculars across sociolinguistic domains (Dummendaal 1989). Despite the information gathered, Brenzinger et al. still maintain that knowledge of the extent and circumstances of language death in Africa is limited.

We turn now to the data at hand. Structural innovations in prose narratives produced by the Emai people numbering 25-30,000 speakers, the Emai speak an Edoid language in the Benue region of southern Nigeria. Although there are approximately 30 Edoid languages, no one language has been the subject of comprehensive linguistic description incorporating grammar, dictionary and texts. None of these languages is dominant either, which may account for the extensive use of Nigerian Pidgin English throughout the region (Elugbe and
One measure of the latter's penetration in the region is Marchese and Schuvalk's (1982) finding that in a large urban area children are acquiring Nigerian Pidgin English as mother-tongue. Further complicating the linguistic picture is the use of Standard Nigerian English as the official medium of communication in the mass media, government and education.

Linguistic conditions of the sort found in Bendel compel us to inquire carefully into the status of its individual languages. In the mid-1980's a comprehensive documentation effort was initiated with respect to Emai. As part of this, prose narrative samples were collected in naturalistic circumstances from storytellers recognized by their local communities. A total of 70 narratives were collected, their orthographic rendering and interlinear translation leading to 880 pages of Emai text. Of the 70 narratives, 63 were provided by storytellers in their 40's or 60's, another 7 by a storyteller in his 20's. It is linguistic innovations exclusive to texts of this youngest storyteller that will be assessed. They alternate with more standard structures found in narratives of older storytellers.

Linguistic innovations of two types occur in the narratives. Externally induced innovations reflect direct borrowing from English; they reveal linguistic changes resulting from intrusion of English into Emai. Internally induced innovations reflect analogical leveling or regularization; changes resulting in a loss of irregular structures within Emai. Both show an age constraint defined by the youngest storyteller, although only internally induced innovations show an absolute age constraint.

Table I Sample lexical items borrowed from English and found in prose narratives produced by Emai speakers of different ages

<table>
<thead>
<tr>
<th>English Item</th>
<th>Emai Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>'bathroom'</td>
<td>tbarum 'bathroom'</td>
</tr>
<tr>
<td>'gallon'</td>
<td>igawa 'gallon'</td>
</tr>
<tr>
<td>'coat'</td>
<td>ikot 'coat'</td>
</tr>
<tr>
<td>'car'</td>
<td>imato 'car'</td>
</tr>
<tr>
<td>'parlor'</td>
<td>ipalalo 'parlor'</td>
</tr>
<tr>
<td>'step'</td>
<td>istehpu 'step'</td>
</tr>
<tr>
<td>'corset'</td>
<td>ikoseng 'corset'</td>
</tr>
</tbody>
</table>

Further illustration of lexical level innovations with no age-constraint is found in the following examples from Emai prose narratives

1. a. o ké vádé, o ré awé ó vbi ibgedi 4
   'after he was coming, he put his legs on the bed'
A second subset of externally induced innovations reveals a definite age-constraint. Confined to narratives of the youngest storyteller, these contrast with those in Table I, since they consist of grammatical categories borrowed from English. Three of these grammatical category innovations are noteworthy.

One age-constrained externally induced innovation consists of the particle must, derived from English ‘must’. It functions in narratives of the youngest storyteller to convey deontic modality.

Standard Emai expresses deontic modality with three preverbal particles: the Predictive, Anticipative, and Hortative. They differ from epistemic modality particles not only in meaning but also in ability to induce high tone lowering in an immediately following verb.

3 a ọl̀i ọmọhẹ lọ e ọl̀i èmae
the man PRED eat the food
‘the man will eat the food’

b ọl̀i ọmọhẹ lọ e ọl̀i èmae
the man ANTI eat the food
‘the man is about to eat the food’
c. ọlọ́ ọgbe ọrọ̀ ọ́lọ́́ọ́lú ní ọ̀rọ̀, e ọ́lọ́́ọ́lú ọma
   the man HOR eat the food
   'the man should eat the food'

A second age-constrained external innovation is exhibited by the form anu, evidently borrowed from English 'and' In narratives of the youngest storyteller it conjoints coordinate clauses.

4. ọlọ́ ọma, ọ ma ụkpọkpọ ụlọ lọ́rọ́mọ́rọ́ ọma, ọrọ̀ ní èrì ọ má ū kérè gán ọsókhórókho
   the Olo this she have one R she like L all
   and SA ì CER do small that PF one H call it squirrel
   'as for this Olo, she has one of them whom she likes and indeed it is small
   It is that one they call the ground squirrel'

In standard Emai, and certainly in narratives produced by older storytellers, conjointed coordinate clauses are never overtly marked Indeed, Emai relies on zero marking for most of Payne's (1985) category cline for conjunction except NP S VP AP PP NP For instance, verb phrase conjunction, as indicated by the conjointed verbs ọmg and e in 5, does not allow any overt marker to surface, zero marking of the serial verb construction is obligatory

5. ọlọ́ ọgbe dé éma e
   the man buy yam eat
   'the man bought yam and ate it'

Noun phrases employ an overt conjunction marker The Comitative particle bu, as indicated in 6, conjoints noun phrases regardless of their number or grammatical position.

6 a. éwe bì ọgkhọ̀ váré
   goat COM chicken came
   'a goat and a chicken came'

b. éwe bì ọgkhọ̀ ṣi bì ṣiagbá bì ọsí váré
   goat COM chicken COM cow COM horse came
   'a goat, a chicken, a cow and a horse came'

c. ọjì okpo só záwó ọlọ́lo bì ọje
   the woman see Ololo COM Oje
   'the woman saw Ololo and Oje'

A third age-constrained external innovation affects argument position. It arises from verb borrowing, a phenomenon in the narratives which is infrequent. The cognition verb laiki, borrowed from English 'like,' places the Affected Experiencer in subject position In 7, the Affected Experiencer signaled by the pronoun ọ, occupies subject position.

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7 ọlọ ọlọ na, ọ mọg úkpokpá ọlọ láfi ọkọ ọrụ ụmụma 'as for this Olo, she has one from all of them whom she likes'

Standard Emai, in contrast, tends to place the Affected Experiencer of cognition verbs in direct object position, as shown by ọkọ ọkọ ọkọ in 8

8 a ọlọ́ úkpun ọghen ọlọ́ okposo
the cloth please the woman
'the cloth pleased the woman'

b ọlọ́ ọghen ọlọ́ okposo
the man please the woman
'the man pleased the woman'

Standing in contrast to externally induced innovations are those of a second type. In prose narratives of the youngest storyteller internally induced innovations occur which reflect rule generalization or analogical leveling. All examples of this type are age-constrained.

One example of an internally induced innovation concerns the grammatical marking of arguments associated with the speech communication verb ta 'to speak, say.' In narratives of the youngest storyteller, the Addressee of the verb ta is marked by the verb ụbịụkụ

9 ọgba isi ụbịụkụ kha tá ọtụta ụbịụkụ ụbịụkụ
ụgba ASS village HYP say word show village

obéamuchọghen, o tá ụbịụkụ ụbịụkụ ụbịụkụ ụbịụkụ
small-handed-one it speak show animal all TER

"When the Obia of the village spoke to the village, the small-handed one, it had already spoken to all the animals."

Standard Emai marks the Addressee of ta with the Applicative particle and a verb of hearing in a resultative construction. The Addressee precedes the verb ụbịụkụ 'to hear' and follows the Applicative particle ìlì, 10a, the latter requiring an indirect object pronoun, ain, 10b

10 a ọlọ́ okposo ta ọtụta ìlì ọlọ́ ọghen ọghen
the woman speak words APP the man hear
'the woman spoke to the man'

b ọlọ́ okposo ta ọtụta ìlì ìlì ọghen ọghen
the woman speak words APP him hear
'the woman spoke to him'

Direct object marking of the verb ta in narratives of the youngest storyteller also deviates from standard practice. It is accomplished with the third person direct object pronoun ọtụta.
11  isí  ó  o  tá  ġi.  isí  béeñ  údíñ  béeñ
pig  SC  H  speak-to  her  pig  start-F  palmtree  start-F

"the pig speaks to her the pig starts the palm tree starts"

Standard Enm does not admit pronominal marking of ta's direct object instead, it accepts only the cognate object noun éta, never a pronoun or even the indefinite noun émi.

12.a  ġli  okposo  tá  ëta  li  ġli  ómghé  hon
the woman speak word APP the man hear
‘the woman spoke to the man’

* b  ġli  okposo  tá  ĝi  li  ġli  ómghé  hon
the woman speak it APP the man hear

*c.  ġli  okposo  tá  émi  li  ġli  ómghé  hon
the woman speak thing APP the man hear

Verbs other than ta illustrate standard behavior for designating the contrastive marking of Addressee for speech and non-speech events. Verbs like zé require vbié for non-speech events and the construction lú hon for speech events.

13 a  ġli  okposo  zé  ġli  eín  vbíéé  ġli  ómghé
the woman disclose the secret show the man
‘the woman disclosed the secret to the man’

b.  ġli  okposo  zé  ġli  eín  li  ġli  ómghé  hon.
the woman disclose the secret APP the man hear
‘the woman disclosed the secret to the man’

In fact, in narratives of the youngest storyteller, Addressee marking for the verb zé in non-speech contexts is consistent with standard practice.

14.  ófélokhúa,  óghé  iná  zé  ġli  eín  na,  ó
giant-rat it PCT this-way disclose the secret this it
ó  zé  vbíéé  ívan  ó  zé  vbíéé  isi
it disclose show grasscutter it disclose show pig

‘as for the giant rat, it this way disclosed this secret, it disclosed it to the grasscutter it disclosed it to the pig.’

The verb ta, also in standard practice, admits Addressee marking only with it hon. Since it is limited to speech events, it does not accept the vbié marking characteristic of non-speech events. The youngest storyteller, one presumes, is regularizing the marking of Addressee by
resorting to the form vbígg regardless of a communication event's speech or non-speech character

15 a ọhọ okposo tá éta vbígg ọhọ ọghọhọ
the woman speak word show the man

b ọhọ okposo tá éta if ọhọ ọghọhọ hgn
the woman speak word APP the man hear
"the woman spoke to the man"

A second instance of internally induced innovation in narratives of the youngest storyteller appears in emphatic constructions. For this, repetition structures within the preverbal phrase are formed with the relative tense auxiliary ke

16 ọ rẹ ẹ ọhọ "a ẹn ẹ̣mè ọ lọ ụ
t SEQ say it one know what one PRED do
ébè ọgbẹn ọ ọ kẹ rẹ hama ná?
as leopard SC H ANT SEQ be-pregnant now

má kẹ kẹ yá kẹ sì kia ọgbẹn rẹ
we-NEG HYP ANT IG ANT draw near leopard R

"it then said, "is it known what we will do when the leopard is pregnant? We will not ever draw near it"

Emphatic structures in standard Emai, while also employing preverbal items in repetition structures, do not admit ke. Instead, standard emphatic constructions employ either of two preverbs in repetition: the distal manner deictic form iyẹ 'that way' or the additive aspectualizer gbo 'too, also'. A relative tense particle is never allowed. The youngest storyteller, through overregularization of a feature peculiar to two preverbal items, is thus beginning to extend the emphatic domain to particles not otherwise admitted in standard grammatical practice

17 a ọhọ ọghọhọ gbọ dóbọ ọhọ gbọ ẹ ọhọ émae
the man ADD REFL hum ADD eat the food
"the man by himself ate the food too"

b ọhọ ọghọhọ iyẹ dóbọ iyẹ iyẹ hián ọhọ ọrẹ
the man that-way REFL hum that-way cut the wood
"the man that way by himself cut the wood"

A third internally induced innovation shows the first person emphatic pronoun in argument positions. In 18, the emphatic pronoun meme occupies subject position
18. ñ rå ló wè "è e ke viè, mèng ri vbi uan" 
I SEQ tell you you PR ANT cry I be L here

ò rå ló "mèng ló sè sè !we sè niè" 
it SEQ say it I ANTI DUR reach house reach that-way

"Our mother," I tell you, "don’t cry, I am here I am here " it then said, 
"I am still about to reach the house ""

Emphatic pronouns in standard Ema1 never appear in argument positions They are confined to focus (19a) or topic (19b) position The youngest storyteller, it would seem, has regularized the distribution of mèng, relative to other personal pronouns, by placing it in subject position

19 a. mèng li ñ è gli émae
I PF I eat the food

‘it was I who ate the food’

b. mèng, ñ è gli émae
I I eat the food

‘as for me, I ate the food’

A final internally induced innovation in narratives of the youngest storyteller concerns failure of person agreement This condition particularly affects first person emphatic pronouns in focus position and their corresponding resumptive pronouns in a main clause In 20, the first person emphatic pronoun mèng or mèng in focus position is paired with the third person pronoun or in direct object position

20. u èn khu mèng ki á a eche of ñokho
you know IND I NF one H call it chicken

ò rå ló "èn" ò rå ló ñokho, mèng ú
it SEQ say it INT it SEQ say it chicken I you

ì niè kpay of tå èta ki ó q?
H that-way help it speak word NF it be

‘you know that it isn’t I whom one calls a chicken It then said, 
"OK" it then said, "chicken, it is I whom you helped speak, isn’t it?""

Standard Ema1 requires person agreement across these positions With mèng in focus position, the corresponding resumptive pronoun in direct object position should be ng, the first person object pronoun Again, it appears that the youngest storyteller is overregularizing use of the third person pronoun as the resumptive marker

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In conclusion, prose narrative productions in Emaliland evince linguistic innovation types which correlate with speaker age. Externally induced innovations reveal the intrusion of L2, English, into L1, Emal. A subset of these externally induced innovations are age-constrained since they appear only in narratives provided by the youngest storyteller.

Age-related, externally-induced innovations affect Emal’s structural system, its set of closed-class grammatical morphemes. Among these innovations are the borrowed forms and and must ‘must’. In contrast, non-age-related external innovations affect only the set of open-class lexical morphemes, the borrowing of noun forms like Ubedil.

Also affecting the system of closed-class grammatical morphemes is a set of internally induced innovations. Included among these are non-standard marking of arguments for the verb ta and agreement failure. For the youngest storyteller, both innovation types reveal erosion of substantive elements in the closed-class system. A major question which arises in this context is whether these innovations extend to the younger generation as a whole. At present, there is little reason to assume that they do not, particularly given the extensive use of Standard Nigerian English and Nigerian Pidgin English in Emaliland.

On the basis of these innovation types, we would like to argue that more than language shift is occurring. We regard these linguistic facts as suggesting a case of language loss in progress. In fact, our evidence suggests, contra Brenzinger et al., that European languages may be replacing indigenous vernaculars in rural West Africa. At this point, particularly given the analyses by Brenzinger et al., one might ask why Emal is vulnerable? After all, it is rural, not urban, it has a fair number of speakers, and it seems distributed across various sociolinguistic contexts. In response to this question we highlight two points. The first is the density principle noted by Romane (1993). She argues that languages are particularly susceptible to endangerment in geographic regions of high linguistic density. Emal and its Edo neighbors occur in such a region. These languages are found in Dalby’s (1977) Fragmentation Belt, a zone of extreme linguistic complexity stretching across Africa from Senegal to Ethiopia. The relatively high concentration of languages in Nigeria, particularly in the geographic region known as Bendel, showcase this density principle. A second point we wish to highlight is that within the Bendel region no one language predominates, there is no indigenous lingua franca. Nigerian Pidgin English and Standard Nigerian English have thus come to predominate in this area. And lastly, assuming the correctness of at least some of our analyses, it would appear that structural innovations in texts from speakers of different ages may serve as a guide to a significant level of language endangerment.
NOTES

1 Analysis of data incorporated in this paper was supported by grants to the first author from the National Science Foundation, SBR #9409552, and Southern Illinois University at Edwardsville and by a sabbatical leave from the University of Ibadan to the second author.

2 Orthographic conventions for Emai are consistent with those in Schaefer (1987), where o represents a half open back vowel, e a half open front vowel and b a voiced bilabial approximant.

3 Sample sentences are taken from Schaefer and Egbokhare (In Preparation).

4 Abbreviations used throughout this study include the following: ADD=Additive, ANT=Anterior, ANTI=Anticipative, APP=Applicative, ASS=Associative, CL=Change of Location, COM=Comitative, F=Factitive, H=Habitual, HOR=Hortative, HYP=Hypothetical, IG=Ingressive, IND=Indicative, INT=Interjection, L=Locative, NEG=Negative, PCT=Punctual, PF=Positive Focus, PR=Prohibitive, PRED=Predictive, REFL=Reflexive, SC=Subject Concord, SEQ=Sequential, TER=Terminal.
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