ear) I now began to think, and we talked with a woman, a girl. The girl refused and said, " No, I don't want to get I said, " I don't want to get married," when I arrived, in t want to get married at all." I left the girl alone, I tried y, (then) I left it alone. The girl is here today, that girl is marry, then, in here,[1] the girl I tried to marry is here, we he. We entered here into the car, this is she, sitting down, . Yes, the girl started and said, " Not me, my father has get married." Yes, I left it alone, I left it alone like that. imba dancing at night, there was dancing at the cilimba. I danced at the cilimba at night, again I spoke to her and aid, " I don't want it, my father has refused." I left her song to me, called " Mangwenjere ". Yes, they sang a jere ". But as for me I have finished the tale of the girl, because she refused. Now this is the girl, let her speak too. to sing,[2] it is as I have said, the story of this girl is thus.'

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s sitting beside him in the landrover when the recording was made. sing the song ' Mangwenjere ' mentioned earlier in his story.

DAHL'S LAW AND THAGICŨ

By PATRICK R. BENNETT

The hypothesis presented in this discussion has been gradual in its development. It may be said to have begun when I read in the discussion of Dahl's Law in Meinhof and van Warmelo (*Introduction to the Phonology of the Bantu Languages*, Berlin, 1932, page 183) the sentence, ' Cf. also Gikuyu, where Dahl's Law also appears to be at work.' From the work I had already done with Kikuyu it was clear that the change of k to g in certain environments in that language was what was meant ; but I at once rejected as improbable the suggestion of a connection with Dahl's Law, which was presented simply as the voicing of the first of any series of two voiceless stops. The phenomenon was admittedly similar ; but I saw no way to account for its affecting only the velar in Kikuyu, nor could I accept the possible inference from the statement that it might be the first step in the introduction of a general form of Dahl's Law into the language.

About a year later, however, I again began to consider the possibility of a connection between Dahl's Law and the similar dissimilation in Kikuyu. The work I had done with Kamba, which is so closely related to Kikuyu that the two are to a very large extent mutually intelligible, but lacks the Dahl's Law-like dissimilation of Kikuyu, would have made the identification of the phenomenon in Kikuyu with Dahl's Law seem even less reasonable ; that of two so closely related forms of speech one should have a rule of this sort of which no trace[1] exists in the other seems to me to point not so much to the retention of an old phenomenon in the one as to the introduction of the rule in question after the split between the two. Because of the geographical position, however, I could not even accept that it could be a recent introduction from another language, so that it would have been necessary to assume that it was an independent development, unrelated to Dahl's Law.

Work with Luhya, however, gave me an alternative to this conclusion. Luhya has a general form of Dahl's Law whose working has been very much complicated by the phonetic shifts the language has undergone. Seeing this, and noting the similarity of the phenomenon in Kikuyu as well as the differences in the phonologic situation, I found it possible to account fairly reasonably for the differences in respect to the phenomena in question on the basis of the differences between the two languages in the phonetic shifts undergone and their apparent ordering relative to one another, and concluded that the phenomenon in Kikuyu might be not merely similar to Dahl's Law, but also actually a form thereof.

[1] This is not quite accurate, as there are, as will be shown below, a very few words in Kamba which, when compared with their Kikuyu equivalents, seem to show the remains of an old k > g shift ; but in the vast majority of cases it is true that there is no sign of anything of the sort.

After, however, fairly intensive investigation of the interrelationships of the members of the group of languages or dialects to which Kikuyu and Kamba belong, in the course of which I had become aware of a large body of new and relevant data and had my estimate of the significance of some of those available earlier drastically revised, I found it necessary to alter my ideas about the history of Kikuyu considerably. It was, however, still possible to account reasonably for the divergent form of Dahl's Law in Kikuyu, and for those in the other dialects as well.

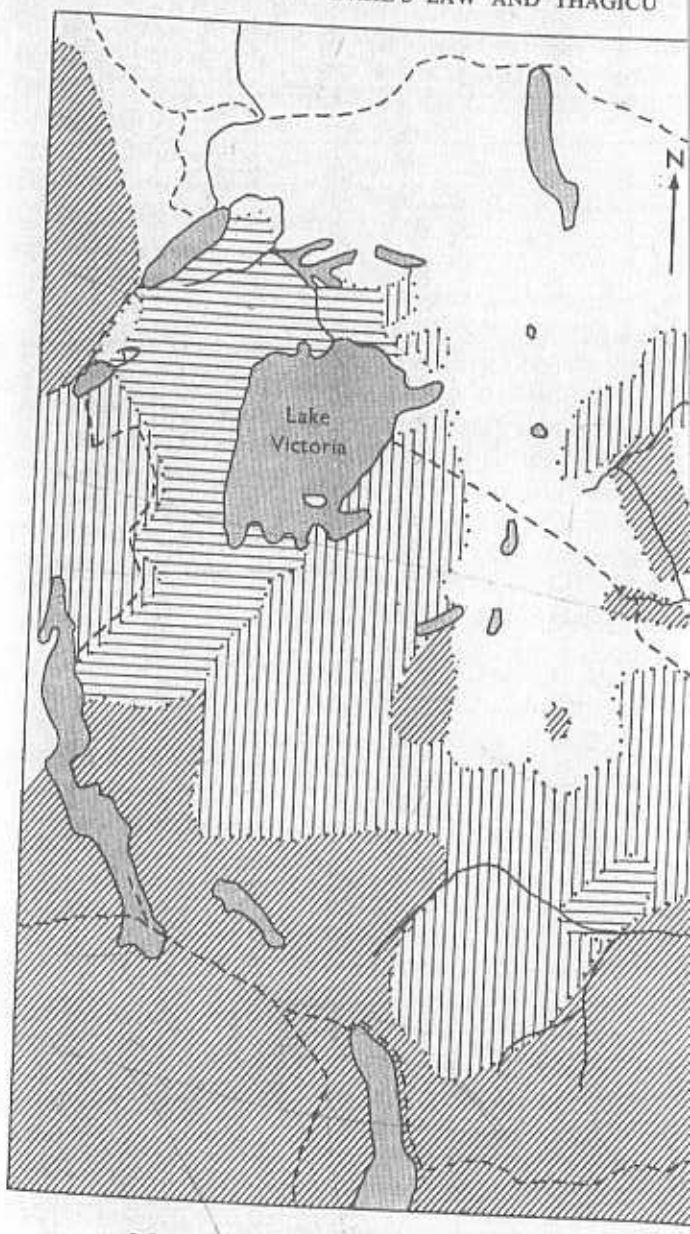
Evidence which I have acquired since then has not forced a further alteration in my views, though some points which, being based on inaccurate or incomplete information, were doubtful have been clarified. I can, I think, feel safe in thus recording my conclusions : I see no reason to expect that any further evidence from within the Thagicũ group will make any significant change necessary, nor do I think it likely that external evidence will have much effect.

What follows, then, is a discussion of the various phenomena resembling Dahl's Law in a number of forms of Bantu spoken in Kenya belonging to the group of very closely related languages or dialects here called Thagicũ [1] which show phenomena resembling Dahl's Law which vary considerably in exact form and range of application. Its purpose is not merely to record the facts, but to attempt to provide a tentative explanation of these differences, assuming that the phenomena are related.

Our knowledge is not sufficiently wide and detailed to allow a similar discussion of the similar and possibly related phenomena in East Africa as a whole ; I shall, indeed, try to show that it is apparently possible to account for the differences between the phenomena in Thagicũ and those in some other languages of Kenya, but, though I personally think it most likely that Dahl's Law, in spite of its formal diversity, is but one phenomenon, it is too early to draw any definite conclusion.

I shall first discuss the actual situation within Thagicũ and then present an explanation based on the relative chronologies, within the various dialects, of the linguistic changes affecting the form of Dahl's Law (as I shall continue to call it), in an attempt to show that the superficial differences can reasonably be put down to historical factors rather than to differences in the original change, and that therefore Dahl's Law may be a single phenomenon. Of the various dialects of

[1] The term Thagicũ is not commonly in use ; the group is more usually known as the ' Kikuyu Group '. However, the latter term has the disadvantage that it singles out one member of the group, which, though indeed the largest and at the moment best-known member, is in many ways one of the least typical. The name ' Thagicũ ' is, in various forms and in various ways, associated with all the major subdivisions of the group, and there is some reason to believe that it was in fact the name of the tribe from which they are all derived ; it has the advantage that no member of the group known to me calls itself by that name in that form (though ' Segeju '. and **Adaiso**, the Segeju name for the tribe, are obviously variants of it) ; and it allows one to speak simply of ' Thagicũ ' instead of forcing one, to avoid confusion with the Southern Kikuyu dialect or the Kikuyu sub-division, which includes Northern and Southern Kikuyu. to use the longer ' Kikuyu Group '.



Map 1.—Distribution of Dahl's Law in East

Dahl's Law Regular
Dahl's Law Vestigial
Bantu Dahl'

(Language boundaries here marked with dotted line for clarity ; some bo

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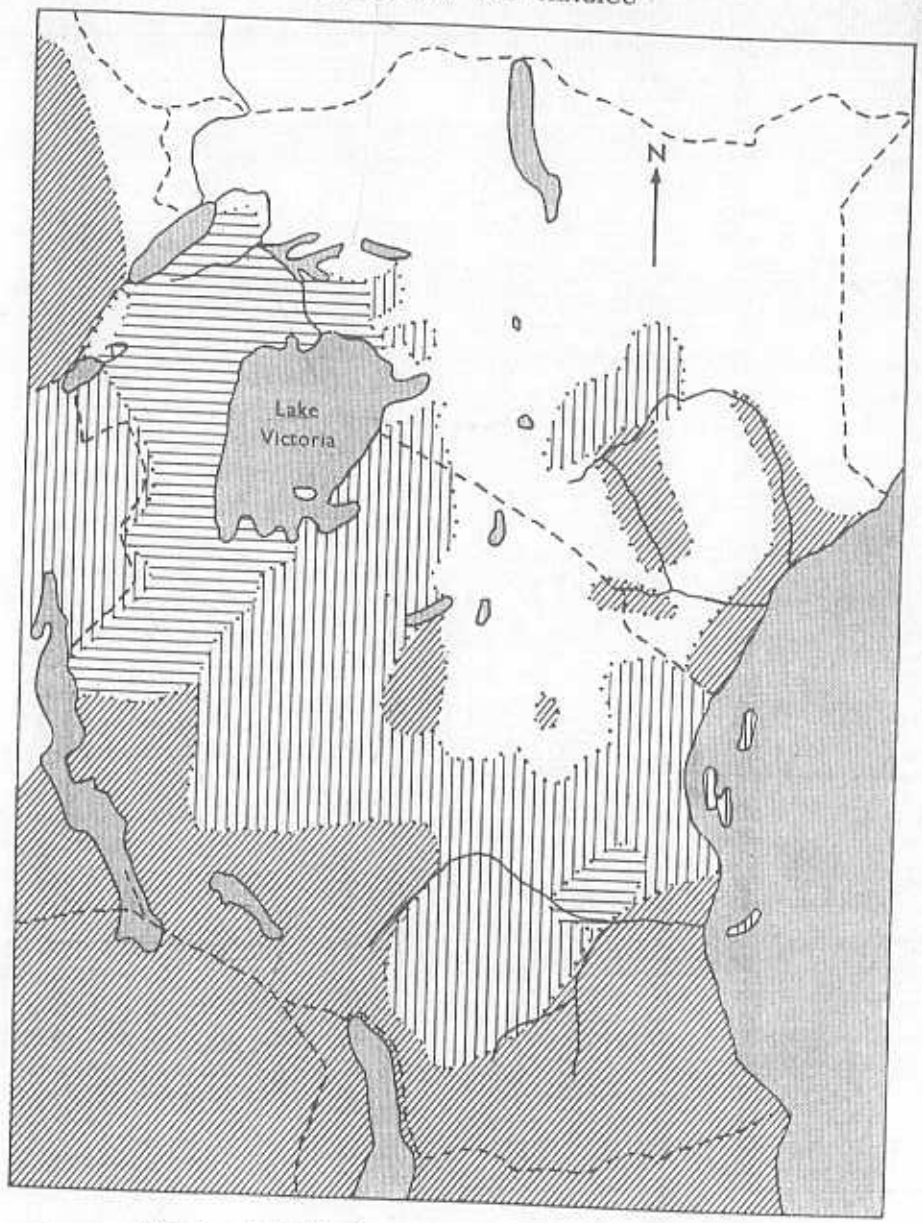
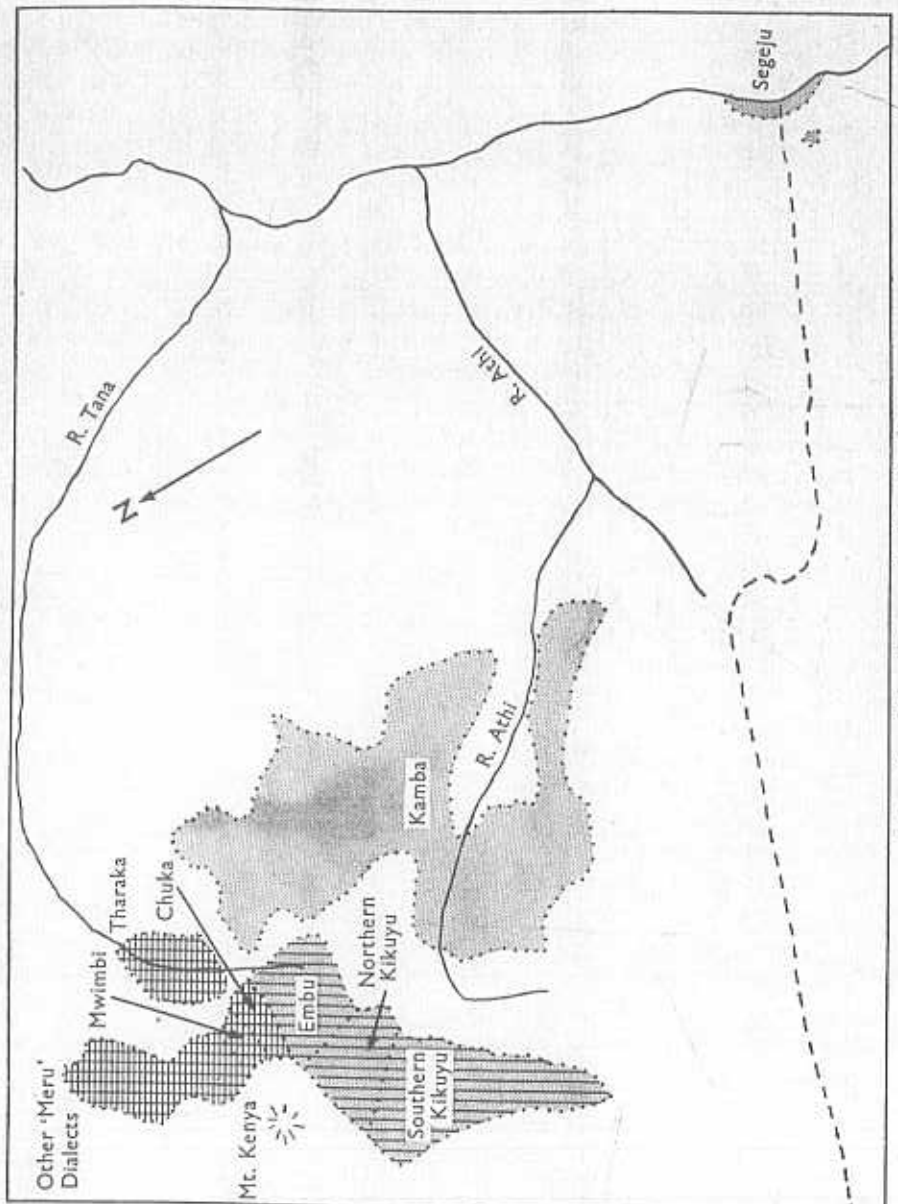


Map 1.—Distribution of Dahl's Law in East Africa.

Dahl's Law Regular
Dahl's Law Vestigial
Bantu languages without Dahl's Law

(Language boundaries here marked with dotted line for clarity ; some boundaries are uncertain.)



Map 2.—Thagicũ, excluding Sonjo.

Thagicũ, only Southern Kikuyu, Embu, Kamba, Segej
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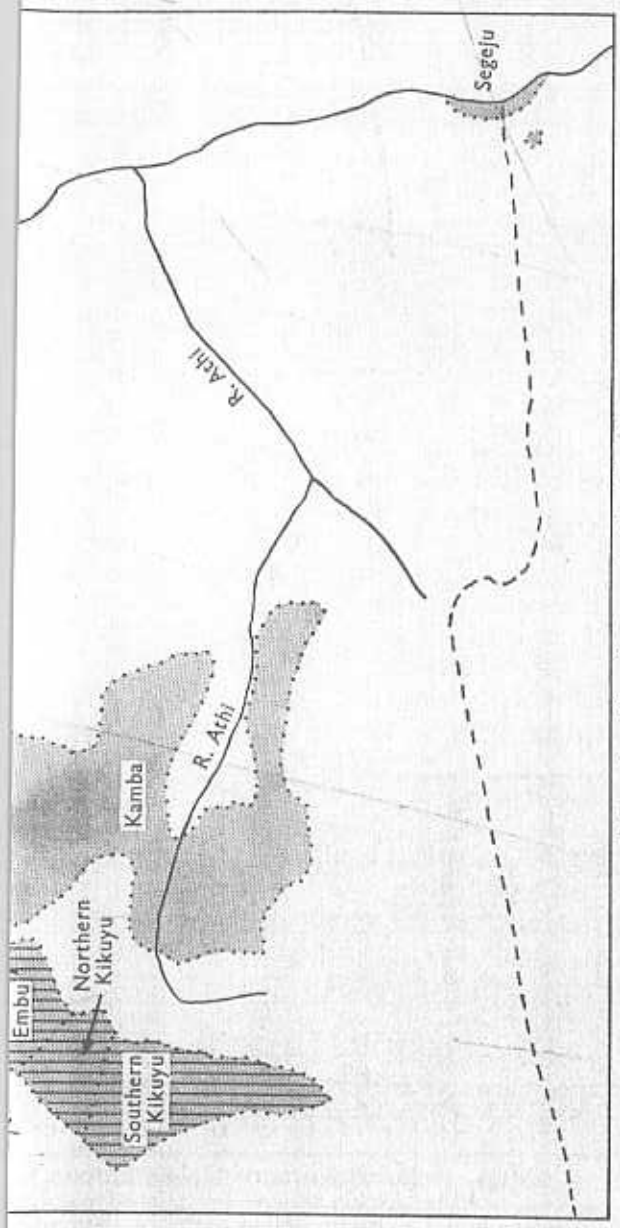

Map 2.—Thagicũ, excluding Sonjo.

Thagicũ, only Southern Kikuyu, Embu, Kamba, Segeju, Mwimbi (one of the so-called 'Meru' dialects—neither politically nor linguistically is 'Meru' as much of a unit as one might be led to believe), and Tharaka will be discussed in any detail, partly to avoid fruitless repetition, partly because of lack of data. Other dialects will be referred to on occasion, and of course the tentative histories (which are based on the internal ordering of 'morphophonemic' [1] rules in the various dialects, modified on the basis of the evidence from other dialects and the apparent interrelationships of the dialects, as deduced from linguistic and historical evidence) are the product of consideration of all the data on all the dialects available to me, not simply of the six enumerated above. A comparison with the situations in Gusii and Luhya, two other Bantu languages of Kenya, will follow.

The sources from which the materials on which this article is based are drawn are various. For Southern Kikuyu I have relied in part on my own material, in part upon T. G. Benson, *Kikuyu–English Dictionary*, Oxford, 1964. The Kamba and Mwimbi material is again based on my own work, and for Embu I have a small amount of information collected during a brief stay in Kenya in July, 1966. The Tharaka data come primarily from a tape-recording made for me in Mombasa in the spring of 1966 by Miss Carol Eastman of the Linguistics Department of the University of Wisconsin, supplemented from Gerhard Lindblom's *Outlines of a Tharaka Grammar*, Upsala, 1914, which is unfortunately obviously based on a different dialect. For Segeju I have relied upon 'Sprachproben aus dem Segedju' by Ernst Dammann (*Zeitschrift für Eingeborenen-Sprachen*, Band XXVII, pp. 223–233). The Gusii is drawn from W. H. Whiteley's *The Tense System of Gusii*, Kampala, 1960, and *Practical Introduction to Gusii*, Nairobi, 1956, supplemented by material recorded by me in Nairobi, while the Luhya represents primarily my own researches, supplemented by L. L. Appleby, *A First Luyia Grammar*, Nairobi, 1961. Of those to whom thanks are due for their contributions to this work I should perhaps single out Professor Malcolm Guthrie and Mr. T. G. Benson, of the School of Oriental and African Studies, and Mrs. Michael Olinick and Miss Carol M. Eastman of the University of Wisconsin, for their kindness in providing me with some of the materials upon which this is based directly or indirectly; Mr. Joshua Mutia and Mr. Eliphas J. Mburea, two of my informants and friends who have been of invaluable assistance, linguistic and otherwise; and many others too numerous to mention, to whom I am deeply indebted for advice, encouragement, and assistance.

The orthographic conventions on the whole reflect the sources: for Kikuyu, Kamba, and Mwimbi I have used the standard orthographies, with slight

[1] I dislike the term 'morphophonemic', and even the word 'rule' is somewhat inappropriate—it would be more accurate to say 'statements of the relationships and differences between the phonetic, realized, superficial forms of the language and the phonologic, structural forms which underly them'—but the shorter expression, though less pleasing, is more likely to give people in the field some indication of the phenomena to which I refer, though not of how I regard them.

modifications, such as the marking of tone [1] and in some cases the use of [:] to mark vowel length not indicated in the normal orthography. For Tharaka and Embu I have used a slightly modified version of the same (the three dialects mentioned above use basically the same orthography, that of Kamba being the most divergent); where Lindblom's Tharaka material has been used I have somewhat normalized his transcriptions, which utilized the (for a Thagicũ dialect rather unsuited) Swedish Dialect Alphabet of J-A. Lundell. For Segeju I have used the transcription of Dammann's 'Sprachproben' unaltered. Gusii is given in the transcription used in Whiteley's *Tense System of Gusii*, and for Luhya is used a slightly modified form of the normal orthography.

When discussing past forms and isolated phonetic units I use a more conventional phonetic transcription, with some influence from the Kikuyu orthography; in place of w and y the regular vowel symbols are used; h is used to indicate aspiration of an immediately preceding stop. The following should be noted:

th (Kikuyu, Kamba, Mwimbi, etc.) equals ð.

b, g (Kikuyu, Mwimbi, Embu, Tharaka) in intervocalic position equal β, ɣ.

i, u, ĩ, ũ, e, o (everywhere except present Gusii, Luhya) equal i, u, e, o, ɛ, ɔ, respectively.

c (except Gusii and where c = ts must be distinguished from č) equals š or ć, varying with dialect and individual.

w', w (Kamba) equal u̯, ũ̯.

* marks a hypothetical form.

** marks a fictitious form (i.e., one one has no reason to believe exists or existed).

† marks a structural, rather than a realized form—†j, for example, means, 'everything, whatever its realization, which is a reflex of *j or those units which have merged with it'.

C, K, G, F, and V stand for any consonant, voiceless stop, voiced stop, fricative, and vowel, respectively.

# indicates a word boundary.

// is used before a statement of environment.

Ø equals zero.

[1] It should be noted that the tones marked on Kikuyu forms represent not the realized tones, but rather the structural tones, or, if one prefers, the tones found on words in other dialects (specifically Mwimbi) which are cognate with the words in Kikuyu which belong to the tonal class of Kikuyu in question (this is necessary, as Kikuyu, both Northern and Southern, has undergone a rather drastic change in its tonal system which results in a complicated relationship between structural and realized tone). In Kikuyu forms, only the stems of nouns and the first syllable of the stems of verbs are marked; in the other dialects each syllable is marked. Where no tone is marked, the tone is unknown to me.

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'Dahl's Law' is a dissimilatory phenomenon, or more accurately the name given to a number of similar dissimilatory phenomena, found in a number of the Bantu languages of East Africa and named after Edmund Dahl, who noted it in Nyamwezi. Its geographical distribution is very limited; it is restricted to the northeastern corner of the Bantu area, its limits being roughly the Thagicũ group on the north, Hehe and Bena on the south, and Nyarwanda on the west. It is not, by any means, present in all the languages spoken in the enclosed area, and in a number of those in which it is to be found it exists only in a very limited or irregular form.

Even in those languages in which Dahl's Law does occur regularly it varies considerably in both form and range of application. In Nyamwezi, for which Dahl originally formulated it, it takes the form of the substitution of a voiced consonant for the first of a series of two voiceless aspirates.[1] In a somewhat more general form, as, for example, stated by Meinhof in his article, 'Das Dahlsche Gesetz', ZDMG, Band 57, pp. 299–304 ('*Wenn in einem Wortstamm zwei aufeinanderfolgende Silben mit einer stimmlosen Explosiva beginnen, so wird die erstere stimmhaft.*'), with certain modifications in minor details to fit various languages (as, for example, Luhya, where the product is not a voiced stop and the conditioning consonants are not stops or, in at least one case, voiceless), such a statement holds good for Nyamwezi and the other languages which show Dahl's Law; but for most, if not all, of the languages concerned, a number of additional qualifications must be made to produce a wholly accurate statement.

In some languages, as in Luhya, Dahl's Law does not apply except within a morpheme; in others, such as Kikuyu, elements prefixed to the morpheme are affected; while in at least one language, Gusii (I do not know that this occurs elsewhere, though it is possible that it does), both prefixes and morpheme-final consonants followed by suffixes are affected. In some languages it does not apply where a consonant formerly found between two others, the second of which would normally condition Dahl's Law in the first if no consonant intervened, has been lost; in other languages it does apply in such cases; and in others there is variation.

In addition to such restrictions on the occurrence of Dahl's Law imposed by the position within word or morpheme of the two consonants, there are necessary in the various languages revisions of the general statement of Dahl's Law also to state more accurately the range of consonants which may condition or be conditioned; to say simply 'voiceless aspirate' or even 'voiceless stop' or 'voiceless consonant' would be incorrect in many languages. In Kikuyu the only consonant affected is k, the conditioning consonants being k, c, t, and ð;

[1] Throughout this discussion 'voiceless (un)aspirate' should be read as 'voiceless (un)aspirated stop'. Except where specifically stated, it will not include, nor will it refer exclusively to, h.

in Luhya the consonants affected are h ~ y ~ Ø [1], r, x, and some cases of s, while those which condition the shift are r, x, some but not all cases of s and i, and possibly (though no example is known to me which would settle the point) h ~ y ~ Ø; though these are, perhaps, extreme cases, they are not the only languages in which it is not easy to find a single simple category to which all of the consonants involved belong. Also, in some languages the presence of a nasal before one or the other of the two consonants may have to be taken into consideration as an element affecting the working of Dahl's Law.

Even within a given language the correct statement of Dahl's Law is by no means a simple one. When one takes into account as well the variation from language to language, it becomes apparent that a simple, unified, and complete statement of the phenomena in the languages of East Africa classed as Dahl's Law is impossible. If the languages which exhibit these phenomena were widely separated, linguistically or geographically, one would be very much inclined to put the occurrence of somewhat similar phenomena of this sort down to coincidence or parallel evolution.[2] However, such is not the case—in comparison with the total area covered by Bantu languages the area within whose bounds Dahl's Law is found is very restricted indeed; while it is true that within this area languages showing such a phenomenon are often widely separated from one another, and tongues which do not show anything of the sort abound, it is a comparatively compact area, and rather small, when seen in the proper perspective. This makes coincidence seem much less likely. While it is of course by no means impossible that a number of fairly closely related languages spoken in a limited area should purely by coincidence and independently have evolved reasonably similar dissimilatory soundshifts of a type not found, to my knowledge, elsewhere in the Bantu-speaking area, the probability is surely extremely small. It is, I think, reasonable to say that Dahl's Law, however far from uniform it may be, is probably a single phenomenon.

This being granted, it remains to decide how Dahl's Law in fact came to be found in the languages in which it occurs, and to account for its formal diversity. The former question is apparently easily answered. There are two obvious possibilities: either it spread by borrowing,[3] having at some point evolved in

[1] i.e. the reflex of Bantu *p, formerly h, which is now usually lost, sometimes replaced by y.

[2] There is a difference; that a phenomenon similar in many ways to Dahl's Law occurs in Greek and Sanskrit (Grassmann's Law), or that Grimm's Law in Germanic parallels the treatment of the Bantu sound system in Luhya is only coincidence; but parallel evolution, while it can, of course, only be due to a series of coincidences, implies change from an identical or similar original state, through identical or similar stages, to an identical or similar result, without mutual influence. The spirantization of the Bantu non-post-nasal voiceless stops in Sotho and Luhya may be due either to pure coincidence or to parallel evolution; the similar situation in German can have only coincidence as a possible explanation.

[3] Though it is by no means usual to speak of the spread of a phonologic phenomenon as 'borrowing', I have done so throughout; primarily to distinguish between simple spreading within a language, such as necessarily occurs in the course of any linguistic change, and spreading across significant linguistic boundaries, such as would be necessary here.

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At first sight, it would seem that in view of t
question, to explain the variation in form, it is
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what can be reconstructed of the history of a give
not only the sequence of events after Dahl's Law
in a neighbouring language, but also that *precedi*
introduction of Dahl's Law after the split betv
apparently, only be due to coincidence or borrow
like that in Thagicũ, where out of a number of mutu
obviously only comparatively recently separated fro
which lack Dahl's Law, while others show Dahl's La
form. Kikuyu, which has Dahl's Law, is far mo
which does not show it, than it is to any of the l
which possess Dahl's Law; therefore it seems clea
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geographical distribution of Dahl's Law: in Eas
incidentally, in Thagicũ in particular), the further we
its form of Dahl's Law. Near Lake Victoria one find
are regular and functional and come close to fitting
'law' made earlier; nearer the seacoast one finds
or ones which require a quite different type of stateme
is that there was a gradual spread toward the east,
force.

On the other hand, while granting that inheritanc
facts, unlikely, further inspection of the data brings
seem to make borrowing almost as unlikely a hypo
the very recent introduction that it appears one woul
than there in fact is. Why should a language, having
a tongue in which all the possible units are affected,
stops which could be affected, have a form of Dahl's
velar? It is not, of course, denied that in the course
phenomena of this sort some change is possible—a c
is only to be expected. If one found languages with
next to others with five, one would not be surprised.
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which might have been, beside those with all the po
Dahl's Law, without languages showing intermediate s

[1] Actually, it is probable that the present state is to some ext
but with the exception of a few languages it is most likely that
for its extension in East Africa.

ts affected are h ~ y ~ Ø [1], r, x, and some cases of s, tion the shift are r, x, some but not all cases of s and f, example is known to me which would settle the point) se are, perhaps, extreme cases, they are not the only not easy to find a single simple category to which all of belong. Also, in some languages the presence of a nasal r of the two consonants may have to be taken into ent affecting the working of Dahl's Law.

language the correct statement of Dahl's Law is by no When one takes into account as well the variation from becomes apparent that a simple, unified, and complete nena in the languages of East Africa classed as Dahl's e languages which exhibit these phenomena were widely or geographically, one would be very much inclined to somewhat similar phenomena of this sort down to volution.[2] However, such is not the case—in comparison red by Bantu languages the area within whose bounds very restricted indeed ; while it is true that within this such a phenomenon are often widely separated from one hich do not show anything of the sort abound, it is a rea, and rather small, when seen in the proper perspective. seem much less likely. While it is of course by no means er of fairly closely related languages spoken in a limited coincidence and independently have evolved reasonably ndshifts of a type not found, to my knowledge, elsewhere area, the probability is surely extremely small. It is, y that Dahl's Law, however far from uniform it may be, nomenon.

it remains to decide how Dahl's Law in fact came to be n which it occurs, and to account for its formal diversity. apparently easily answered. There are two obvious spread by borrowing,[3] having at some point evolved in

*p, formerly h, which is now usually lost, sometimes replaced by y.

that a phenomenon similar in many ways to Dahl's Law occurs in nann's Law), or that Grimm's Law in Germanic parallels the treatstem in Luhya is only coincidence ; but parallel evolution, while it to a series of coincidences, implies change from an identical or gh identical or similar stages, to an identical or similar result, The spirantization of the Bantu non-post-nasal voiceless stops in lue either to pure coincidence or to parallel evolution ; the similar ve only coincidence as a possible explanation.

ans usual to speak of the spread of a phonologic phenomenon as o throughout ; primarily to distinguish between simple spreading necessarily occurs in the course of any linguistic change, and linguistic boundaries, such as would be necessary here.

some language of the area, or it was evolved in an ancestor of all or most of the languages which show it, and is present in them today as the result of inheritance.

At first sight, it would seem that in view of the need to answer the second question, to explain the variation in form, it is necessary to reject the latter possibility in favour of the former. For one thing, it is often, when one looks at what can be reconstructed of the history of a given language, the case that it is not only the sequence of events after Dahl's Law which differs from that found in a neighbouring language, but also that *preceding* ; this would point to the introduction of Dahl's Law after the split between the two, which could, apparently, only be due to coincidence or borrowing. Similarly one has cases like that in Thagicũ, where out of a number of mutually intelligible speech forms, obviously only comparatively recently separated from one another, there are some which lack Dahl's Law, while others show Dahl's Law, but do not share the same form. Kikuyu, which has Dahl's Law, is far more closely related to Kamba, which does not show it, than it is to any of the languages outside of Thagicũ which possess Dahl's Law ; therefore it seems clear that it was introduced into Kikuyu only after it had become separate from Kamba. Then, too, there is the geographical distribution of Dahl's Law : in East Africa as a whole (and, incidentally, in Thagicũ in particular), the further west the language, the stronger its form of Dahl's Law. Near Lake Victoria one finds forms of Dahl's Law which are regular and functional and come close to fitting the general statement of the ' law ' made earlier ; nearer the seacoast one finds vestigial forms, none at all, or ones which require a quite different type of statement. A reasonable conclusion is that there was a gradual spread toward the east, with a steady diminution of force.

On the other hand, while granting that inheritance seems, in the face of these facts, unlikely, further inspection of the data brings to light a few points which seem to make borrowing almost as unlikely a hypothesis. If Dahl's Law were the very recent introduction that it appears one would expect rather less diversity than there in fact is. Why should a language, having taken over Dahl's Law from a tongue in which all the possible units are affected, and having other voiceless stops which could be affected, have a form of Dahl's Law which affects only the velar ? It is not, of course, denied that in the course of the spread of linguistic phenomena of this sort some change is possible—a certain amount of variation is only to be expected. If one found languages with three consonants affected next to others with five, one would not be surprised. But to find, as one does, languages with but one consonant affected, out of a larger range of consonants which might have been, beside those with all the possible consonants showing Dahl's Law, without languages showing intermediate stages separating them, with

[1] Actually, it is probable that the present state is to some extent the result of a combination, but with the exception of a few languages it is most likely that one or the other is responsible for its extension in East Africa.

the change seeming as recent as it does, raises doubts in one's mind. On the other hand, why would a language borrowing the phenomenon from one where only k is affected expand it to apply to all the voiceless stops ? One might assume the dissimilation which affects only k, as in Kikuyu and Gusii, for example, to be a phenomenon distinct from the more general dissimilation ; but then how would one explain cases like Mwimbi, where after nasals consonants other than k are affected, though in non-post-nasal position only k is changed ?

Then, too, it is not enough to say that Dahl's Law was borrowed ; one must also point to a reasonable-seeming possible source. Southern Kikuyu has a form of Dahl's Law which differs from that of its nearest relative, Northern Kikuyu, and from those of the other members of the Thagicũ group which show Dahl's Law (remember that not all do). Assuming that Dahl's Law was borrowed, one asks, ' When ? '. The answer is, presumably, after the point at which Southern Kikuyu became distinct from its relatives, including Northern Kikuyu. One must then ask, ' Whence ? '—and this is not so easy to answer. The closest languages showing Dahl's Law are those to the west (not counting other members of the Thagicũ group, who must also have received it from the same source, presumably), particularly Gusii, which conveniently, like Kikuyu, shows the limited form of Dahl's Law affecting k only. It so happens, unfortunately, that between the two there is a considerable stretch of territory occupied by the non-Bantu Masai and allied peoples. Even granting that this sort of change can be borrowed (which I do not consider to be as certain as it might be), I would imagine that a reasonable amount of contact, if not considerable political, linguistic, or geographical proximity, would be necessary ; linguistic changes are unlikely to jump such barriers as the Masai (whose language, it should probably be stated here to eliminate one valid possibility, does not seem to show anything like Dahl's Law). One must then, to maintain that Dahl's Law was introduced into Southern Kikuyu after the separation of Northern Kikuyu from one of the languages to the west, suppose that the Masai had not yet arrived. However, at this point the argument shows signs of collapsing under its own weight. The separation between Northern and Southern Kikuyu must have been quite recent (though this still need not imply in historic times) ; the linguistic evidence shows that it probably occurred after two of the changes which set Kikuyu (Northern and Southern) off from the rest of Thagicũ had occurred, these being the loss of *j and the peculiar tonal shift found only in these two dialects of Thagicũ, to my knowledge. There is evidence, however, which points to the Kikuyu having had contact with the Masai *before* this tonal shift, which must have preceded their separation, which, to uphold the present argument, must have preceded the coming of the Masai. There are, as one might expect, a number of words common to Masai and Southern Kikuyu, the majority of which, from their form, are apparently borrowings by Southern Kikuyu from Masai. A certain percentage of these have tonal patterns in Kikuyu whose realizations are unlike those of the Masai original,

though the realized tones of many reflect the origin
type, however, many have the tonal pattern in Kik
pattern of realized tones of other dialects, and pres
of Kikuyu before the tone shift, which correspond
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one another.

As languages are spoken by discrete individuals, it is
change to take place, except on an individual level,

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though the realized tones of many reflect the original very clearly. Of the former type, however, many have the tonal pattern in Kikuyu which corresponds to the pattern of realized tones of other dialects, and presumably to the realized pattern of Kikuyu before the tone shift, which corresponds to the tones of the word in Masai : one example is **bàrikṹ:i**, ' light-brown cow ', which is derived from the Masai **barrikói** ' reddish-brown ', and whose tonal pattern, while it corresponds to the [_-_] of other dialects, is generally realized as [_-_]. While other possible explanations exist, there are enough cases like this to make it seem probable that, while the loan-words whose realized tones correspond to those in Masai are likely to be recent, those whose structural tonal patterns, but not realized tones, correspond to the Masai predate the tone shift, which implies contact with the Masai, which, when other factors, including geographical and traditional, are taken into consideration, seems quite clearly to indicate that there probably was no close contact with the western tribes from which Dahl's Law might be supposed to have been borrowed at the time of the split.

There exists, fortunately, a way out of this difficulty, a way to account, at least within Thagicũ, for the diversity in form of Dahl's Law without having to postulate an improbable borrowing at a very late date. Until now, like others discussing Dahl's Law, I have been speaking of it as a simple change in certain environments from a voiceless to a voiced consonant which occurred in various languages at various points in the past, as I until comparatively recently assumed it to be. If this were the case, however, the situation in Thagicũ would be impossible, except as the result of borrowing : Kamba could not, for example, have lost Dahl's Law except by devoicing all voiced consonants indiscriminately at some stage, which clearly was not the case, for †g and †k are still treated differently. Yet borrowing, at least after a certain point, seems to be ruled out.

In spite, however, of the admitted truth of the assertion that a historical change involving a phonetic merger, as Dahl's Law is, cannot be undone,[1] there are two ways in which one can, in various situations, reconcile this with the apparent reversal of such a change. One of these lies in the very nature of linguistic change, and involves the addition to the principle stated above of the condition, ' once it has been completed '. Though it is very easy to lose sight of the fact in the abstract investigation of languages, languages are spoken and influenced by people, not peoples ; it is just as important to remember in historical work as it is in synchronic that there is, strictly speaking, on the surface no such thing as a uniform language, just as there is no such thing as a uniform culture, but only a varying number of individual systems with some degree of basic similarity, but with a greater or lesser number of superficial differences from one another.

As languages are spoken by discrete individuals, it is impossible for a historical change to take place, except on an individual level, instantaneously or even

[1] If, that is, two or more units become phonetically identical in the same environment.

reasonably close thereunto—but few, if any, ethnic groups, however small and uniform, can have found themselves speaking one day a language in some respect noticeably different from that spoken the day before. Even in a small and homogeneous group a linguistic change needs time to spread and be adopted, and while this is taking place some interruption might occur, such as the division of the group in question, which would allow one half to make a change which might prove abortive in the other, thus producing a situation which, to the historical linguist, would later look like the reversal in one group of a change which occurred in both. Then, too, if a group with a reasonably cultural and political unity is large enough (in actual size or in area covered) to have linguistic subdivisions, a change might occur in one of these subdivisions, and later be replaced after a generation or so through the influence of another dialect—this again would produce an apparent reversal, though it would not be the dialect which in fact underwent the change which would later fail to show it, as this is as much a case of linguistic extinction and replacement as would be the adoption by a community of a totally unrelated language. Finally, it is possible for a change to take place in a given language and then be erased, not by a parallel dialect, but by an earlier one, through the influence upon the generation after the change of the language of the parents of the generation whose speech underwent the change.

While, however, the type of occurrence described above could easily account for the presence and absence of Dahl's Law in Kikuyu and Kamba, respectively, it does not in my view allow one to explain adequately the variations in form of Dahl's Law in the Thagicũ dialects in which it does occur. The explanation I think at present to be the most reasonable one, and which I am tentatively proposing here, is based not on the nature of linguistic change in general, but on the nature of a certain subclass of linguistic changes.

As languages change they quite frequently continue to show indications of the nature of the change and their previous states, generally in the form of ' morphophonemic ' phenomena, though even unconditioned shifts can sometimes be hinted at. The linguistic investigator can from the present situation deduce certain of the changes which occurred in the language's history, though probably never all. It is also quite frequently possible to detect to some extent an ordering of these changes, where forms occur which show two or more of the shifts in question, or which, because of the operation of one, fail to show another, which can then be supposed not unreasonably to have been later. This ordering is most important to the linguist, as it is the result and to some degree a reflection of the changes the language has undergone and their sequence. It is rather closely analogous to embryological evidence in the investigation of biological evolution. Like it, it sheds considerable light on the past where direct evidence is lacking; but also like embryological evidence it should not be trusted too far. For this synchronic ordering in a single language is not always reliable, partly because but

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of analogy, may cause a rearrangement of the under
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a language.

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in other cases, again, all the forms which would have
been lost ; or a later shift may have obliterated the
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It is easy to think of rules as being added, in the
of these synchronic orderings, to the top of the pile, so
collapse and jumbling, to be sure, so that the order
with, nonetheless, the latest being uppermost. A cer
is an exception ; for, while in the course of events oth
put in a position in the sequence relative to other ru
such a rule maintains its position relative not to the cl
sequence ; having been added at the end, for an indet
the end, and will, in the synchronic ordering, appear to
which, in historical fact, it preceded. An example of su
of nasal to immediately following consonant in Soth
ntjá, has a palatal nasal (which a believer in the '
transcribe as such, as n and ɲ are distinguished elsew
nkú ' sheep ' an ŋ, and mphó ' gift ' an m ; the nasal i
the same, being the Class 9 nominal prefix. This as
new—it is found in an active form in most if not all
extremely unlikely that it is a recent innovation in any
ntjá ' dog ' had originally a b as its initial stem consona
to, for example, the Swahili mbwa. The change from a bi

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few languages can be so well provided with forms which bear upon the ordering as to point to but one possible sequence : generally there are a number of changes which, while their position in the order relative to certain other changes is clear, lack evidence as to their position relative to one another, so that, while the main outline is certain, the details are blurred. Also, it is possible for later changes to alter the apparent order of the earlier, as disturbing factors, such as the operation of analogy, may cause a rearrangement of the underlying layers. However, these statements or rules relating the superficial to the structural form, and their ordering, can be most useful, and, taken in conjunction with a sufficiency of comparative evidence, such direct historical information as may be available, and any other facts, linguistic or otherwise, which may have a bearing on the matter, can allow one to deduce quite a bit about the history (or rather prehistory) of a language.

It is not, however, a complete record ; not all changes are recorded. For some, even from comparative data, there may be no evidence which would lead one to suppose the existence of an earlier form ; others may have been reversed ; [1] in other cases, again, all the forms which would have shown the change may have been lost ; or a later shift may have obliterated the traces in the forms in which they occurred. There is one type of change, however, which, while it is recorded, is not recorded in the right position.

It is easy to think of rules as being added, in the history of the development of these synchronic orderings, to the top of the pile, so to speak, with an occasional collapse and jumbling, to be sure, so that the ordering becomes confused, but with, nonetheless, the latest being uppermost. A certain type of rule, however, is an exception ; for, while in the course of events other shifts, once having been put in a position in the sequence relative to other rules, maintain this position, such a rule maintains its position relative not to the changes recorded, but to the sequence ; having been added at the end, for an indeterminate period it stays at the end, and will, in the synchronic ordering, appear to be later than many changes which, in historical fact, it preceded. An example of such a rule is the assimilation of nasal to immediately following consonant in Sotho. The word for ' dog ', **ɲtjá**, has a palatal nasal (which a believer in the ' phoneme ' would have to transcribe as such, as **n** and **ɲ** are distinguished elsewhere), **ntá**, ' louse ' an **n**, **ŋkú** ' sheep ' an **ŋ**, and **mphó** ' gift ' an **m** ; the nasal in each case is structurally the same, being the Class 9 nominal prefix. This assimilation can hardly be new—it is found in an active form in most if not all Bantu languages, and it is extremely unlikely that it is a recent innovation in any or all of them. The word **ɲtjá** ' dog ' had originally a **b** as its initial stem consonant—the word corresponds to, for example, the Swahili **mbwa**. The change from a bilabial followed by a labial

[1] It is by no means true that *no* historical change can be reversed. A merger, it is true, cannot (at least usually) in an unbroken sequence of events be undone ; but a simple phonetic shift not involving an identification of two units may at any time be reversed without trace.

glide to a palatal is fairly recent—Pedi, a very closely related language, which must have separated fairly late, has a different development, the word for ' dog ' being mpšá. But in Sotho in the synchronic ordering the presumably far older nasal-assimilation rule seems to *follow* that change, since otherwise the form would be **mtjá.

As long as such a rule continues to ' float ' on top of the sequence,[1] it adapts to fit subsequent changes—one of the units to which it applies may change or be lost, new units to which it could apply may be added, and the rule's exact range of application will change to match. The form of the rule as a statement remains the same : at any point in the history of Sotho the rule referred to above could probably have been stated in the form, ' a nasal immediately preceding another consonant is homorganic with it '. Because, however, of shifts in the inventory of items to which it can apply, due to changes subsequent to its introduction into the language, its apparent position in the internal synchronic order shifts.

Eventually, however, some such rules are fixed—that is, they cease to adapt themselves to new conditions, continue to apply to the same items, and changes occurring thereafter apply not to the input, but rather to the output of the rule. From that time on, they maintain their position relative to previous and subsequent changes, with only such shifting and reshuffling as occurs from time to time to disturb the sequence. Not all, of course, are equally likely to be fixed, the probability depending upon the nature of the rule and the degree to which it may be said to be a tendency [2] of the language or of languages in general. The Sotho example is extremely unlikely to be fixed—the conditioning is too intimate and the assimilation too ' natural '. Others, however, are far less stable, and are liable to be fixed. The cause of this fixing may be the occurrence of a change involving the identification of the product of the rule with some other unit, a shift which drastically alters the phonetic form of either input or output, the ceasing of the

[1] From this picture of their behaviour I have at times called such phenomena ' floating rules ', a term which, though perhaps unnecessarily picturesque, has the elements of appropriate (at least for one with the same view of the nature of linguistic change) connotation (a criterion too often neglected, I think), simplicity, and lack of confusing associations (a criterion also neglected, though less than it used to be—few people today would be inclined to use the term ' infinitive ', for example, for anything but a verbal noun, in technical contexts), necessary in a name suggested for a concept discussed so little, if at all, in the past and, so far as I know, unnamed.

[2] It should be noted that such an unfixed or readjusting rule is *not* the same as a ' tendency ', though it is easy to confuse them. A tendency may—as, I think, in the case of the nasal assimilation described—manifest itself in the form of such a rule ; but it may equally occur at intervals in the history of the language—compare the consonant shift in High German paralleling that in Proto-Germanic, for example. A rule of this sort, on the other hand, is present over a period in the language, constant in form, but with its range of applicability varying. If Dahl's Law were the result of a tendency, its presence would be due to independent development. It is true that certain such rules, of which Dahl's Law is, I think, an example, have a tendency to be fixed in a certain way, or else lost, and to this extent independent development may be responsible. But the explanation I am advancing here is based on the common change, followed by individual fixing changes, rather than on individual, possibly independent, changes.

rule to be active in the ' morphophonemics ' of the languag
Until this happens, though, the rule may at any point be l
needless to say, even after it is fixed there is no way of
by internal evidence alone, the time of its introduction—t
other changes which it occupies is not that of the introdu
rather that of its fixing. The original change may have take
or a single day before its fixing ; without records, there ca

It is my opinion that the most probable explanation
Thagicũ with regard to Dahl's Law is that the dissimila
present in the immediate common ancestor of the group (ho
there) as such a rule, and that its fixing did not occur until
separated and diverged significantly from one another. In
I shall attempt to show that, granting that this was the c
Dahl's Law in the dialects can reasonably be accounted for
their histories after the break-up of the group and before
dialect, of Dahl's Law.

Thagicũ is a group of dialects or very closely related la
the most part, in Kenya, to the east and south of Mount
Kikuyu (from which, because of its being, at present, the be
the group, Thagicũ is more commonly termed the ' Kikuy
Embu, Mbere, the cluster of dialects known as ' Meru '
Muthambi, Mwimbi, Igoji, Imenti, and Tigania), and Thara
spoken in the area mentioned in more or less close contac
and all of which are to varying extents fairly readily mutual
other forms of Bantu, not spoken in the same area, are associ
One, Segeju, though spoken in Tanzania on the coast, princi
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from the main body of Thagicũ in a number of ways, and clea
by neighbouring tongues, are linguistically obviously Thagicũ
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its linguistic affiliations is, unfortunately, not available to me.
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The Thagicũ group falls (culturally as well as linguistically
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[1] Primarily on the basis of the assertion in T. Wakefield, ' Routes of
the Coast to the interior of Eastern Africa ', *Journal of the Royal Geograp*
1870, pp. 303–339, that ' the Wa-Sónjo are Wasegéju immigrants '.

airly recent—Pedi, a very closely related language, which
airly late, has a different development, the word for ' dog '
otho in the synchronic ordering the presumably far older
seems to *follow* that change, since otherwise the form

rule continues to ' float ' on top of the sequence,[1] it adapts
ges—one of the units to which it applies may change or be
h it could apply may be added, and the rule's exact range
nge to match. The form of the rule as a statement remains
nt in the history of Sotho the rule referred to above could
ated in the form, ' a nasal immediately preceding another
nic with it '. Because, however, of shifts in the inventory
n apply, due to changes subsequent to its introduction into
ent position in the internal synchronic order shifts.
r, some such rules are fixed—that is, they cease to adapt
ditions, continue to apply to the same items, and changes
ply not to the input, but rather to the output of the rule.
maintain their position relative to previous and subsequent
h shifting and reshuffling as occurs from time to time to
Not all, of course, are equally likely to be fixed, the
upon the nature of the rule and the degree to which it may
cy [2] of the language or of languages in general. The Sotho
nlikely to be fixed—the conditioning is too intimate and
atural '. Others, however, are far less stable, and are liable
of this fixing may be the occurrence of a change involving
e product of the rule with some other unit, a shift which
honetic form of either input or output, the ceasing of the

heir behaviour I have at times called such phenomena ' floating rules ',
haps unnecessarily picturesque, has the elements of appropriate (at
e view of the nature of linguistic change) connotation (a criterion
k), simplicity, and lack of confusing associations (a criterion also
it used to be—few people today would be inclined to use the term
or anything but a verbal noun, in technical contexts), necessary in a
ept discussed so little, if at all, in the past and, so far as I know,

t such an unfixed or readjusting rule is *not* the same as a ' tendency ',
se them. A tendency may—as, I think, in the case of the nasal
nifest itself in the form of such a rule ; but it may equally occur at
f the language—compare the consonant shift in High German
ermanic, for example. A rule of this sort, on the other hand, is
language, constant in form, but with its range of applicability varying.
lt of a tendency, its presence would be due to independent develop-
in such rules, of which Dahl's Law is, I think, an example, have a
ertain way, or else lost, and to this extent independent development
e explanation I am advancing here is based on the common change,
g changes, rather than on individual, possibly independent, changes.

rule to be active in the ' morphophonemics ' of the language, or some such factor. Until this happens, though, the rule may at any point be lost without trace, and, needless to say, even after it is fixed there is no way of dating, even relatively, by internal evidence alone, the time of its introduction—the position relative to other changes which it occupies is not that of the introduction of the rule, but rather that of its fixing. The original change may have taken place a million years or a single day before its fixing ; without records, there can be no way of telling.

It is my opinion that the most probable explanation for the situation in Thagicũ with regard to Dahl's Law is that the dissimilation in question was present in the immediate common ancestor of the group (however it came to exist there) as such a rule, and that its fixing did not occur until after the dialects had separated and diverged significantly from one another. In the following pages I shall attempt to show that, granting that this was the case, the variations of Dahl's Law in the dialects can reasonably be accounted for by the differences in their histories after the break-up of the group and before the fixing, in each dialect, of Dahl's Law.

Thagicũ is a group of dialects or very closely related languages spoken, for the most part, in Kenya, to the east and south of Mount Kenya. It includes Kikuyu (from which, because of its being, at present, the best-known member of the group, Thagicũ is more commonly termed the ' Kikuyu Group '), Kamba, Embu, Mbere, the cluster of dialects known as ' Meru ' (including Chuka, Muthambi, Mwimbi, Igoji, Imenti, and Tigania), and Tharaka, all of which are spoken in the area mentioned in more or less close contact with one another, and all of which are to varying extents fairly readily mutually intelligible. Two other forms of Bantu, not spoken in the same area, are associated with the group. One, Segeju, though spoken in Tanzania on the coast, principally in the vicinity of Tanga, is quite clearly, from the evidence available to me, a member of the group. Dammann's ' Sprachproben ', while their language is markedly divergent from the main body of Thagicũ in a number of ways, and clearly much influenced by neighbouring tongues, are linguistically obviously Thagicũ ; however, it seems likely that nothing recognizable as a form of Thagicũ is still spoken among the Segeju. The other language or dialect commonly linked with the group is Sonjo, spoken in a speech-island in the middle of the Masai territory in Tanzania. It is traditionally asserted that Sonjo is connected with the group,[1] but evidence as to its linguistic affiliations is, unfortunately, not available to me. Until material on the language becomes available, one can but say that it may be connected ; needless to say, it will not figure in the discussion in any way.

The Thagicũ group falls (culturally as well as linguistically) into two clearly marked subdivisions. Northern Thagicũ includes Tharaka and the various dialects

[1] Primarily on the basis of the assertion in T. Wakefield, ' Routes of Native Caravans from the Coast to the interior of Eastern Africa ', *Journal of the Royal Geographical Society*, Vol. 40, 1870, pp. 303–339, that ' the Wa-Sónjo are Wasegéju immigrants '.

lumped together under the name of Meru—all those, that is, of the cluster around Mount Kenya from the Chuka–Embu boundary northwards. At present, though the evidence is really insufficient for certainty, this group seems to be divided into an Eastern sub-group, including Tharaka, and a Western, including 'Meru'. Southern Thagicũ includes the remaining dialects, whose exact interrelationships are uncertain. Kikuyu and Embu–Mbere seem in a number of ways to form a distinct sub-group, but the evidence is inconclusive. The early date at which Segeju must have lost contact with the rest of Thagicũ makes it especially difficult to place. In some ways it resembles Kamba more than the other dialects; however, in a number of ways it seems more reasonable to treat it for the moment as an independent branch of Southern Thagicũ (that it is Southern rather than Northern, at least, is fairly certain).

To discuss in full the evidence for the above grouping would be impossible here; it must suffice to say that, while the sub-groupings are somewhat tentative, there can on the basis of the data available be no doubt as to the validity of the split between Northern and Southern; a very large number of facts, lexical, phonologic, and ethnological, support it. In what follows I shall, as stated earlier, discuss one member of each of the probable sub-groups: Tharaka,[1] Mwimbi for 'Meru', Southern Kikuyu, Embu, Kamba, and Segeju. Chart 1 shows, in a slightly simplified form, the most important consonant correspondences.

Dahl's Law is one of the more important features in which the dialects differ from one another. There are three points of general agreement: no non-post-nasal consonant but **k** may be affected; in no dialect are morpheme-final consonants (at least normally) affected; in no dialect is a reflex of *ŧ affected.[2] In other respects the dialects differ, and it should be noted that the points of agreement mentioned above are all negative ones.

In Southern Kikuyu, only non-post-nasal **k** is affected; the consonants affecting are **ð**, **t**, **c**, and **k**. The rule applies not only within morphemes but also to prefix consonants. Where two or more prefixes having **k** as their consonant occur before one of the affecting consonants, all are affected, not only the one nearest the conditioning consonant; where, however, a stem begins with a **g** owing to the operation of Dahl's Law, prefixes are not affected. Consonants in suffixes do not normally affect those in preceding morphemes; it is, however, not unknown for this to happen in fixed forms; one excellent example is

[1] It seems probable that Tharaka is not, in fact, a unit; I have seen three fairly extensive sets of data purporting to be on Tharaka, and all three differ on various points. As stated earlier, this will be based primarily on the material supplied me by Miss Eastman, supplemented from Lindblom, though the two probably represent different dialects.

[2] A few irregular correspondences seem to be possible relics of a stage when the reflex of *ŧ affected by Dahl's Law was differentiated from that to which Dahl's Law did apply. Compare Tharaka **nõata** (in Lindblom's transcription equals **nthata** or **ntata**), Kamba **ndáta**, Kikuyu **njátâ**, all meaning 'star'; but Tharaka **nthí**, Kamba **nthí**, Kikuyu **thí**, 'earth'. This is, however, by no means a regular development, and other factors may be involved.

	Southern Kikuyu	Embu	Kamba	Segeju
†p	h	β	β	β
†mp	:h	mβ	mb	(?)
†ŧ	ð	ð	ð	ɖ
†nŧ	:ð	nd	nð	nɖ
†t	t	t	t	t
†nt	nd	nd	nd	t
†c	c	c	s	š
†nc	nj	nj	nz	(?)
†k	k	k	k	k
†nk	ng	ng	ng	ng
†b	Ø	Ø	Ø	Ø
†mb	mb	mb	mb	mb
†j	Ø ~ y	c	s	s
†nj	nj	nj	nz	s
†r	r	r	Ø	r
†nd	nd	nd	nd	nd
†g	ɣ	ɣ	Ø	Ø
†ng	ng	ng	ng	ng

Chart 1: Principal consonant correspondences betwee

kũgúũka, 'to be dislodged, pulled out'; this, though with a monomorphemic stem, and is probably ider speakers, in fact is composite, having the reversive-stati connected with the verb **gũkúũra** 'to pull out, uproo transitive suffix occurs; these forms must have becor units before the fixing of Dahl's Law.

The situation is almost exactly the same in Embu. *not* one of the conditioning consonants: compare Southern Kikuyu **gĩthàkà**. Interestingly enough, this is Northern Kikuyu agrees with Embu rather than South only dialect in which the reflex of *ŧ is among the con both Embu and Northern Kikuyu there seems to be, fr to me, a tendency to adopt the use of **g** instead of **k** in found sporadically in the materials I have seen; how regular, and **k** before a **ð** in the same morpheme rem influence of Southern Kikuyu upon the speakers (or perh seems the most likely explanation.

Segeju does not show Dahl's Law at all. In Kamba, not seem to be present in the vast majority of cases, there

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ns a regular development, and other factors may be involved.

	Southern Kikuyu	Embu	Kamba	Segeju	Mwimbi	Tharaka
†p	h	β	β	β	Ø	Ø ~ β
†mp	:h	mβ	mb	(?)	mp	mp
†ʈ	ð	ð	ð	ɖ	ð	ð
†nʈ	:ð	nd	nð	nɖ	nd	nð
†t	t	t	t	t	t	t
†nt	nd	nd	nd	t	nt	nt
†c	c	c	s	š	c	c
†nc	nj	nj	nz	(?)	nc	nc
†k	k	k	k	k	k	k
†nk	ng	ng	ng	ng	nk	nk
†b	Ø	Ø	Ø	Ø	Ø	Ø
†mb	mb	mb	mb	mb	mb	mb
†j	Ø ~ y	c	s	s	j	y
†nj	nj	nj	nz	s	nj	nj
†r	r	r	Ø	r	r	r
†nd	nd	nd	nd	nd	nd	nd
†g	ɣ	ɣ	Ø	Ø	ɣ	ɣ
†ng	ng	ng	ng	ng	ng	ng

Chart 1: Principal consonant correspondences between Thagicũ dialects cited.

kũgúũka, 'to be dislodged, pulled out'; this, though it resembles a simple verb with a monomorphemic stem, and is probably identified as such by native speakers, in fact is composite, having the reversive-stative **-ũk-** suffix, and is surely connected with the verb **gũkúũra** 'to pull out, uproot', where the equivalent transitive suffix occurs; these forms must have become fixed and identified as units before the fixing of Dahl's Law.

The situation is almost exactly the same in Embu. There, however, the **ð** is *not* one of the conditioning consonants: compare **kíthàkà** 'bush', with the Southern Kikuyu **gĩthàkà**. Interestingly enough, this is one of the ways in which Northern Kikuyu agrees with Embu rather than Southern Kikuyu, which is the only dialect in which the reflex of *ʈ is among the conditioning consonants. In both Embu and Northern Kikuyu there seems to be, from the evidence available to me, a tendency to adopt the use of **g** instead of **k** in prefixes before **ð**—this is found sporadically in the materials I have seen; however, it is by no means regular, and **k** before a **ð** in the same morpheme remains unaffected. Recent influence of Southern Kikuyu upon the speakers (or perhaps only the transcribers) seems the most likely explanation.

Segeju does not show Dahl's Law at all. In Kamba, though Dahl's Law does not seem to be present in the vast majority of cases, there are a few words (**màútà**,

Position	Southern Kikuyu	Embu	Kamba	Segeju	Mwimbi	Tharaka	
†k—k :	gũkúa	gũkúa	kũkw'á	(kugwa)	gũkúa	gũkúa	' to die '
†k—c :	gũcò:ka	gũcìokà	kũsyòká	(kušoka)	gũcò:kà	gũcòokà	' to return '
†k—t :	kũgwáta	kũgwátà	kũkwátà	(kukwata)	kũgwátà	kũgwátà	' to catch '
†k—t :	kũgèithia	gũkè:thìa	kũkè:thyà	——	gũkè:thìa	(gũkethia)	' to greet '
†k—NK :	kũndũ	kũndũ	kũndũ	——	gũntũ	gũntũ	' place '
†nk—K :	ngũkũ	ngũkũ	ngũkũ	——	ngũkũ	ngũkũ	' chicken '
†nt—K :	——	——	ndetema	——	ntetema	(ndetema)	' fever '
†mp—K :	hĩti	mvĩti	mbĩti	——	mbĩti	mbĩti	' hyena '

Chart 2 : Examples illustrating the range of consonants affected by and affecting Dahl's Law in the Thagicũ dialects cited ; where possible cognates have been given in all dialects ; items in parentheses have been slightly modified for the sake of uniformity.

' fat ', cf. Kikuyu **magúta**, stem †-**kúta**, is the most c
to show it. These may be indications that at one
or one of the other possible explanations for the exis
may be the correct one, as, for example, the possibili
at some point.

The Northern Thagicũ forms of Dahl's Law
Southern. In Tharaka, the only non-post-nasal co
Also affected, however, are **mp**, **nt**, and **nk**. The sta
is uncertain. Lindblom's material and some other
seen show no trace of this. However, other ma
possession shows Dahl's Law affecting **k** and **nk** in pr
some variation, though other prefixed **NK** clusters sh
gĩkóngóró, ' chair ', with Lindblom's **kĩkongor:o**. Th
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others, the second and more likely one being an amo
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' Meru ', several. The presence of Dahl's Law in pre
Meru influence—and its absence, equally, to that of

The consonants conditioning Dahl's Law in Tha
probably, though no examples are available, **mp** and
Lindblom a reflex of ***p** seems to be found as the a
' eyelashes ', cf. Swahili **kope** ; but even if this is accur
such case—Lindblom gives **-kmβĩ** for ' short ', cf. Kik
morpheme, the voicing of **nt** and **mp** when the affect
nasal is not without exception—Lindblom gives **mpag**
forms of Tharaka in which prefixes are affected, nor
prefixes are affected if the last stands before one of th
is the case in Kikuyu and Embu.

In Mwimbi, the remaining dialect, typical in this res
the consonants affected are **k**, **nk**, and **mp**. Unlike T
show Dahl's Law affecting **nt**. The affecting consonants
ng (though no example is available at present), and **nk**,
and presumably in Mwimbi too, though again I have no
through borrowing, analogical formation, or other ty
among the affecting consonants. In both prefixes
affected ; the other post-nasal consonants, however, qu
a morpheme (and always in prefixes) fail to show Dahl

In the whole group, it is plain that only **k** (and **nk**

' It should be noted that there is considerable variation in
Mwimbi and other forms of Northern Thagicũ too.

Position	Southern Kikuyu	Embu	Kamba	Segeju	Mwimbi	Tharaka	
†k—k :	gũkúa	gũkúa	kũkw'á	(kugwa)	gũkúa	gũkúa	' to die '
†k—c :	gũcò:ka	gũcioká	kũsyòká	(kušoka)	gũcò:kà	gũcòoká	' to return '
†k—t :	kũgwáta	kũgwátà	kũkwátà	(kukwata)	kũgwátà	kũgwátà	' to catch '
†k—t :	kũgèithia	gũkè:thia	kũkè:thyà	———	gũkè:thia	(gũkethia)	' to greet '
†k—NK :	kũndũ	kũndũ	kũndũ	———	gũntũ	gũntũ	' place '
†nk—K :	ngũkũ	ngũkũ	ngũkũ	———	ngũkũ	ngũkũ	' chicken '
†nt—K :	———	———	ndetema	———	ntetema	(ndetema)	' fever '
†mp—K :	hiti	mviti	mbíti	———	mbíti	mbíti	' hyena '

Chart 2 : Examples illustrating the range of consonants affected by and affecting Dahl's Law in the Thagicũ dialects cited ; where possible cognates have been given in all dialects ; items in parentheses have been slightly modified for the sake of uniformity.

' fat ', cf. Kikuyu **magúta**, stem †-**kúta**, is the most common example) which seem to show it. These may be indications that at one time Dahl's Law was active, or one of the other possible explanations for the existence of a few irregular forms may be the correct one, as, for example, the possibility of interdialectal borrowing at some point.

The Northern Thagicũ forms of Dahl's Law are more general than the Southern. In Tharaka, the only non-post-nasal consonant affected is again **k**. Also affected, however, are **mp**, **nt**, and **nk**. The status of Dahl's Law in prefixes is uncertain. Lindblom's material and some other specimens of Tharaka I have seen show no trace of this. However, other material on the dialect in my possession shows Dahl's Law affecting **k** and **nk** in prefixed elements, though with some variation, though other prefixed **NK** clusters show no trace of it : compare **gikóngóró**, ' chair ', with Lindblom's **kikoŋgoro**. There are two good possible explanations, the first being possible mishearing on the part of Lindblom and others, the second and more likely one being an amount of local variation within Tharaka equal to that within ' Meru '—Tharaka is spoken over an extremely large area of rough country, and it seems likely that, though there is not enough evidence to allow certainty, Tharaka is not in fact one dialect, but rather, like ' Meru ', several. The presence of Dahl's Law in prefixes might easily be due to Meru influence—and its absence, equally, to that of Kamba.

The consonants conditioning Dahl's Law in Tharaka are **t**, **c**, **k**, **nt**, **nk**, and probably, though no examples are available, **mp** and **nc**. In one example from Lindblom a reflex of ***p** seems to be found as the affecting consonant : **ŋgoβe**, ' eyelashes ', cf. Swahili **kope** ; but even if this is accurately recorded it is the only such case—Lindblom gives **-kuβi** for ' short ', cf. Kikuyu **-kũhi**. Even within a morpheme, the voicing of **nt** and **mp** when the affecting consonant is also post-nasal is not without exception—Lindblom gives **mpæmpe** for ' maize '.[1] In those forms of Tharaka in which prefixes are affected, normally all of a series of **kV-** prefixes are affected if the last stands before one of the affecting consonants, as is the case in Kikuyu and Embu.

In Mwimbi, the remaining dialect, typical in this respect of ' Meru ' as a whole, the consonants affected are **k**, **nk**, and **mp**. Unlike Tharaka, Mwimbi does not show Dahl's Law affecting **nt**. The affecting consonants are **t**, **c**, **k**, **mp**, **nt**, probably **nc** (though no example is available at present), and **nk**. In other forms of Meru, and presumably in Mwimbi too, though again I have no example, **p** (when present through borrowing, analogical formation, or other types of innovation) is also among the affecting consonants. In both prefixes and stems **k** and **nk** are affected ; the other post-nasal consonants, however, quite frequently even within a morpheme (and always in prefixes) fail to show Dahl's Law.

In the whole group, it is plain that only **k** (and **nk** in Northern Thagicũ) is

[1] It should be noted that there is considerable variation in **NK** clusters before others in Mwimbi and other forms of Northern Thagicũ too.

actively affected by Dahl's Law. Though Dahl's Law is found affecting regularly other consonants in the Northern dialects, there are numerous exceptions (even with nk) within morphemes, largely due to inter-dialect borrowing and other factors, probably. While the shift affecting k is so active that not only loan-words (Kikuyu gà:kí, ' khaki ', to give but one example) but even foreign words spoken as such are affected (I have heard occasional forms showing Dahl's Law in both English and Swahili from speakers of various Thagicũ dialects), with the others one finds cases such as the Mwimbi mpàkúri, ' bowl ', a loanword from the Swahili (originally Arabic) bakuli, where the form found is the opposite of that one would expect not only from Dahl's Law but also from the shape of the source.

I shall now present what seem to me to be the factors in the histories of the various dialects responsible for the above differences in form of Dahl's Law. It should be noted, however, that the ' historical facts ' given here are not such in the true sense of the words, but rather what seem to be most likely to have been the facts of the (unrecorded) history of the group. They are tentative conclusions, based on consideration (inevitably not wholly objective) of all the data available to me ; while I think them likely to be fairly near the truth, it cannot be denied that, for all that can be known to the contrary, if the facts were available they might be entirely different. The changes and their orderings have been deduced from the synchronic orderings of the various dialects, comparison thereof, the evidence of the apparent interrelationships of the dialects, and anything else which seemed relevant ; that the group is a fairly large and close-knit one makes a greater approximation to accuracy possible ; but it must still be emphasized that nothing can be said with complete certainty about linguistic prehistory.

As a history must have both an ending and a beginning, it is appropriate, having described above the present state of affairs as far as Dahl's Law is concerned, to give some idea of what seems the probable original state of Thagicũ in regard to the matters to be discussed. At some point in the past, well before the break-up into the various dialects, though the exact point relative to Thagicũ's becoming distinct from other languages cannot, at the moment, be stated, the ancestor of the Thagicũ dialects was, in all probability, externally much like certain of the present languages further to the west. It certainly possessed a seven-vowel system, which has been preserved by all the dialects. The tonal system must have been very much like that which Mwimbi shows today : not only structurally, as is the case with Kikuyu and Kamba, but superficially a two-tone system. Of the consonants, it seems likely that *b continued to be realized even in intervocalic position after Thagicũ had become independent of other languages ; the structural ɽd had almost certainly long since come to be realized as an r-equivalent in non-post-nasal position ; *ɟ and *j had probably well before the break-up of Thagicũ become differentiated in point of articulation.

Thagicũ

T-1 : †b > c // ——iV

T-2 : †b > β, †j > ž // $\frac{V}{\#}$ ——

T-3 : β > Ø // V——

T-4 : Prefix-initial vowels were lost

Southern Thagicũ

ST-5 : NKh > NK

ST-6 : β, ž > Ø // # ——

Northern Thagicũ

NT-5 : †p > ɸ // $\frac{V}{\#}$ ——

NT-6 : †ʈ > ð

Kikuyu-Embu

KE-7 : †p > ɸ

Southern Kikuyu

Sk-8 : ž > Ø // $\frac{V}{\#}$ ——

Sk-9 : Fixing of Dahl's Law

Sk-10 : †ʈ > ð

Sk-11 : NF > :F

Embu

Em-8 : †ʈ > ð

Em-9 : Fixing of Dahl's Law

Em-10 : ž > e

Kamba

Ka-7 : †p > ɸ // $\frac{V}{\#}$ ——

Ka-8 : †ʈ > ð

Ka-9 : †g > Ø // $\frac{V}{\#}$ ——

Ka-10 : †r > Ø

Ka-11 : NK > NG (Fixing of Dahl's Law)

Segeju

Se-7 : †p > ɸ // $\frac{V}{\#}$ ——

Se-8 : †ʈ > θ > ð > ɖ

Se-9 : †g > Ø // $\frac{V}{\#}$ ——

Se-10 : †nj > ž

Se-11 : ž > s

Se-12 : †nt > †t

Se-13 : NK > NG (Fixing of Dahl's Law)

Se-14 : c > š

Se-15 : k > g // —— $\frac{i}{u}$

Mwimbi

Mw-7 : Fixing of Dahl's Law

Mw-8 : ɸ > Ø

Mw-9 : †c > †j // ——iV

Tharaka

Th-7 : Fixing of Dahl's Law

Th-8 : ɸ > β, Ø

Chart 3 : Relevant changes. It should be noted that after a split two changes with the same number need not be simultaneous. Intermediate steps not shown. Realizations of non-final symbols not certain.

Facing p. 147

the voiceless being a denta
this last left room for the
came first it is impossible
ceased to be a unit is certai
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the nominal prefixes were
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Starting from this point

[1] The original point of artic
personally, in part, no doubt, be
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dental more likely than the pa
whatever the original positions,
as described.

[2] It seems probable that there
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[3] As I am merely attempting
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[4] Although none of the pres
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Thagicũ (see the discussion of cha
The alternation in Class 5, a fea
comparing Kikuyu igòtì, 'neck'
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nothing to do with this ; they a
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[5] A characteristic of Thagicũ i
at least in the singular, do not be
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Class 14. Which they took when

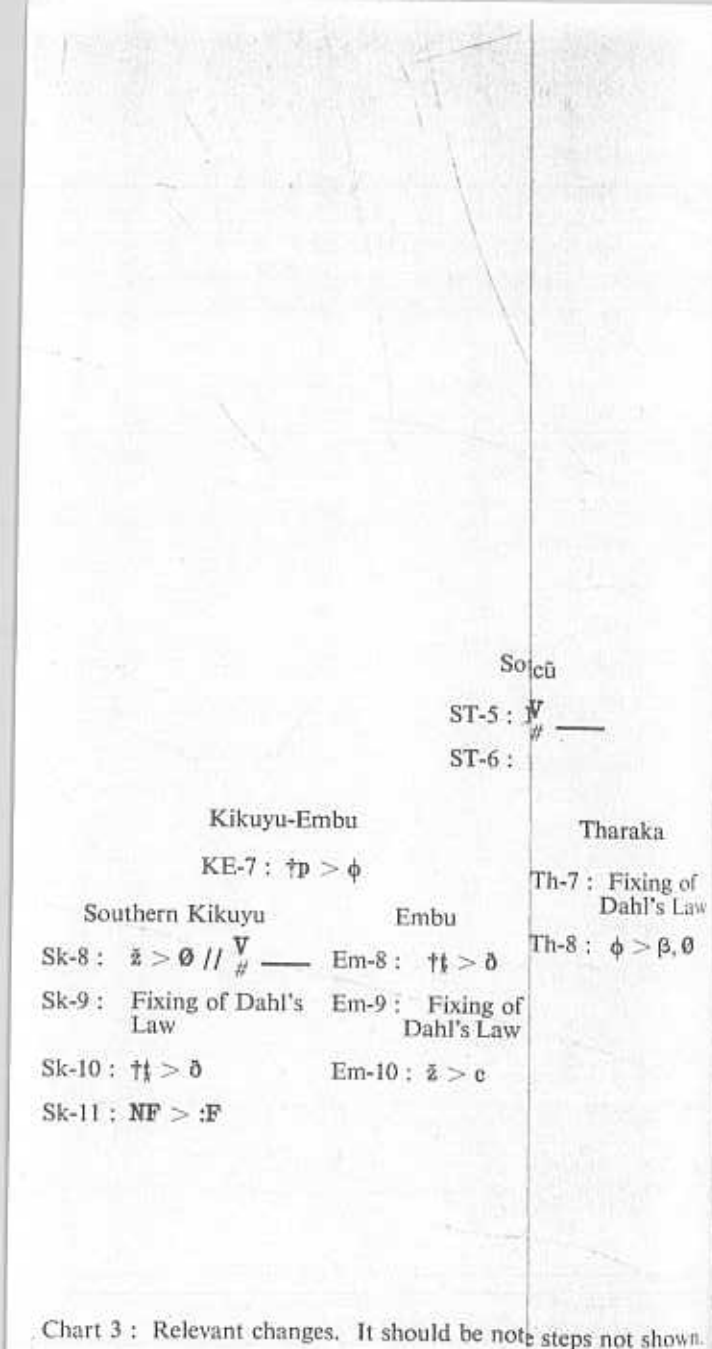

Chart 3 : Relevant changes. It should be noted that steps not shown.

Facing p. 147

the voiceless being a dental stop or affricate, probably, and the voiced palatal [1]—this last left room for the introduction, by phonetic shift and borrowing (which came first it is impossible to say, but that it was introduced before the group ceased to be a unit is certain—the very name ' Thagicū ' contains it) of a voiceless palatal not shared to my knowledge with other forms of Bantu, and therefore presumably introduced after the language's becoming independent. The Ganda Law, otherwise known as Meinhof's Rule, a change which involves the dissimilation through loss of the stop element of the first of a series of two **NG** clusters, or, in this case, as elsewhere, of an **NG** cluster where the next consonant was a nasal, was certainly present. For purposes of the present discussion, it is necessary to assume that Dahl's Law, in the form of a rule involving the phonetic change *without merger* of the first of a series of two voiceless stops,[2] was present.[3] On a slightly different level, it is probable (and relevant to the discussion) that the nominal prefixes were of the common **VCV-** type,[4] except in the cases, as is usual, of Class 5 (where before stems with a realized initial consonant the prefix probably took the form ***ii-**, or possibly ***rii-**, instead of the ***erī-** presumably found with vowel-initial stems), Classes 9 and 10 (though these were probably vowel-initial, as is also probable for the following), and the ' Classes ' 1a, 2a, and the other class of prefixless nouns.[5]

Starting from this point the changes shown in Chart 3 seem to have occurred

[1] The original point of articulation of this voiced-voiceless pair is, of course, uncertain—personally, in part, no doubt, because of my early exposure to the languages of the north-east where the voiceless member, at least, is very commonly dental in its realization, I consider a dental more likely than the palatal articulation more commonly suggested ; at any rate, whatever the original positions, at this point in the history of Thagicū the two were probably as described.

[2] It seems probable that there was no restriction on the position of the two within the word other than phonologic which existed at this time ; as in the Kikuyu form **kūgūūka**, referred to earlier, it probably applied even when the second consonant was in a suffix. It does seem unlikely, though, that it applied outside the phonetic (as opposed to structural) word.

[3] As I am merely attempting to present a reasonable possibility, not to prove what I think to be the case, the circularity arising from basing my arguments on that for which I am attempting to produce evidence must be allowed.

[4] Although none of the present dialects (unless Sonjo is indeed a member of the group) retain this feature, its former presence is fairly certain, as is demonstrated in part by the differentiation between nominal and other concords in certain classes, most apparent in Northern Thagicū (see the discussion of change ST-6, below), but also found in vestigial form in Southern. The alternation in Class 5, a feature extremely common in Bantu languages, may be seen by comparing Kikuyu **igòti**, ' neck ', with **ríithò**, ' eye '. The disyllabic prefixes used in at least the western branch of Northern Thagicū with adjectives under certain circumstances have nothing to do with this ; they are quite obviously simply the ordinary pronominal concord prefixed to the (originally disyllabic) nominal concord.

[5] A characteristic of Thagicū is the possession of a number of nouns which, while prefixless, at least in the singular, do not behave like those of 1a (they also differ semantically), and most of which seem to be loanwords (though many are common to the group as a whole and so were presumably acquired early). The class to which these are assigned for purposes of concord is not the same in all dialects : the Northern group uses the concord of Class 9, the Southern of Class 14. Which they took when first introduced it is, of course, impossible to determine.

in the tentative order given (it should be borne in mind that this is necessarily an incomplete account, only those changes which seem most relevant being included). Where there is no clear evidence as to which of two shifts preceded the other, I have chosen the order which to me seemed more reasonable ; if the choice is wrong in such cases, it does not affect the present discussion, though a complete investigation of the history of the group might make another order seem more likely. The following points should be noted concerning the individual changes :

T-1 : Though one is inclined to hypothesize a voiced intermediate stage (which, like other intermediate stages where the intermediate result is not relevant, is not shown here), the result is realized in most dialects as voiceless, varying (often in the same speaker) between č and š—it is written here and in most orthographies as c. In Kikuyu, Segeju, and Northern Thagicũ it is usually clearly differentiated from *j. Mwimbi is the only dialect showing a voiced non-post-nasal reflex ; this, however, is phonologically conditioned and probably fairly recent : when c precedes i followed by another vowel, it is realized as ǰ (compare Mwimbi **kũjiarà**, ' to bear ', with the Kikuyu **gũciara**, and, to illustrate the working of the shift in question, Gusii **okobiara** ; but Mwimbi **gũcòokà**, Kikuyu **gũcòoka**, Kamba **kũsyòkà**, where the i, still found in Kamba, Chuka, and some other dialects, was lost in Mwimbi, presumably before the voicing of c in such positions). Presumably early Thagicũ must have distinguished the product of this change from the reflex of earlier *j until (still before the break-up) the devoicing took place, but what the qualitative difference may have been can only be conjectured.

T-2 : The position in the ordering of this shift is logically determined by the two on either side of it ; actually, of course, linguistic change being what it is, there is nothing to prevent all three from having gone on at the same time.

T-4 : This, again, may well have been simultaneous with the last one, but cannot have occurred before it, as in that case the nominal prefix of Class 2, for example, would have been ****ba-**, not the **a-** it is in all dialects.

T-1–4 : None of these would have affected Dahl's Law, except for the second, which would have increased the number of words containing voiceless consonants found in the language and added a new unit to the range of consonants involved. All of these seem to have occurred before the split between Northern and Southern Thagicũ, and probably after the point at which Thagicũ became a distinct entity separate from other languages of

the area. After this point, it seems necessar
some of the apparently later shifts may ve
occur before the dialects actually separated

NT-5, NT-6, Se-7, Se-8, Ka-7, Ka-8, KE-7
involved, namely the spirantization of *p ar
in detail and in apparent dates, in all the di
to suspect that they actually belong to the
likely enough that the change may have be
facts that, in Southern Kikuyu, the fixing
preceded the completion of the change of t
shift involving the labial is not the same in
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I am inclined to consider this an example
inheritance and carrying to completion mo
pair of tendencies common to most of the

ST-5 : Whether this is in fact an accurate
uncertain, though I think it likely. It is ce
led to the eventual voicing of consonants
Southern Thagicũ as a whole ; it is equally
is of a later date, as the differential treatmen
in various dialects (as seen in Chart 1) sho
though, from the fact that in Southern Tha
voicing due to Dahl's Law before an old **N**
of the stop of the **NK** cluster with the series
Dahl's Law (whatever their phonetic realiza
stage.

ST-6 : Though the voicing of post-nasal stops re
most striking differences between Northern a
is in fact the main phonologic distinguishi
voicing (it is clearly another case of a readjust
than the break-up of Southern Thagicũ. It is
for the fact that, where Mwimbi has **àntũ**
báôntê, ' all the people ', Southern Kikuyu, f
the nominal prefix, where the consonant was
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i became a distinct entity separate from other languages of

the area. After this point, it seems necessary to separate the groups, though some of the apparently later shifts may very well at least have begun to occur before the dialects actually separated from one another.

NT-5, NT-6, Se-7, Se-8, Ka-7, Ka-8, KE-7, Em-8, Sk-10 : The changes involved, namely the spirantization of *p and *ṭ, are found, with variations in detail and in apparent dates, in all the dialects, which would incline one to suspect that they actually belong to the stage before the split. It seems likely enough that the change may have begun then ; but in view of the facts that, in Southern Kikuyu, the fixing of Dahl's Law seems to have preceded the completion of the change of the *ṭ, and that the form of the shift involving the labial is not the same in all dialects, it appears that they must have been completed only after the various dialects became distinct. I am inclined to consider this an example of parallel evolution, of the inheritance and carrying to completion more or less independently of a pair of tendencies common to most of the East African Bantu languages.

ST-5 : Whether this is in fact an accurate representation of the facts is uncertain, though I think it likely. It is certain that the tendency which led to the eventual voicing of consonants after nasals is common to Southern Thagicũ as a whole ; it is equally certain that the actual voicing is of a later date, as the differential treatment of certain of the **NK** clusters in various dialects (as seen in Chart 1) shows. I consider it probable, though, from the fact that in Southern Thagicũ there is no sign of the voicing due to Dahl's Law before an old **NK** cluster, that such a merger of the stop of the **NK** cluster with the series of voiceless stops affected by Dahl's Law (whatever their phonetic realization) did occur at about this stage.

ST-6 : Though the voicing of post-nasal stops referred to above is one of the most striking differences between Northern and Southern, it is this which is in fact the main phonologic distinguishing factor, the fixing of the voicing (it is clearly another case of a readjusting, unfixed, rule) being later than the break-up of Southern Thagicũ. It is this change which accounts for the fact that, where Mwimbi has **àntũ bôndê** for structural **†abàntũ báõntê**, ' all the people ', Southern Kikuyu, for example, has **àndũ õ:thê** ; the nominal prefix, where the consonant was intervocalic, lost the *b in both dialects, but the pronominal, where it was originally non-post-vocalic and non-post-nasal, lost it only in the Southern group.[1]

[1] This has resulted in an interesting situation in the 2nd and 3rd person plural subject and object prefixes. Originally, as in many languages of the area, these were probably ***mũ-** and ***ba-** respectively. Now, however, Northern Thagicũ has **bũ-** and **ba-** and Southern **mũ-** and **ma-**. The presence of the **m** in the 3rd plural of the Southern dialects may well be an extension from

Th-7 : *Fixing of Dahl's Law, Tharaka* : This took the form of the identification of the stops resulting from the dissimilation in its original form : with the homorganic voiced stops in the cases of **k**, **mp**, **nt**, and **nk**, remaining voiceless and, whether immediately or long after, being reidentified phonetically with the unaffected equivalents in the cases of **t**, **c**, and possibly **nc**.[1] The conditioning consonants were at the time the unaffected reflexes of **†t**, **†c**, **†k**, **†mp**, **†nt**, **†nc**, and **†nk**.

Th-8 : The positions in which the reflex of ***p** was lost and those in which it was retained as β I am, at the moment, unable to state ; probably there has been a certain amount of influence from analogy and other dialects. Retention is somewhat more frequent where it occurs as the initial consonant of a verb, somewhat less before front vowels It should be stated that there is no visible correlation between its retention and its occurrence in a position in which it would originally have been affected by Dahl's Law.

Mw-7 : *Fixing of Dahl's Law, Mwimbi* : Here again the affected series was reidentified, **k**, **mp**, and **nk** with the voiced, **t**, **c**, **nt**, and **nc** with the unaffected voiceless, the conditioning consonants being at this time the unaffected reflexes of **†t**, **†c**, **†k**, **†mp**, **†nt**, **†nc**, and **†nk**. It is not clear why **nt** is here treated in a way different from that in which it is treated in Tharaka. The two items which might have been expected to be affected, since voiced equivalents with which they might readily have been identified existed, **nt** and **nc**, have this in common : the non-post-nasal equivalents were both stops and unaffected by Dahl's Law ; whether this has, or even might have, any bearing on their treatment I cannot say.

Mw-8 : There may well have been an intermediate stage as an **h** or something of the sort ; this change is probably fairly recent. It has left a hiatus affecting vowel coalescence and (optionally) the functioning of Dahl's Law—the word for ' drum ', usually **glémpé**, I have found at least once as **kiémpé**, the stem being **†-pémpé**.

the **ma-** of Class 6, which is in turn an extension from the nominal prefix. The prefixes in question are in Imenti Meru (Mwimbi differs here) **a-** and **ba-** for Class 2, **ma-** and **ja-** for Class 6. After this shift the verbal forms merged as **a-** in the Southern dialects, so that, when the **m** spread by analogy in Class 6, it was not unreasonable that it should also be extended to Class 2. In some forms of Southern this is carried even further, so that in Kamba not only the verbal prefix, but also the normal adjectival is **ma-** in both classes. Interestingly in Segeju, though the 3rd plural subject prefix is **ma-**, the corresponding object prefix is **-a-**, so that it seems probable that the change in these prefixes was incomplete at the time of its separation from the body of the group.

[1] Owing to the scarcity of forms containing **nc** in a position in which it could be affected and the absence from my material of such forms which could also reasonably be said to be inherited words (at least not introduced after this point) and unlikely to have been influenced by analogy, it is impossible to state the position of **nc** with certainty.

Mw-9 : There is nothing to date this relative to known to me, but it is clearly late, being pe discussion of T-1.

Se-7 : It is interesting to note here the word **mvea** to the Kikuyu **hĩa**, Kamba **mbyá**, and the stem treatment (there are, unfortunately, only on equally doubtful, of **†mp** in Dammann's materi Kikuyu and Embu, with ***p** shifting in any env exception. If the latter is the actual state of believe) there can be found a reasonable exp irregularity. In many Bantu languages nouns receive different treatment from that given other a noun of Class 9 with monosyllabic stem will nasal, while others of the same class do not : **mbuzi** ' goat ' are of two syllables each. It is the sort may have developed in Segeju (after Thagicũ but before this point), so that in the stem, in spite of the way it is written, is, at l monosyllabic) the nasal was syllabic and the intervocalic. Alternatively, analogy from the sin is conceivable.

Se-8 : It is true that the ultimate product is a voiced in view of the facts in the other dialects, it se assume that it passed through these stages tha voicing.

Se-13 : *Fixing of Dahl's Law, Segeju* : At this point the post-nasal voiceless stops which remained voiced equivalents. No voiced non-post-nasal st the voiceless stops affected by Dahl's Law could be noted that, for all the evidence to the contrary first, unfixed stage of Dahl's Law could have bee immediately after the dialect became independ however, at which the last remnants of a voiced lost, Dahl's Law could not have been fixed in a p

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Mw-9 : There is nothing to date this relative to the fixing of Dahl's Law known to me, but it is clearly late, being peculiar to Mwimbi—see the discussion of T-1.

Se-7 : It is interesting to note here the word **mvea** ' horns '. This corresponds to the Kikuyu **hía**, Kamba **mbyá**, and the stem is †-**pía**. Either the regular treatment (there are, unfortunately, only one or two other examples, equally doubtful, of †**mp** in Dammann's material) must be the same as in Kikuyu and Embu, with *p shifting in any environment, or else this is an exception. If the latter is the actual state of affairs (as I am inclined to believe) there can be found a reasonable explanation for the apparent irregularity. In many Bantu languages nouns with monosyllabic stems receive different treatment from that given others. In Swahili, for example, a noun of Class 9 with monosyllabic stem will have as its prefix a syllabic nasal, while others of the same class do not : the nouns **mbwa** ' dog ' and **mbuzi** ' goat ' are of two syllables each. It is possible that something of the sort may have developed in Segeju (after its split from the rest of Thagicū but before this point), so that in the word for ' horns ' (whose stem, in spite of the way it is written, is, at least in the other dialects, monosyllabic) the nasal was syllabic and the reflex of *p treated as if intervocalic. Alternatively, analogy from the singular (presumably *rūvīa) is conceivable.

Se-8 : It is true that the ultimate product is a voiced dental stop, but, especially in view of the facts in the other dialects, it seems more reasonable to assume that it passed through these stages than to postulate a simple voicing.

Se-13 : *Fixing of Dahl's Law, Segeju* : At this point, necessarily after Se-12, the post-nasal voiceless stops which remained were identified with the voiced equivalents. No voiced non-post-nasal stops remained with which the voiceless stops affected by Dahl's Law could have merged. It should be noted that, for all the evidence to the contrary, the dissimilation of the first, unfixed stage of Dahl's Law could have been lost much earlier, even immediately after the dialect became independent ; after this point, however, at which the last remnants of a voiced-voiceless contrast were lost, Dahl's Law could not have been fixed in a positive form.

Se-14 : The proper placement of this shift relative to Se-10, Se-11, and Se-13 is uncertain, largely because indications of the treatment of †**nc** are lacking. If this is treated exactly as is †**nj** a revision of this will be necessary, as in

that case Se-10 would presumably have to follow the post-nasal voicing included in Se-13. If †nc is treated differently, but the same way as †c, then it will be necessary to assume that, before Se-13, the nasal was lost. Only if †nc is differentiated from both †c and †nj can this ordering stand.

Se-15 : A few cases of what might otherwise appear to be voicing caused by Dahl's Law would result from this shift, which is, however, clearly conditioned not by the consonant but by the vowel.

Ka-11 : *Fixing of Dahl's Law, Kamba* : As in Segeju, strictly speaking Dahl's Law was *not* fixed, and this merely represents the point at which the post-nasal voiceless stops became voiced. There are, however, more problems here than there are in Segeju. The few forms lacking an expected k, such as màútà, ' fat ', seem to indicate that the loss of the Dahl's Law dissimilation and the loss of *g intervocalically may have been going on at the same time. Granting that interference from other dialects is not to blame, it would appear that a merger of the voiceless stops affected by Dahl's Law, as well as the post-nasal voiceless stops, with the voiced equivalents, where they existed, had begun before the spirantization and loss of *g, but was interrupted, well before completion, by that shift, just as the form ŋgoβɛ ' eyelashes ' in Tharaka may show that the identification had begun before or during the shift of †p to ɸ (which might, under certain circumstances, force one to place the separation of Northern Thagicũ into its Eastern and Western branches before the change in question, as the voicing appears to be lacking in this word in ' Meru '). It should be noted that both of these words (though this is not true of some of the other anomalous items) are ones whose cognates even in certain languages which do not have Dahl's Law as a regular phenomenon are occasionally found with what one would expect to be the reflex of a voiced rather than a voiceless consonant (as in Runyankore, where one finds amajuta and orugóhe instead of the anticipated **amafuta and **orukóhe).

KE-7 : In both Kikuyu and Embu-Mbere, unlike the rest of Thagicũ (unless the realization of †mp as mv in Segeju referred to above is regular), the reflex of *p is treated the same whether or not a nasal precedes. It is true that in some dialects, as in the form of Northern Kikuyu I have heard, the forms with †mp have the mb which would be expected were this not the case, but it seems probable that this is fairly late, the sequence running not simply mp > mb, but rather mp > mɸ > mβ > mb. It is possible that the mb of Kamba is also due to the latter process, which would force a reconsideration of the closer relationship between Kikuyu and Embu-Mbere, but in view of the fact that, while the Northern Kikuyu dialect in

question has made the analogous series of shift Kamba has nð, there is some reason to believe th here is the more accurate.

Em-9 : *Fixing of Dahl's Law, Embu* : Here the voic Dahl's Law were identified with the voiced series wh existed, as were the voiceless post-nasals, and othe the unaffected voiceless stops, t and c, for which no point of articulation remained, continuing voiceless. ditioning the change in k, the only consonant still after this stage, were the unaffected non-post-nasal †t at the time.

Em-10 : This, like the identical shift in Kamba, may somewhat earlier ; it would not significantly alter an discussion. It must, however, be later than the div Mbere and Kikuyu.

Sk-8 : This change is shared with Northern Kikuyu, referred to elsewhere. After this point, however, th to agree.

Sk-9 : *Fixing of Dahl's Law, Southern Kikuyu* : Again affected by Dahl's Law and the voiceless post-nasal with the voiced equivalents where such existed, as wa nc, and nk, and otherwise with the unaffected voicel sonants conditioning the change in k (the nasal, not responsible in the other cases) were the voiceless stops Law that existed at the time, specifically the reflexes o

Sk-10 : Because of the fact that in Southern Kikuyu the sonants conditioning Dahl's Law, it is necessary, granti took this form, to assume that in that dialect *t did no until after the fixing of Dahl's Law. Why exactly this say. I am inclined to suspect that †t had before the grou at least an affricate ; alternatively, it may be that it had after the split between Northern and Southern Kiku fixing of Dahl's Law, this became temporarily, within

[1] As has Mwimbi. Note that in neither, as far as I have been able to distinguished from the usual nd in point of articulation.
[2] There is no certain example of †nt occurring as conditioning consonar If there were, it might make revision of the statement for Southern Kiku

0 would presumably have to follow the post-nasal voicing
-13. If †nc is treated differently, but the same way as †c,
necessary to assume that, before Se-13, the nasal was lost.
differentiated from both †c and †nj can this ordering stand.

ses of what might otherwise appear to be voicing caused by
would result from this shift, which is, however, clearly
ot by the consonant but by the vowel.

Dahl's Law, Kamba : As in Segeju, strictly speaking Dahl's
ixed, and this merely represents the point at which the post-
stops became voiced. There are, however, more problems
e are in Segeju. The few forms lacking an expected k, such
', seem to indicate that the loss of the Dahl's Law dissimila-
ss of *g intervocalically may have been going on at the same
ng that interference from other dialects is not to blame, it
that a merger of the voiceless stops affected by Dahl's Law,
post-nasal voiceless stops, with the voiced equivalents, where
ad begun before the spirantization and loss of *g, but was
ell before completion, by that shift, just as the form ŋgoβɛ
Tharaka may show that the identification had begun before
shift of †p to ɸ (which might, under certain circumstances,
lace the separation of Northern Thagicũ into its Eastern and
ches before the change in question, as the voicing appears to
this word in ' Meru '). It should be noted that both of these
h this is not true of some of the other anomalous items) are
ognates even in certain languages which do not have Dahl's
lar phenomenon are occasionally found with what one would
he reflex of a voiced rather than a voiceless consonant (as in
where one finds amajuta and orugóhe instead of the anticipated
**orukóhe).

Kikuyu and Embu-Mbere, unlike the rest of Thagicũ (unless
n of †mp as mv in Segeju referred to above is regular), the
treated the same whether or not a nasal precedes. It is true
dialects, as in the form of Northern Kikuyu I have heard,
th †mp have the mb which would be expected were this not
it seems probable that this is fairly late, the sequence running
p > mb, but rather mp > mɸ > mβ > mb. It is possible that
mba is also due to the latter process, which would force a
on of the closer relationship between Kikuyu and Embu-
n view of the fact that, while the Northern Kikuyu dialect in

question has made the analogous series of shifts nt̠ > nθ > nð > nd,[1] Kamba has nð, there is some reason to believe that the statement given here is the more accurate.

Em-9 : *Fixing of Dahl's Law, Embu* : Here the voiceless stops affected by Dahl's Law were identified with the voiced series where voiced equivalents existed, as were the voiceless post-nasals, and otherwise reidentified with the unaffected voiceless stops, t and c, for which no voiced stop of similar point of articulation remained, continuing voiceless. The consonants conditioning the change in k, the only consonant still to show Dahl's Law after this stage, were the unaffected non-post-nasal reflexes of †k, †c, and †t at the time.

Em-10 : This, like the identical shift in Kamba, may in fact have occurred somewhat earlier ; it would not significantly alter anything relevant to this discussion. It must, however, be later than the division between Embu-Mbere and Kikuyu.

Sk-8 : This change is shared with Northern Kikuyu, as is the tonal shift referred to elsewhere. After this point, however, the two dialects cease to agree.

Sk-9 : *Fixing of Dahl's Law, Southern Kikuyu* : Again the voiceless stops affected by Dahl's Law and the voiceless post-nasal stops were identified with the voiced equivalents where such existed, as was the case for k, nt̠, nc, and nk, and otherwise with the unaffected voiceless stops. The consonants conditioning the change in k (the nasal, not Dahl's Law, being responsible in the other cases) were the voiceless stops unaffected by Dahl's Law that existed at the time, specifically the reflexes of †t̠, †t, †c, and †k.[2]

Sk-10 : Because of the fact that in Southern Kikuyu the ð is one of the consonants conditioning Dahl's Law, it is necessary, granting that Dahl's Law took this form, to assume that in that dialect *t̠ did not cease to be a stop until after the fixing of Dahl's Law. Why exactly this should be I cannot say. I am inclined to suspect that †t̠ had before the group broke up become at least an affricate ; alternatively, it may be that it had become θ and that, after the split between Northern and Southern Kikuyu, but before the fixing of Dahl's Law, this became temporarily, within Southern Kikuyu

[1] As has Mwimbi. Note that in neither, as far as I have been able to discover, is the result distinguished from the usual nd in point of articulation.

[2] There is no certain example of †nt̠ occurring as conditioning consonant within a morpheme. If there were, it might make revision of the statement for Southern Kikuyu necessary.

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only, a stop or affricate again. Possibly there is some other explanation. For the moment, however, this must suffice.

Sk-11 : In a few cases this does not in fact appear to apply : one finds corresponding to the Mwimbi **glémpé** ' drum, barrel ' not the ****kīhéehé** one would expect from the ***kīɸémɸé** of the stage before this, but rather **kīhémbé**. Quite possibly this is due to its position in the word ; conceivably it is simply that before Sk-9 there was beginning a change which would have had **NF** become **NK**, but which proved abortive, leaving, however, its traces in the form of a few words with, after the post-nasal voicing, **mb** where **mɸ** should have been (the lack of an ****nd** would account for the absence of such cases with the dental—even if **nt** had, having become **nθ**, which is doubtful, returned through such an abortive shift to **nt**, it would not have been voiced in Sk-9, and would have become **nθ** again in Sk-10) ; again, it is possible that this is due to a sporadic tendency within Northern Thagicũ towards the devoicing of **NG** clusters, for which some evidence certainly exists (this would very well account for the Mwimbi form **mpâkûri** in place of ****mbàkûri** mentioned earlier).

Chart 4 illustrates the working of most of the shifts shown in Chart 3 and discussed above, and may make clearer their effect on the present situation. In each case, it is the position of the fixing relative to changes affecting the number of voiceless stops to which Dahl's Law could apply, and in some cases the way in which it was fixed, which determines the extent to which Dahl's Law applies. In the cases of Kamba and Segeju, it may seem odd to speak of the fixing of Dahl's Law when, in fact, Dahl's Law does not exist. However, this is the point at which, in those dialects, the post-nasal voicing, which I have chosen elsewhere to consider connected with the Dahl's Law voicing, though other treatments are possible, took place, and the point beyond which the positive fixing of Dahl's Law, even if this had not been lost earlier, would have been extremely unlikely.

Needless to say, there are problems. The ordering is extremely uncertain in spots. Because of the construction of the Bantu word, among other things, there are comparatively few examples, if in a given case there are any at all, which could illustrate the relative order of a specific pair of shifts, and often it is just the word most necessary to form the basis of a historical conclusion that a given dialect has replaced with a loanword, or which has been omitted from the sole source of information on the dialect. As a result, though one sees fairly clearly *what* shifts have occurred, one must rely very heavily upon the relative dating of dialect cleavages, some of which must in turn rest upon phonologic evidence, with the somewhat dissatisfying, however inevitable, introduction of circularity. The treatment of Southern Thagicũ ***mp** is a case in point. Finding Kamba and Segeju treating it (except where the clearly earlier Ganda Law applies) exactly the

	ınd after taneous)
	u
to die	ı
to return	cioka
to bear	arà
to catch	kûatà
to greet	*kûkèiθia
place	tû
chicken	gûkû
heart	
fever	ètema
people	
hyena	*mbiti (?)
rhinocero	**mbùria (?)

. Not all ch

	I. Thagicũ—before T-1	II. Thagicũ—after T-4	III. Dialects—before fixing of Dahl's Law and after (note that fixings are not necessarily simultaneous)				
			(*a*) Southern Kikuyu	(*b*) Embu	(*c*) Kamba	(*d*) Segeju	(*e*) Mwimbi
o die	ũkũkhúa	kũ̀khúa	kũkhúa > gũkúa	kũ̀khúa > gũ̀kúa	kũ̀khúa > kũ̀kúa	kũ̀khúa > kũ̀kúa	kũ̀khúa > gũ̀kúa
o return	ũkhũbiokhà (?)	khũ̀ciokhà	khũciokha > kũcioka	khũ̀ciokhà > kũ̀cioka	khũ̀ciokhà > kũ̀cioka	khũ̀ciokhà > kũ̀cioka	khũ̀ciokhà > kũ̀ci
o bear	ũkhũbiarà	kũ̀chiarà	kũchiara > gũciara	kũ̀chiarà > gũ̀ciarà	kũ̀chiaà > kũ̀ciaà	kũ̀chiarà > kũ̀ciarà	kũ̀chiarà > gũ̀cia
o catch	ũkhũkũathà	khũ̀kũathà	khũkũatha > kũgũata	khũ̀kũathà > kũ̀gũatà	khũ̀kũathà > kũ̀kũatà	khũ̀kũathà > kũ̀kũatà	khũ̀kũathà > kũg
o greet	ũkhũkèiṭhia	khũ̀kèiṭhia	khũkèiṭhia > kũgèiṭia	kũ̀khèiθia > gũ̀kèiθia	kũ̀khèiθia > kũ̀kèiθia	**kũ̀khèiθia > **kũ̀kèiθia	kũ̀khèiθia > gũ̀kè
ace	ũkũnthũ̀	kũ̀nthũ̀	khũntũ̀ > kũndũ̀	khũ̀ntũ̀ > kũ̀ndũ̀	khũ̀ntũ̀ > kũ̀ndũ̀	**kũ̀thũ̀ > **kũ̀tũ̀	kũ̀nthũ̀ > gũ̀ntũ̀
icken	ĩnkũkhṹ	nkṹkhṹ	nkṹkhṹ > ngṹkṹ	nkṹkhṹ > ngṹkṹ	nkṹkhṹ > ngṹkṹ	**nkṹkhṹ > **ngṹkṹ	nkṹkhṹ > ngṹkṹ
eart	ĩnkhórò	nkhórò	nkórò > ngórò	nkórò > ngórò	nkóò > ngóò	nkórò > ngórò	nkhórò > nkórò
ver	**ĩntèthèmá (?)	**ntèthèmá	**ntèthèmá > **ndètèmá	**ntèthèmá > **ndètèmá	ntèthèmá > ndètèmá	**tèthèmá > **tètèmá	ntèthèmá > ntètè
eople	abanthũ̀	ànthũ̀	antũ̀ > andũ̀	àntũ̀ > àndũ̀	àntũ̀ > àndũ̀	àthũ̀ > àtũ̀	ànthũ̀ > àntũ̀
yena	ĩmpíthí	mpíthí	mɸíthí > mɸíti	mɸíthí > mɸíti	mpíthí > mbíti	**mpíthí (?) > **mbíti (?)	mpíthí > mbíti
inoceros	ĩmphùria	mphùria	mɸùria > mɸùria	**mɸùria > **mɸùria	mpùžia > mbùžia	**mpùria (?) > **mbùria (?)	mphùria > mpùri

Chart 4 : Illustrations of the Shifts and their effect on Dahl's Law. Not all changes taken into a

ts—before fixing of Dahl's Law and after fixings are not necessarily simultaneous)

Kamba	(*d*) Segeju	(*e*) Mwimbi	(*f*) Tharaka
> kũkúa	kũkhúa > kũkúa	kũkhúa > gũkúa	kũkhúa > gũkúa
hà > kũcíokà	khũciokhà > kũciokà	khũciokhà > kũciokà	khũciokhà > kũciokà
> kũciaà	kũchíarà > kũciarà	kũchíarà > gũciarà	kũchíarà > gũciarà
hà > kũkũatà	khũkũathà > kũkũatà	khũkũathà > kũgũatà	khũkũathà > kũgũatà
a > kũkèiθia	**kũkhèiθia > **kũkèiθia	kũkhèiθia > gũkèiθia	kũkhèiθia > gũkèiθia
> kũndũ	**kũthũ > **kũtũ	kũnthũ > gũntũ	kũnthũ > gũntũ
> ngũkũ	**nkũkhũ > **ngũkũ	nkũkhũ > ngũkũ	nkũkhũ > ngũkũ
ngóò	nkórò > ngórò	nkhórò > nkórò	nkhórò > nkórò
á > ndètémá	**tèthémá > **tètémá	ntèthémá > ntètémá	ntèthémá > ndètémá
ándũ	àthũ > àtũ	ànthũ > àntũ	ànthũ > àntũ
- mbíti	**mpíthi (?) > **mbíti (?)	mpíthi > mbíti	mpíthi > mbíti
> mbùžia	**mpùria (?) > **mbùria (?)	mphùria > mpùria	mphùriá > mpùria

; and their effect on Dahl's Law. Not all changes taken into account have been discussed.

IV. Final Forms

(*a*) Southern Kikuyu	(*b*) Embu	(*c*) Kamba	(*d*) Segeju	(*e*) Mwimbi	(*f*) Tharaka
gũkuá	gũkuá	kũkw'á	(kugwa)	gũkuá	gũkuá
gũcò:ka	gũciokà	kũsyòkà	(kušoka)	gũcò:kà	gũcò:kà
gũciara	gũciarà	kũsyáà	(kušara)	kũjíarà	gũciarà
kũgwáta	kũgwátà	kũkwátà	kukwata	kũgwátà	kũgwátà
kũgèithia	gũkè:thia	kũkè:thyà	**kukeidža (?)	gũkè:thia	(guke:thia)
kũndũ	kũndũ	kũndũ	**kutu	gũntũ	gũntũ
ngũkũ	ngũkũ	ngũkũ	**nguku	ngũkũ	ngũkũ
ngórò	ngórò	ngóò	ngoro	nkórò	nkórò
**ndetema	**ndetema	ndetema	**tetema	ntetema	(ndetema)
andũ	àndũ	àndũ	atu	àntũ	àntũ
híti	mviti	mbíti	**mbíti (?)	mbíti	mbíti
hùria	**mvuria	mbùsyá	**mbudza (?)	mpùria	mpùria

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same way as *mb, while Kikuyu and Embu have not phonetically merged the two, one assumes that Kikuyu is closer to Embu than either is to the other two. But the treatment of *mp in Segeju, as stated above, is, because of scanty and somewhat contradictory evidence, doubtful; and the situation in Kamba might conceivably be the result of the stopping, within Kamba, of a common Southern Thagicũ *mɸ or of an *mβ developed later as in Northern Kikuyu—one cannot rely too much on symmetry, and the fact that *nʈ is not so treated proves nothing. So that this is not really conclusive evidence for the closer interrelationship of Kikuyu and Embu. Again, there are the many cases, of the sort familiar to any worker in dialect geography, where different isoglosses point to different groupings: a number of excellent reasons could be advanced for making the primary division not between Northern and Southern Thagicũ, but between Kikuyu and all the other dialects. Most, if not all, however, of the changes whose distributions would seem to make the ordering given above untenable, such as the spirantization of *p and *ʈ and their later voicing, which are found in all dialects, and the loss of i after e in words such as Kikuyu (and Mwimbi) gũeɔ̀:ka, 'to return', which occurs in a number of linguistically and geographically separate dialects, can be fairly easily accounted for by assuming them to have been unfixed rules themselves, or shifts which took place over a longer or at a more crucial period than others, or possibly in some cases simply independent developments or changes spread by borrowing at a time when the dialects were distinct but still in fairly close contact.

The exact form of the original dissimilation is also, of course, and will remain, uncertain. In the Charts, partly for the sake of convenience, and partly because I think it one of the most likely possibilities, I have chosen to present it as a loss of aspiration by the first of two voiceless and aspirated stops; it seems a reasonable possibility, and parallels are known to exist. It has been objected that, as the present-day dialects do not in fact show any significant aspiration of their voiceless stops, it is unreasonable to assume aspiration to have been present at any time. To this I would point out that in the first place the phonetic situation today does not in itself necessarily give any clue as to the *phonetic* situation in the past, and in the second deaspiration, while it is convenient, and while aspiration is not uncommonly found in Bantu languages (and in Bantu languages showing Dahl's Law) as a further feature distinguishing the voiceless from the voiced series, is not the only type of differentiation possible. It might, for example, have taken the form of an actual voicing, the original voiced series being at the time implosive (which, like the aspiration of voiceless consonants, is not found in present-day Thagicũ but is by no means unknown in East Africa) or possibly fricative. I am not trying to make any special case for one of the ways of distinguishing the series of voiceless stops affected by Dahl's Law from both the unaffected voiceless series and the voiced consonants; I cannot, however, accept the idea that from the time of its introduction into Thagicũ Dahl's Law took the

form of the actual pronunciation of the voiceless series when in a position to be affected exactly as if they belonged to the voiced series. That would necessarily, because of the differences between dialects, place the change's introduction after the break-up of the group into the various dialects, and I have already given my reasons for doubting the likelihood of that.

A further problem which remains, and probabily will continue to remain, unsolved is the question of when and how Dahl's Law came into Thagicũ. Again, the possibilities of independent innovation, inheritance, and borrowing exist ; the time of the entry may have been before Thagicũ split off from the other languages of East Africa, or after. It is conceivable that a detailed investigation of the interrelationships of the Bantu languages of East Africa and of their linguistic histories would shed light on the subject ; but a very great amount of work would be necessary which has not been, and may never be, done.

At the moment, I think it probable that even in the earliest distinct form of Thagicũ the dissimilation that was the first stage of Dahl's Law was present through inheritance, but there is no way to be certain. The explanations attempted above account only for the differences between the forms it takes in the various dialects of Thagicũ, and may not be, in any case, the truth.

It is, however, possible to find similar, though equally tentative, explanations in history for the situations in other languages of East Africa which show Dahl's Law (though points which cannot at least at present be accounted for, such as the difference in the form of the fixing of Dahl's Law between Mwimbi and Tharaka, remain), and to show that, as far as can be known at the moment, there is a reasonable possibility that other languages had the same original form of Dahl's Law as that in Thagicũ. This would reduce the probability of coincidence even further, and, if enough work were done to establish the relative chronologies of the changes known to have occurred in the various languages, it might be possible to find a more firmly based answer to the question of the source and date of Dahl's Law.

To show that similar explanations are possible, I shall now treat two other languages of Kenya, Gusii and Luhya, as I have already treated the Thagicũ dialects. Here, I should state, there is much less certainty of the accuracy of the historical statements than there has been above. The volume of data available to me is smaller, and for neither language have I the comparative evidence from other dialects that I have for Thagicũ.

In Gusii, as in Thagicũ, which it resembles in a number of other respects. Dahl's Law is rather limited in its application. The only units affected are **k** and **nk**, the conditioning consonants being **t, s, c, k, nt, ns, nc,** and **nk**. There would seem to be, as in Kamba and elsewhere, a few exceptions to this statement in fixed forms ; the word **émbéò** ' wind ' shows **mb** for a probable ***mp** before **†p** (compare the Kikuyu **héhò** ; the form is attested as **embeho** in the vocabulary in Sir Harry Johnston, *The Uganda Protectorate*, London, 1902, its presumable

history being **†ímpépò** > **ímbépò** > **ímbéɸò** > **émbéhò** > **émbéò**), though reflex of ***mp** seems to be **ŋ** (**mp** > **mɸ** > **ŋh** > **ŋ**). The dissimilatio affects the velars only, however. This is very active, though, occurri in the environments stated for Mwimbi (within a morpheme, in pref and after nasals) but also in morpheme final position : compare **ó** begin ' with **yácaagete**, ' 4 began '. In some cases **k** is not affecte (silent) reflex of **†p** occurs between it and one of the conditioning c but there seems to be considerable variation.

One might suggest the following as a reasonable sequence of s detectable historical events, starting from a state essentially the sa postulated for Thagicũ, with the Dahl's Law dissimilation taking the s

G-1 : **†p** > **ɸ** (> **h** > **Ø**)

G-2 : **j** > **c**

G-3 : *Fixing of Dahl's Law, Gusii* : The voiceless stops affected Law were reidentified with the voiced equivalents in the cases of and otherwise with the series of voiceless stops unaffected by D The conditioning consonants were at the time the unaffected **†(n)ɬ, †(n)t, †(n)c** [< ***(n)j**] and **†(n)k**. This should be compare Mwimbi situation ; note that only for the velars did there exis vocalic position a voiced stop corresponding, which may h connection with the form of the fixing here.

G-4 : **ɬ** > **s**

In Luhya [1] Dahl's Law is, as said earlier, somewhat difficult to stat it is closer in form to the general statement given at the beginning of the than is that of any of the Thagicũ dialects or Gusii. All of the original stops (normally realized as **h** ~ **y** ~ **Ø**, **s, r,** and **x**) are affected, becomin tively **β, c** (here equals **ʦ**) **t**, and **k** ~ **č**. The conditioning consonants ar (I have no data on the theoretically possible members of this list which h omitted) **r, x**, and the fricatives **s** and **f** only when they are reflexes of a stop (compare **li:kòsi**, ' neck ' < ***-kòti** with **òmùxási** ' woman ' < ***-k** applies only within a morpheme.

[1] ' Luhya ' is even more diverse than ' Meru '. Like the term ' Meru ', it covers of fairly closely related but distinct dialects ; but it also includes a few forms of spe as Logooli, which must be considered separate languages, though geographically and fairly close. The two dialects I have worked with, Nyole and Taconi, however clearly distinct, agree in most significant phonologic respects with one another and dialect of Appleby's grammar. This account is based on a synthesis of the three.

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history being †**ímpépò** > **ímbépò** > **ímbéɸò** > **émbéhò** > **émbéò**), though the normal reflex of ***mp** seems to be ŋ (mp > mɸ > ŋh > ŋ). The dissimilation regularly affects the velars only, however. This is very active, though, occurring not only in the environments stated for Mwimbi (within a morpheme, in prefixes, before and after nasals) but also in morpheme final position : compare **ógocaaka** ' to begin ' with **yácaagete**, ' 4 began '. In some cases k is not affected when the (silent) reflex of †p occurs between it and one of the conditioning consonants, but there seems to be considerable variation.

One might suggest the following as a reasonable sequence of some of the detectable historical events, starting from a state essentially the same as that postulated for Thagicũ, with the Dahl's Law dissimilation taking the same form :

G-1 : †p > ɸ (> h > Ø)

G-2 : j > c

G-3 : *Fixing of Dahl's Law, Gusii* : The voiceless stops affected by Dahl's Law were reidentified with the voiced equivalents in the cases of k and nk, and otherwise with the series of voiceless stops unaffected by Dahl's Law. The conditioning consonants were at the time the unaffected reflexes of †(n)t, †(n)t, †(n)c [< *(n)j] and †(n)k. This should be compared with the Mwimbi situation ; note that only for the velars did there exist in intervocalic position a voiced stop corresponding, which may have some connection with the form of the fixing here.

G-4 : t > s

In Luhya [1] Dahl's Law is, as said earlier, somewhat difficult to state, though it is closer in form to the general statement given at the beginning of the discussion than is that of any of the Thagicũ dialects or Gusii. All of the original voiceless stops (normally realized as h ~ y ~ Ø, s, r, and x) are affected, becoming respectively β, c (here equals ts) t, and k ~ č. The conditioning consonants are at least (I have no data on the theoretically possible members of this list which have been omitted) r, x, and the fricatives s and f only when they are reflexes of a voiceless stop (compare **li:kòsi**, ' neck ' < ***-kòti** with **òmùxási** ' woman ' < ***-kádi**). It applies only within a morpheme.

[1] ' Luhya ' is even more diverse than ' Meru '. Like the term ' Meru ', it covers a number of fairly closely related but distinct dialects ; but it also includes a few forms of speech, such as Logooli, which must be considered separate languages, though geographically and culturally fairly close. The two dialects I have worked with, Nyole and Taconi, however, though clearly distinct, agree in most significant phonologic respects with one another and with the dialect of Appleby's grammar. This account is based on a synthesis of the three.

Here the following sequence seems likely (the ordering is a bit more certain than some of the earlier ones, owing in part to the number and type of relevant shifts), the starting point being again the same, except that (probably due to a shift after its separation from other languages, rather than the retention of an earlier realization) the unit corresponding to Thagicũ *j is identical in position with the equivalent of Thagicũ *ṭ :

L-1 : *Fixing of Dahl's Law, Luhya* : The affected voiceless stops became voiced, in all cases except that of intervocalic †t merging with the voiced equivalent, the conditioning consonants being, presumably, all (as stated above, the evidence is incomplete) of the unaffected voiceless series. It is interesting to note that this differs considerably from the form of fixing hypothesized for the other forms of Dahl's Law discussed, where there was not simple indiscriminate voicing.

L-2 : b > β // $\overset{\text{V}}{\#}$ —

L-3 : †p, †ṭ, †t, †k, †nṭ, and †nk when not affected by Dahl's Law became ɸ, s, r, x, ns, and nx, respectively ; why †mp and †nt were not affected is not clear to me.

L-4 : g > j // — $\begin{matrix}\text{i}\\ \text{ĩ}\\ \text{e}\end{matrix}$

L-5 : K > f, G > v // — u ; K > s, G > z // — i

L-6 : i, u > ĩ, ũ

L-7 : NF > F

L-8 : †ɖ, d, j, g, v, z > c, t, č, k, f, s

L-9 : NK > NG

Here 1 must precede 2, 4, and 5 ; 5 must precede 7 ; 3 must precede 7 and 9 ; from dialects differing significantly from those on which this is based it is clear that 8 and 9 were fairly late.

I have in the above attempted, as stated in the beginning, to present what seems to me a reasonable alternative to the hypothesis that Dahl's Law was introduced into Thagicũ from outside after the group had split up into the various

dialects. I do not claim that borrowing is ruled out altogether ; th accept the borrowing of such a dissimilation in its final form, and that its introduction in any form at so late a date is highly improb original dissimilation and the voicing of the stops involved may ha in such a way ; indeed, the latter, though I still have grave doub the probability of obstacles in the forms of tribes and physical bar likelihood of its having come into Thagicũ in such a way, might c view of its distribution, with the languages showing comparativel being found mainly to the west, around the eastern shores of Lake areas having apparently later fixings or none at all, have spread out centre.

I have tried, using the data available on the histories of the dialec to account, in presenting the aforementioned alternative, for the ex diversity shown by Dahl's Law within Thagicũ, and have incidental small attempt to show that similar hypotheses could be used to exp greater diversity within East Africa as a whole. My arguments hav on the assumption that Dahl's Law in any given language or dial not a single change, but rather a two-step process, involving the in the original shift and its later fixing or loss, after various alteratio of application through changes occurring in the interval, by the c a subsequent change, giving the appearance, in the synchronic orc language, of a single change at the time of the second.

I cannot claim to have proved my point—this is impossible prehistory. I do feel that I have presented a reasonable possibility is likely to be not too far from the truth. It is my hope that this, it is, may stimulate others to consider the point in the languages fami as, whatever the result, this will then be some contribution to the k linguistic relationships in East Africa, and to Historical Lingui supreme goal is the reconstruction of the history of the language an

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, G > v // __ u ; K > s, G > z // __ i

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F

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dialects. I do not claim that borrowing is ruled out altogether ; though I cannot accept the borrowing of such a dissimilation in its final form, and am convinced that its introduction in any form at so late a date is highly improbable, both the original dissimilation and the voicing of the stops involved may have been spread in such a way ; indeed, the latter, though I still have grave doubts, considering the probability of obstacles in the forms of tribes and physical barriers, as to the likelihood of its having come into Thagicũ in such a way, might quite easily, in view of its distribution, with the languages showing comparatively early fixings being found mainly to the west, around the eastern shores of Lake Victoria, other areas having apparently later fixings or none at all, have spread out from a single centre.

I have tried, using the data available on the histories of the dialects concerned, to account, in presenting the aforementioned alternative, for the extreme formal diversity shown by Dahl's Law within Thagicũ, and have incidentally made some small attempt to show that similar hypotheses could be used to explain the even greater diversity within East Africa as a whole. My arguments have been based on the assumption that Dahl's Law in any given language or dialect represents not a single change, but rather a two-step process, involving the introduction of the original shift and its later fixing or loss, after various alterations in its field of application through changes occurring in the interval, by the occurrence of a subsequent change, giving the appearance, in the synchronic ordering of the language, of a single change at the time of the second.

I cannot claim to have proved my point—this is impossible in linguistic prehistory. I do feel that I have presented a reasonable possibility, and that it is likely to be not too far from the truth. It is my hope that this, tentative as it is, may stimulate others to consider the point in the languages familiar to them, as, whatever the result, this will then be some contribution to the knowledge of linguistic relationships in East Africa, and to Historical Linguistics, whose supreme goal is the reconstruction of the history of the language and its family.