THE DEVELOPMENT OF A NATIONAL ORTHOGRAPHY IN SOMALIA AND THE MODERNIZATION OF THE SOMALI LANGUAGE

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On October 21, 1972 Somalia made Somali the sole official language of the state and introduced a national orthography using Latin characters. This orthography has no diacritics or special letters, and among its salient characteristics is the use of the letters c and x for the voiced and voiceless pharyngeal fricatives respectively, and the doubling of the vowel letters to mark the length of vowels. Although it looks like some of the orthographies which developed before the rise of modern linguistics, in its inspiration it goes back ultimately to the International Phonetic Alphabet (IPA), which has played a very important role in the description of hitherto unwritten languages and in reducing them to written form. The basic principle of this alphabet is, as is well known, to represent each individual sound by one single letter shape, at the same time using special non-letter symbols to represent such additional features as the length of vowels, tone or stress. The spread of IPA was a powerful antidote against the ill-fitting and ethnocentric transposition on to the language which the researcher was describing, of the pronouncing conventions attached to the letters of the Latin alphabet in his own language; this was a frequent practice in many endeavours to transcribe African languages towards the end of the 19th century and in the early part of the 20th.

The IPA system was adopted in a somewhat simplified form in the Practical Orthography of African Languages (POAL), recommended by the International Institute of African Languages and Cultures in London, later called the International African Institute.[1] However, both IPA and POAL contain special letters which are not normally found on the keyboards of typewriters and printing machines and are thus expensive and difficult to use; developing countries could ill afford the cost of new equipment and yet they urgently need mass literacy if they are to progress. POAL is less rigid than IPA in its rules and allows the doubling of vowel letters to indicate length; it thus moves from the restricting 'one sound-one letter' principle without giving up the scientific basis on which IPA was founded. This measure proved of particular significance to the development of the Somali orthography, towards which the first practical steps were taken through the research undertaken by Lilias E. Armstrong in the early 1930s in London, with the cooperation of two Somalis, Cismaan Dubad of Hargeysa District and Xaaji Faarax[2] of Berbera. The research resulted in the publication of a long article under the title 'The phonetic structure of Somali'[3] in the introduction to which she expressed the hope 'that the students of Somali and all those interested in establishing an orthography for Somali, may find that it throws some light on their special difficulties' (p.116).

Armstrong uses POAL for transcribing Somali, with a few additional symbols taken from IPA and with the symbol ᶜ for the voiced pharyngeal fricative. In her approach to the task of discovering the phonemes and tonemes of Somali she very much favoured the study of minimal pairs, i.e. pairs of different words or of grammatical forms of the same word which are identical except for one particular difference, and in her article every formulation is backed by an ample selection of such pairs. This procedure has obvious advantages; it acts as a useful check on aural perception, which is particularly important if the researcher is not a native speaker of the language and is thus liable, however rigorous his phonetic training, to overlook some important phonetic facts. Further, nimimal pairs are immediately recognized by all born speakers of a language, and this allows for cross-checking with different speakers, in order to provide objective criteria in research procedures. A Somali speaker, for example, when faced with a minimal pair such as *dad* 'people' and *daad* 'floodwater' immediately recognizes the need of marking the difference between the vowels in the two words.

Armstrong's emphasis on the use of minimal pairs is not surprising. She taught phonetics at the Department of Phonetics at University College, London, where her departmental head was Daniel Jones, whose work on the phoneme was very much concerned with the study of contrasts. She had wide experience of research in different languages, including English, French, Kikuyu and Russian, and won a well-deserved reputation for her particularly acute aural perception. Yet in her work on Somali she exercises great caution and humility, admitting uncertainty and doubt at various points.

She did not continue her researches into Somali after the publication of this article, but her work had a very strong influence on two later researchers who began their work some years after her death, namely Muuse Xaaji Ismaaciil Galaal and myself. In 1948 C.R.V. Bell, then the Director of Education in the British Somaliland Protectorate, initiated a research project into the possibility of developing a written form of Somali, and he entrusted its academic supervision and overall direction to J.R. Firth, who was then the head of the Department of Phonetics and Linguistics at the School of Oriental and African Studies (SOAS) in the University of London. The project provided funds for a team of two researchers and the necessary recording equipment. One of these was to be a graduate with linguistic training, who would be given advanced training in phonetics (including intensive ear training) and linguistics at SOAS, followed by eighteen months' research in Somalia and a three-month writing-up period.

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1. See the entry in Bibliographical References under International Institute of African Languages and Cultures.
2. Note that all the Somali personal names in this article are transcribed in the national orthography. When the transcription of authors' names on title pages diverges from this orthography, cross references are given in the Bibliographical References.
3. Armstrong 1934.

His co-researcher was to be a speaker of Somali particularly well acquainted with the lexical resources of his language and its oral literature. Ideally both ought to have been Somali speakers, but at that time no Somali graduates with linguistic training existed.

A very small group of applicants responded to the advertisement for the first researcher, and it was my good fortune to be selected. After four terms of training in 1948–49 I went to the headquarters of the Education Department at Sheikh in order to join my team-mate, Muuse Xaaji Ismaaciil Galaal, a man of vast knowledge of his language and its cultural heritage.

We were both greatly impressed and inspired by Armstrong's use of minimal pairs in Somali and we explored extensively the possibilities of contrasts, going through all the possible combinations of phonemes in monosyllables and many combinations in polysyllabic words. We also investigated the grammatical structure of the language and recorded and analyzed a large number of oral literary texts, in order to check our formulations and to supplement our data.

We also interviewed informants from different areas of the Somali speaking territories in order to gain some insight into dialect divisions, travelling extensively and making a three-month visit to Mogadishu in 1951. There we had the opportunity to compare notes with the propounders of a system of writing Somali which had been invented by Cismaan Keenadiid in the early 1920s and was known as *Far Soomaali* (Somali Writing) or *Cismaaniya*.[4] It was a very efficient orthography, as accurate as the present one, but suffered from the great disadvantage of having completely different letters from any known script, thus requiring a vast layout in terms of printing machinery and typewriter keyboards and involving additional educational problems when teaching any of the world languages used in Somalia. We were very much encouraged to find that Cismaan Keenadiid had arrived at very similar conclusions about the phonology of Somali as Armstrong and ourselves, especially since he had no acquaintance whatsoever with the science of linguistics. We learnt in discussions with him that in the early stages of the development of *Far Soomaali*, it was by noticing the words which were written in the same way but differed slightly in pronunciation that his system was gradually perfected by the addition of new letters to the initial set. In other words he made use of the minimal pair technique in essentially the same way as Armstrong and ourselves.

Our researches culminated in a report entitled *Recommendations for a Somali orthography*,[5] which showed the very strong influence of Armstrong's system. We recommended that the retroflex post-alveolar voiced stop and the voiceless pharyngeal fricative consonants should be represented by the appropriate IPA letters, and we adopted her method of showing the length of vowels by doubling the letters. On the other hand we suggested the use of the digraphs sh and kh instead of her ∫ and x, and

the symbol ' instead of ᶜ. The greatest degree of divergence from Armstrong was in the treatment of tone and vowel quality representation. We recommended that four tone marks should be used but only in emergencies, i.e. in situations where the context could not eliminate a possible ambiguity: in this we were guided by our own experience of transcribing texts and the long experience of *Far Soomaali*. This occasional use of tone marks made it impossible to represent any of the tonemes by the absence of tone marks and hence we added one tone mark to those employed by Armstrong.

Another divergence of our report from the system she developed lay in the representation of vowels, which she believed to be eighteen, nine short and nine long. We found that she had overlooked the existence of two vowel phonemes, and we arrived at the conclusion that there were twenty vowel phonemes, ten short and ten long. At the same time we found that it was possible to simplify her system, for we discovered that almost all the numerous minimal pairs which justified setting up this number of vowels consisted of different grammatical forms with the same roots. The contrasts were between:

(a) 2sg. imperative and the 3sg.m. past independent tense forms[6] (called by Armstrong 'short forms') of the same verb, or
(b) nouns and the 3sg.m. past independent tense forms of verbs, both sharing the same root.

The only exceptions to this were some ten pairs of words in which such contrasts were correlated with the presence of different roots.

We also discovered that if the minimal pairs involving the different grammatical forms with identical roots and the few exceptions mentioned above were ignored, there would be only ten vowels, five short and five long, which could be readily transcribed with the ordinary vowel letters of the Latin alphabet.[7] It became obvious to us from transcribing oral texts, and from the experience of *Far Soomaali*, that the context would normally eliminate any semantic ambiguity even if only ten vowel distinctions were shown. We recommended, however, that the signs + and : should be placed before vowel letters when it was absolutely necessary to mark the distinctions within the twenty-vowel system, i.e. in a dictionary or in a description of grammar. We made various other recommendations about spelling conventions and word division rules. Our report was, however, never acted upon, since there was a great deal of opposition to the Latin script among the Somali public at the time.

4. For an account of this system of writing see Moreno 1955.
5. Andrzejewski and Muuse Xaaji Ismaaciil Galaal 1952.
6. For the characteristics of the forms of this tense see Andrzejewski 1968 and 1975a.
7. For further discussion of the problem of representing Somali vowels see Andrzejewski 1954 and 1955.

It was particularly fortunate for us that the completion of our project coincided with the post-war expansion of SOAS, and we both found employment at the Department of African Languages and Cultures there and were able to continue our cooperation between 1952 and 1955. This resulted in the publication of a book *Hikmad Soomaali*[8] which consisted of literary texts written down by Muuse Xaaji Ismaaciil Galaal and provided with a grammatical introduction and notes by myself, where we applied most of our recommendations, with only minor modifications. In 1955 my co-researcher returned to Somalia, where he devoted himself with great zeal to the collecting of oral poetry and prose, using the Latin script for the task: he also gathered round himself, and trained, a group of likeminded young Somalis. He returned to London on a British Council fellowship for a few months in 1962 and for a brief period we resumed our collaboration. This resulted in a joint article, which consisted of an annotated edition of three famous Somali oral poems, under the title 'A Somali poetic combat', which was published in the *Journal of African Languages* and soon afterwards reprinted in booklet form by Michigan State University in East Lansing.[9] In this work we used a simplified method of transcription, replacing the symbols ɖ, ħ and ᶜ by dh, ch and c respectively, and dispensing totally with the use of tone marks and the special signs needed for distinguishing the twenty vowel qualities.

Although our two joint publications had a very limited circulation in Somalia, they did reach some of the leading people who were interested in the writing of the language. Among them was Shire Jaamac Axmed,[10] a talented collector of Somali oral literature and ardent patriot, who was very much concerned with the educational progress of his country, at this time hampered by the use of foreign languages even at the lowest levels of schooling. In 1965 he published a collection of works of oral literature in which he used the same transcription as in 'A Somali poetic combat'. Between 1966 and 1967 he edited a journal, which mainly consisted of oral literary material,[11] where he introduced one change in the transcription: the replacement of the digraph ch by x. Both book and journal had a fairly wide circulation among the public and this gave him the chance of testing the system to find out whether it required any major modification. This was truly pioneering work, requiring much personal sacrifice, and was conducted in spite of great economic difficulties, as well as of discouragement and even at times threats of violence from those who were opposed to the Latin script. His work ended in triumph, however, when his system of transcription, apart from some minor changes in word division rules, was accepted as the national orthography in 1972.

It may seem strange that it took independent Somalia twelve years to decide to make Somali the national language and to introduce an orthography, especially when it is realised that all Somalis speak the same language. The reasons for the delay were political: the conflicting views on the choice of a script were so violently expressed by the public that it became a dangerous issue involving bitter polemics, demonstrations and the possibility of violence on a major scale. *Far Soomaali* had failed to win universal acceptance, while many people fiercely opposed the Latin script since they regarded it as anti-Islamic and likely to foster European cultural domination. Some proposed the use of the Arabic script for Somali, but here there were enormous difficulties in the representation of vowels, which could only be resolved by substantial modifications of the Arabic script, a measure which was anathema to the traditionalists. This turbulent period in Somali cultural history found two able chroniclers in Xuseen M. Aadan and David Laitin.[12]

The introduction of an official orthography was made possible by the decisive action of the revolutionary government which came into power in 1969, but it should be noted that their success was to a large extent due to the preparatory work which began soon after independence, when the Cultural Department of the Somali Ministry of Education was established. This employed a group of full-time Somali researchers who collected a vast number of oral texts, transcribing them in systems of writing of their own choice and doing research into the language.[13] A Somali Language Commission was set up in 1960 under the leadership of Muuse Xaaji Ismaaciil Galaal, which investigated all the existing systems of writing with the aim of choosing the best one for the official orthography. A UNESCO Commission composed of three linguists, Stefan Strelcyn, Joseph Tubiana and myself, was sent to Somalia in 1966 at the request of the Somali government to help with the evaluation of these scripts.[14] The terms of reference were not to select one particular script but to comment on the advantages and disadvantages of all of them. When the revolutionary government came to power they strengthened the Somali Language Commission and entrusted them with the task of preparing schoolbooks and adult education materials, allowing the three main scripts to be used. On 21st October 1972, the third an-

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8. Muuse Xaaji Ismaaciil Galaal 1956. Note that this scholar has published various other works; for bibliographical references readers are referred to Johnson 1969 and 1973 and to Andrzejewski 1975b.

9. Andrzejewski and Muuse Xaaji Ismaaciil Galaal 1963. Note that the use of the letter c for the voiced pharyngeal fricative (it is simply the lowering of the sign ᶜ used by Armstrong) was suggested by Muuse Xaaji Ismaaciil Galaal for the sake of typographical simplicity. The use of the digraph *ch* for the voiceless pharyngeal fricative *h* was first introduced by Shire Jaamac Axmed in his private collection of oral literature in 1959–60. The idea of using digraphs instead of IPA letters had occurred to Muuse Xaaji Ismaaciil Galaal in the early 1950s when he was transcribing oral poems, and had no typewriter with IPA symbols at his disposal.

10. Shire Jaamac Axmed 1965.

11. Shire Jaamac Axmed 1966–67.

12. Xuseen M. Aadan 1968 and Laitin 1977.

13. An account of these activities is provided in Johnson 1973.

14. The work of this commission is described in detail in Laitin 1977.

niversary of the revolution, the decision to introduce an orthography in the Latin script was announced in the President's speech at the parade ground, and this was accompanied by the dramatic gesture of discharging masses of leaflets with the new alphabet, and patriotic slogans written in it, from helicopters which hovered above the assembled crowds. Opposition was overcome mainly by persuasion and skillfully generated enthusiasm, with only occasional cases of coercion.

The Somali public soon discovered that the official orthography was very easy to learn and to use, and this substantially contributed to the speed with which Somali began to replace the foreign languages which had previously been used in all written communications in government business and in education. The assumption that tone marks and signs for all the twenty vowel distinctions were unnecessary for practical purposes was fully confirmed by the experience of teaching and communication. At the same time tone marks have to be used in serious grammatical discussion, as can be seen in the two Somali grammars, where two different methods of marking are used, e.g.

di'bi	'an ox'	dameér	'a she-donkey'
dibi	'oxen'	dameer	'a he-donkey'
a'wr	'a he-camel'	inan	'a boy'
awr	'he-camels'[15]	inàn	'a girl'
		kéen	'bring' (imper.sg.)
		keén	'he brought'[16]

Similarly, for lexical work it proved to be necessary to have special signs for distinguishing vowel qualities within the twenty-vowel system. For example, the leading Somali lexicographer, Yaasiin C. Keenadiid, uses a raised circle to distinguish between pairs like:

| duulid° | 'attacking' | sugid° | 'waiting' |
| duulid | 'flying' | sugid | 'ascertaining'[17] |

The transformation of Somalia into a literate country has been very swift. In the first year all public administration, both central and local, changed over to Somali, and it became the sole medium of instruction in elementary schools and adult education classes. In the following years the whole system of pre-university standard education was gradually converted to Somali, with the exception of the last two forms of secondary schools which are scheduled to change over within the next sixteen months: this applies to all subjects, including science and mathematics. At the National University a Department of Somali Language and Literature was established in 1976 and it now operates entirely in Somali, including the teaching of Somali phonetics and scansion.[18] Similar progress has been made in the legal system, where Somali has replaced foreign languages.

While literacy spread with great rapidity in towns, the rural districts required special treatment and a massive literacy campaign was launched in which older school pupils, under the guidance of their teachers, were sent for a year to the pastoral and agricultural villages to teach people how to read and write and to impart basic knowledge of arithmetic, civics, elementary hygiene and so on.

All this work, though to a large extent relying on voluntary effort, required a massive allocation of national economic resources in order to enlarge the network of schools and technical training centres and to print the books, newspapers and periodicals without which the public could easily revert to illiteracy. In the preparation of books the Somali Language Commission played the leading role at first. In 1973 this task was entrusted to the Curriculum and Adult Education Departments of the Ministry of Education and to the Academy of Culture, which is an institute under the Ministry of Higher Education and Culture concerned with collecting and editing works of oral literature and with encouraging and subsidizing new authorship in all spheres connected with Somali culture, including fiction. The Ministry of Information publishes a national daily paper and various occasional publications, and other government departments publish periodicals. In some small communities, including schools, places of work and local centres, the needs of the reading public are also served by mimeographed magazines with limited circulation but usually a very keen readership.[19]

The use of Somali in all spheres of public life and as the medium of instruction in schools made the modernization of the vocabulary a task of top priority. Some degree of modernization had occurred before the introduction of the orthography through the work of broadcasters, who

15. Cabdullaahi Xaaji Maxamuud "Insaaniya" and others 1973, p. 11.
16. Shire Jaamac Axmed 1976, pp. 99 and 119.
17. Yaasiin C. Keenadiid 1976, pp. 131 and 406.
18. It is interesting to note that a handbook of phonetics written entirely in Somali is used (Maxamed Xaaji Raabi 1977). The principles of Somali scansion were not discovered till recently, in spite of attempts by several researchers, including myself. The breakthrough came with the extensive, independently undertaken researches of two Somali scholars, represented in the following works: Maxamed Xaashi Dhamac "Gaarriye" 1976, and Cabdillaahi Diiriye Guuled [1978].
19. Accounts of all the developments which have taken place in Somalia since 1972 in the sphere of education and literature are provided in Andrzejewski 1974, 1975b, 1977a, 1977b and [1978], Cumar Cismaan Maxamed 1975 and 1976, and Somalia 1974a, 1974b and 1974c. In these publications bibliographical information is provided, but it should be supplemented by the following items: Jaamac Cumar Ciise 1976 and Somalia 1976b and 1977. Note that bibliographical items listed in 1975b as 'in the press' have now all been published with the exception of the work of Axmed Cabdullaahi Qaalib. To give a bibliography of all schoolbooks and teachers' manuals would be beyond the scope of this paper. The largest collections accessible to the public are found in the Library of the College of Education at Lafoole, National University of Somalia, and in the Library of the School of Oriental and African Studies, University of London, where, since their authorship is anonymous, they are entered under the heading *Somalia* in the Main Catalogue.

enriched the language by introducing to the public many new words which were necessary for translating world news items.[20] Their efforts were marked by a strong preference for coining rather than borrowing, influenced as they assuredly were by the usages of Somali poets, who coin new words to help them to cope with the very rigid rules of alliteration and scansion.[21] Ever since broadcasting in Somali was introduced in the early 1940s, poetry has occupied a large part of the programmes, and in Somali society the prestige of poets is such that they are regarded as the highest authorities on the aesthetic values of the language. Neither they nor their devoted audiences would tolerate a large influx of foreign words, and their example was followed by authors of scientific, technical and mathematics textbooks, so that the majority of specialized terms are created from the existing resources of the language. This is mainly done by two methods: either by giving new, specialized meanings to the existing ordinary words or by coining new words out of the roots and suffixes present in the language. The examples below, which are taken from a secondary school book on mathematics[22], illustrate the first of the two methods of lexical enrichment.

	Ordinary Meaning	Specialized Meaning
eber	'being empty,' 'nothing'	'zero'
togan	'stretched,' 'arranged in the proper order'	'positive' (as in 'positive numbers,')
isir	'origin,' 'ancestry'	'factor'
fallaadh	'arrow'	'vector'
bar	'spot'	'point'
xagal	'bend (of a limb)'	'angle'
sallax	'smooth and flat surface of a rock'	'plane'
kulanno	'meetings,' 'places of meeting'	'points on the coordinate plane'
dhidib	'pole supporting the roof of a hut'	'axis'
horsan	'singled out of a group and put to the fore'	'ordered' (as in lammaane horsan 'ordered pair')
fansaar	'placing a pillion rider on a horse'	'function'
urur	'group,' 'association'	'set'
madhan	'empty'	'null' (as in urur madhan 'null set')

hormo	'small group taken out from a larger one and put to the fore' (a word usually applied to a group of camels made ready to be taken to the watering trough) 'subset'

The second method, i.e. coining, is illustrated here by examples taken from the same textbook of mathematics. The nature of the coining is explained by words and affixes given for comparison.

taban	'negative'; cf. tebid 'missing,' 'noticing the loss of something' and −an (participial suffix)
saddexagal	'triangle'; cf. saddex 'three' and xagal 'bend (of a limb)'
sarreeye	'numerator'; cf. sarrayn 'being above' and −e (affix denoting a person or thing which fulfils a particular function or experiences a particular state)
hooseeye	'denominator'; cf. hoosayn 'being below' and −e (as above)
maangal ah	'rational' (as in tirooyin maangal ah 'rational numbers'); cf. maan 'consciousness', 'mind', gelid 'entering' and ah 'which is')

Not all the new words, of course, are drawn from the existing resources of the Somali language and some are borrowed. In mathematics and science they are mainly taken from English but are adjusted to Somali phonology and orthography, e.g. logardam 'logarithm', taanjenti 'tangent' or absiisa 'abscissa'.

It is by no means accidental that the leading Somali mathematician, who invented many of the new terms, is himself a poet. This is Maxamuud Nuur Caalim, a professor of mathematics at the College of Education at Lafoole, who has won wide acclaim for his poems on mathematical themes in which various complex operations are explained in alliterative verse. Most of the examples in the

20. See Andrzejewski 1971.
21. For information about the role Somali poetry plays in the national life of Somalia, see Andrzejewski and Lewis 1964 and Johnson 1974. Further bibliographical information can be found in Johnson 1969 and 1973 and Andrzejewski 1975b.
22. Somalia 1976a.

textbooks he has written are taken from the cultural and physical environment familiar to the students, for it is his conviction that mathematics is a language which should be shared by the community like any other form of language.

The modernization of Somali is still in progress and in fact there are plans to translate or write university handbooks, starting with the humanities and eventually moving on to scientific subjects; I have no doubts as to the feasibility of these ambitious plans. At the moment a large research project is under way which involves the preparation of a comprehensive monolingual dictionary and an extensive description of the grammar; the scheme involves a sizable team of researchers and ancillary staff, and is to some extent funded by the Italian government, who as part of their aid programme offered the services of several Italian linguists and the use of a Rome University computer.[23]

Even at the present stage the Somali experiment represents an unusual measure of success in the development and modernization of a national language, and it is obviously highly relevant to any discussion of language planning and reform in developing countries. It shows that if there is sufficient motivation and readiness to allocate the requisite human and economic resources it is possible to transform a language which till recently had no official orthography into a tool of communication in national life and a vehicle of scientific and mathematical thought.

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Throughout this paper Somali personal names are written in the national orthography. In the list below, however, the names of Somali authors are given in the form in which they are written on the title pages of their works, which is often substantially different. In order to avoid confusion cross-referencing is used, and the sign = is placed between two versions of a name to indicate that they refer to the same person. The inversion of personal names, i.e. surname first, given names or initials second, is applied only in those bibliographical entries where the author is a non-Somali; the names of Somali authors follow their customary order as used in Somalia, i.e. given name first, followed by the name of the person's father and then by that of his grandfather, while any nickname is given in double inverted commas.

Readers should note that sometimes in library catalogues or bibliographies Somali names are inverted, and this can cause serious retrieval difficulties. It is advisable to try all the possible permutations in the order of names when tracing Somali bibliographical entries.

Titles of Somali works are provided here with English translations in square brackets. It should be noted that with the exception of *Iftiinka-Aqoonta* there are no such translations on the title pages of the works concerned. When the year of a publication is given in square brackets this means that it is awaiting publication, the date being only tentative.

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23. See Tedeschini Lalli 1976; for other aspects of university education in Somalia see also Geshekter 1978. The overall direction of the new language research project lies with the Department of Somali Language and Literature, National University of Somalia.

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