

AMHARIC FOR MODERN USE

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There are two major parts in this paper — the first one dealing with the place of Amharic in national life vis-à-vis English and vis-à-vis the other Ethiopian languages, and the second dealing with the inadequacies of Amharic for fulfilling its present function and the measures needed to remedy this situation.

Part I

Ethiopia shares with many other countries — especially in Asia and Africa — the problem of achieving the technological level and the national and cultural integration of industrialised Western countries in as short a time as possible. Language plays a most important role in this task. For Ethiopia, we can divide the linguistic problem into two major parts: first, what relative roles must be played by English and Amharic and, second, what kind of participation — if any — should be given to the vernaculars (i.e. the other Ethiopian languages).

Amharic and English

English now fulfils in Ethiopia the role of a second official language in various areas. It is the medium of instruction in university and secondary education and, until recently, in elementary education from Grade III on. It is used in legislation, broadcasting and, in some cases, in official correspondence. Of all these, perhaps its most crucial role is its use as a medium of instruction in education. The Ministry of Education has recently replaced English by Amharic as a medium of instruction in elementary schools up to and including the VI grade. This trend is very likely to continue. In the not-too-distant future English may be replaced by Amharic in the secondary schools as well. It is too early yet to speak of replacing English as a medium of instruction at the University level.

The problems that such a step has created and will continue to create are many and obvious.

a) Shortage of Teaching Materials

Some attempts have been made to produce the necessary teaching materials in Amharic. These are beset by untold difficulties due to the lack of properly trained manpower to do the task adequately. The attempts so far have been translations of textbooks written for schools in advanced countries with some rather lame attempts at adaptation to local conditions. This is compounded by the rather difficult problem of the inadequacy of the Amharic vocabulary, especially for science subjects. We shall not say any more about this problem here as this will be treated in further detail in Part II below.

b) Lowering of the standard of English achieved by students

Although English continues to be taught at a subject from grade III on, yet the fact that it does not come into full use until the VII grade has meant that the level of English acquired by students by the time they finish elementary

school is so poor that their ability to follow secondary school instruction in English is thereby very seriously impaired.

Yet many obvious advantages result from the replacement of English by Amharic in elementary schools. Since English is the second, third or, in some cases, fourth language for Ethiopian students, the removal of this additional barrier means that a much greater number can acquire an elementary education with much less difficulty than before. To attempt to create a populace that is literate in both English and Amharic is a task that is of too great a magnitude to undertake, aside from being of doubtful necessity. Clearly, then, the solution for the problem of inadequate English at secondary level is to make Amharic the medium of instruction there too. This means, of course, that the set of problems enumerated above will be taken one step higher up the education ladder and present themselves again, in some cases with even greater intensity, at the secondary level. That is, the problem of producing teaching materials in Amharic at the secondary school level is an even more forbidding task than that of producing these materials for elementary schools. To this is added the necessity of having an all-Ethiopian staff at the secondary school level if the teaching medium is Amharic. What with the present rate of teacher drop-out and the extremely slow rate of teacher production for the secondary schools, this may prove to be a practically insurmountable problem. The net result of this may be the employment of unqualified people to teach in the secondary schools simply because they can teach in Amharic. At the same time, the level of English acquired by students at the end of their secondary schools will be so low that it may be wellnigh impossible to carry on with English as the medium of instruction at the university level.

The same cycle of problems would then repeat themselves at the University level, only in a more intense fashion than before. It is not easy to say whether or how one can cut such a vicious circle. One proposal that merits consideration may be the following:-

1. We start with the assumption that University education will have to be given in English for an indefinite period in the future because:-

a) the task of producing the University teaching material (all textbooks and all essential reference material) in Amharic is unthinkable difficult in view of the severe shortage of qualified manpower for the purpose and the prohibitively high cost of production;

c) it will always be necessary for University-educated Ethiopians to have a thorough command of one of the world languages if they are to maintain the necessary contact with the international community.

2. This means that between the end of secondary school education and the beginning of University education the level of English of students wishing to enter the University must be brought up by a period of intensive training in the language. It is difficult to see how this can be done in less than one year. It would therefore be necessary to introduce a pre-University intensive training year in the English language for all those wishing to enter the University. This would, of course, lengthen their University training period by one year, but it seems to be the only way of making it possible to have elementary and secondary education in Amharic and University education in English without seriously crippling the latter.

Amharic and the Vernaculars

"On educational grounds we recommend that the use of the mother tongue be extended to as late a stage in education as possible. In particular, pupils should begin their schooling through the medium of the mother tongue, because they understand it best and because to begin their school life in the mother tongue will make the break between home and school as small as possible.

"We consider that the shock which the young school child undergoes in passing from his home to his school life is so great that everything possible should be done to soften it, particularly where modern methods of infant teaching have not yet penetrated to the school.

"The use of the mother tongue will promote better understanding between the home and the school when the child is taught in the language of the home. What he learns can easily be expressed or applied in the home. Moreover, the parents will be in a better position to understand the problems of the school and in some measure to help the school in the education of the child."

Such a recommendation raises a number of important questions.

1. In Ethiopia there are about 45 different local languages. We have seen the many serious practical problems that arise in attempting to give education even in Amharic. To try to provide an elementary education in a number of vernaculars would at least increase the serious problems by that much. Aside from the necessity of reducing many of these languages to a practical script, there would be the problem of producing teaching material and preparing sufficiently trained teachers to teach in the various languages.

2. In a country like Ethiopia, where the multiplicity of languages, cultures and ethnic groups can sometimes be a barrier to national integration, is it really advisable to risk accentuating such differences by giving education in the various vernacular languages?

The only vernacular that has a usable script, the beginnings of a literature and some teaching materials, is Tigrigna. Galligna and Tigre have also been written in the Ethiopic script to some extent but only in the form of a few religious texts. There can be no doubt, therefore, that the practical difficulties of implementing the UNESCO recommendation would be immense. The only practically feasible way of implementing this recommendation would be to select the three or four major vernaculars and attempt to use these in the first three or four grades of elementary education.

How would this affect national integration? At first glance, it would seem that any role given to vernaculars would have the tendency to encourage fragmentation. The testimony of historical evidence, however, seems to be to the contrary. An excellent illustration of this is provided by the case of the Soviet Union, where enlightened participation of local languages and cultures has been the rule rather than what we might call the "bulldozer approach" to the achievement of unity.

"Soviet educational policy has aimed at providing education in the vernacular. Languages that had no written form have been endowed with scientifically-devised alphabets and grammars, a work of great magnitude which is still

1. "The Use of Vernacular Languages in Education." UNESCO, 2nd impression, Paris, 1958.

proceeding. In time, the need for a unifying language led to the introduction of compulsory Russian and the concomitant use of the Russian alphabet for most vernaculars. With the extension of compulsory attendance from four to seven or eight years, and the provision of boarding schools for pupils from outlying villages the standards of proficiency in Russian are likely to improve. This will help solve the problem of more advanced education among minor linguistic groups. The aim seems to be a bilingual population proud of its own national achievements yet enjoying access to the wider world through Russian."²

It seems likely, therefore, that the use of the vernaculars in education to the extent that this is practically feasible may, far from encouraging separatism, be a force for a true national integration.

An area where the use of vernacular languages would not present any practical difficulties and would be a powerful force for education and national integration is radio broadcasting. At present, the only Ethiopian vernacular used in broadcasting is, for obvious reasons, the Somali language. It is a sad commentary on the policy-making mechanism that the only language given participation is that of a politically dissident group. It is as if one were making dissidence a condition for the benefits of participation. The number of people who speak Amharic as their native tongue can be liberally estimated at 5 million. The number of those who speak it as a second language is not likely to be more than 2 million. This means that at least 13 million Ethiopians are completely cut off from the benefits of radio-broadcasting. It must be pointed out here that those who speak Galligna — at least the Borana dialect — are certainly not cut off from the benefits of radio broadcasts from Mogadiscio, which does have programmes in this language. These are programmes of an almost exclusively political nature and the monolingual certainly have no opportunity of hearing their own country's side of the story. Besides, radio broadcasts in the vernacular could provide an excellent and immediate short-cut to fundamental mass education in the absence of mass literacy, which will probably be a long time in coming anyway. Whatever one might say about the role of vernaculars in education, there is no doubt that the use of vernaculars in broadcasting is something that could and should be put into practice immediately and at small cost with the greatest possible benefits for mass education and national integration.

Part II

Amharic today finds itself in a predicament shared by perhaps scores of other languages all over the non-Western world — the predicament of being a slow-changing language in a fast-changing cultural milieu. It has therefore been rendered rather inadequate as a means of modern communication by the flood of new concepts and objects for which the slow pace of natural language change cannot generate new words fast enough.

This inadequacy, it must be stressed, is exclusively restricted to the domain of vocabulary. As regards the other aspects of language, namely the sound system, the morphology, and the syntax, every natural language is as good as any other for any purpose. In other words, every language is structurally perfect. Insofar as

2. E. Koutaissof, "Literacy and the Place of Russian in the Non-Slav Republics of the USSR." (Regional paper on vernacular languages, No. 21, Paris, 1951 MS) As quoted in "The Use of Vernacular Languages in Education," UNESCO, 2nd Impression, Paris, 1958.

"vocabulary is a very sensitive index of the culture of the people"³ it is also the most sensitive index of any changes in culture. In this section I intend to analyse the nature of the inadequacies that have been felt in the Amharic vocabulary due to rapid cultural changes and to suggest some measures whereby some of these inadequacies may be removed.

Areas of Borrowing (for exemplification of this section, see Appendix I)

At the most obvious level, the names for new objects and materials resulting from modern technology or objects and materials whether artificial or natural that have not formerly been within the cultural experience of Amharic speakers form a highly susceptible area for word borrowing. Another such area is, of course, the names of abstract concepts (as distinct from concrete objects and materials that are new to the Ethiopian culture). Some instances of this are systems of measurement (weight, length, area, volume, heat, pressure, explosive power, light, sound, electricity etc.); other concepts of modern natural science (names of the fields of knowledge and the various concepts they embody); concepts of the social sciences, names for Western institutions and procedures, military titles, civil service titles and offices. As a result of this, one finds a disconcertingly large flood of European loan words in Amharic journalism, in textbooks and in governmental documents of all kinds. In the conversation of educated Ethiopians one finds a promiscuous resort to borrowing even for the expression of common non-technical concepts.

What is wrong with borrowing?

One might counter that after all about 60% of the English vocabulary consists of borrowings of Latin origin, mostly coming through Norman French, and languages in general have in the past — as they do now — often borrowed rather heavily from each other. On this point, the linguist, strictly as a linguist, has nothing to say, for his function is merely to observe, report and analyse language and not to make normative statements about how it should behave. Nevertheless, given certain stated objectives, the linguist can say how these may best be achieved. One of the important functions of language, whether in its spoken or written form, is that of communication. Anything which frustrates or limits the effectiveness of such communication can therefore be regarded as an undesirable quality. The Amharic newspapers, like the legislation and broadcasting in Amharic, address themselves basically to a monolingual Amharic-speaking audience. It is quite clear, therefore, that promiscuous borrowing of the kind that now exists very seriously impedes such communication. This is made even worse by the fact that while the rate of borrowing in other languages in the past has been a much more leisurely one thus enabling speakers to absorb the influx without undue discomfort, the rate of borrowing in present-day Amharic has been of avalanche proportions, leaving the monolingual speakers completely befuddled by what had once been their native tongue.

This is even harder to accept when one realises that the borrowings are not always justified by need. A very large number of loanwords have come into the language while there are perfectly good words for them already in Amharic. The motivation for this has been that of prestige, in the same sense that it was at one time fashionable to ornament one's English with Latin or French words and phrases for which perfectly good equivalents were available in English. There

3. E. Sapir, "Culture, Language and Personality," University of California Press, Berkeley, 1958.

are also some practical reasons for disapproving of loanwords, especially from European languages that differ so radically in structure from Amharic. Firstly, their phonetic pattern makes them very difficult and often impossible for a monolingual Amharic speaker to pronounce intelligibly. Secondly, they do not generally merge into the pattern of the language. While Amharic, being a Semitic language, has a very high derivative pattern based on a root system, such is not the case in the European languages. Furthermore, words coined out of native elements are much easier to understand and remember than borrowed words. To use the terms of Stephen Ullman, coined words have a high degree of "transparency" while loanwords are necessarily of a high degree of "opacity". Lastly, but not least in importance, there are motivations of esthetics and national pride which lead us to deprecate unrestrained linguistic borrowing.

What can be done about it?

The obvious solution to this problem is that a serious organised attempt must be made to make use of the resources of Amharic to provide for the expression of the flood of new objects, materials, processes and concepts that has come as a result of sudden and massive cultural change.

The obvious framework for such an organised effort is a Language Academy. Language academies in the past, especially in certain European countries, have been notorious for their ineffectiveness in having any impact upon the language they are concerned with. It must be stressed, however, that in the countries where the situation has been comparable to that of Ethiopia, language academies have been remarkably successful in influencing the development of the language concerned. The case of the Hebrew Language Academy is perhaps the most dramatic in this respect. Hebrew, a language dead for two thousand years, with a vocabulary utterly devoid of expressions for modern technology, science and other modern concepts, was revived largely due to the efforts of a single person, E. Ben Yehuda, and the Language Council (later Language Academy) that he created. To transpose this into Ethiopian terms, it would be as if Geez were to be revived and modernised to the extent that all University education could be given in it.

Much conscious attention and organisation is devoted to the changes in culture that are taking place in the country. It is only reasonable to demand that the same attention, care and organisation should be devoted to the vehicle of culture — that is, language.

APPENDIX I

A. In the latter part of 1961 some students of mine and I made a count of the European loanwords occurring in the newspaper *Addis Zämän* in twenty-eight issues (the first seven issues of each of four consecutive months). We found 4580 occurrences of 631 different European loanwords, (725 if we count variations in spelling). A few examples of these are listed below under some necessarily loose and sometimes overlapping categories.

Science and Technology

Chemical	ከሚካል :
Nuclear	ኒውክሊየር :
Geothermal	ጂዮ-ቴርሚል :
Technical	ቴክኒካል :
Geomagnetic	ጂኦማግኔቲክ :
Eclipse	ኦክሊፕስ :
Laboratoire	ላቦራቲር :
Telecommunication	ቴሌኮሙኒኬሽን :
Technology	ቴክኖሎጂ :
Diaphragm	ዲያፍራም :
Diphtheria	ዲፍተሪያ :
Electricity	ኤሌክትሪሲቲ :
Astronomical	አስትሮኖሚካል :
Evolution	ኤቦሎሽን :
Sanitation	ሳንቲቲሽን :
Research	ሪሰርች :
Hydro-electric	ሃይድሮ : ኤሌክትሪክ :
Radio-activity	ራዲዮ : አክቲቪቲ :
Psychologist	ሳይክሎጂስት :
Hypnotism	ሒፕኖቲዝም :
Scientist	ሳይንቲስት :
Pharmacy	ፋርማሲ :
Industry	ኢንዱስትሪ :
Germ	ጀርም :
Film	ፊልም :
Equatorial	ኤኳቶሪያል :
Isotopes	አይስቶፕስ :
Short-wave	ሾርት : ዌቭ :
Atomic	አቶሚክ :
Mechanical	ሚካኒካል :
Pilot	ፓይሎት :
Civil Engineer	ሲቪል : ኢንጅነር :
Abstract Concepts	
Propagand	ፕሮፓጋንድ :
Program	ፕሮግራም :

Project	ፕሮጀክት :
Practical	ፕራክቲካል :
Principle	ፕሪንሲፕል :
Problem	ፕሮብሌም :
Planning	ፕላንንግ :
Police	ፖሊስ :
Formalité	ፎርማሊቲ :
Doctrine	ዶክትሪን :
Discipline	ዲስቲፒን :
Colonialism	ኮሎኒያሊዝም :
Communism	ኮሙኒዝም :
Collective Security	ኮልክቲቭ ሰኩሪቲ :
Cultural	ካልቸራል :
Opération	አፕራሲዮን :
Imperialism	አምፔሪያሊዝም :
Artificial	አርቲፊሻል :
Specialization	እስፔሻላይዜሽን :
Extension	ኤክስቲንሽን :
Tragédie	ትራጅዲ :
Systems	ሲስተምች :

Political and Social Concepts and Institutions

Democratic	ዲሞክራቲክ :
Consulate-General	ኮንሰሌት ፡ ጀኔራል :
Committee	ኮሚቴ :
Officiel	አፊሲያል :
Interview	አንተርቪው :
Institute	እንስቲትዩት :
Embassy	ኤምባሲ :
Protestant	ፕሮቲስታንት :
Fund	ፈንድ :
Europeanized	ዩሮፕላይዝድ :
Agenda	አገንዳ :
Nutrition Board	ኑትሪሽን ቦርድ :
Museum	ሙዝየም :
Exhibition	ኤክሲቢሽን :
Mission	ሚሲዮን :
Moral	ሞራል :
Lottery	ሎተሪ :
Hotel	ሆቴል :
Civil Aviation	ሲቪል አብዮሽን :
Social	ሶሻል :
Seminar	ሰሚናር :
Political	ፖሊቲካ :
Socialist	ሶሻሊስት :

Nationalist	ናሽናሊስት :
Party	ፓርቲ :
Federation	ፌዴሬሽን :
Protectorate	ፕሮቴክቶሬት :
Republic	ሬፑብሊክ :
Africanism	አፍሪካኒዝም :
International	ኢንተርናሽናል :
Diplomatic	ዲፕሎማቲክ :
Contraband	ኮንትራባንድ :
Monopolist	ሞኖፖሊስት :
Bank	ባንክ :
Budget	ባጀት :
Economy	ኤኮኖሚ :
Economic	ኤኮኖሚክ :
Insurance	ኢንሹራንስ :
Parliament	ፓርላማ :
Personnel	ፐርሰኔል :
Protocol	ፕሮቶኮል :
Administration	አድሚኒስትሬሽን :
Inspector	ኢንስፔክተር :
Chancellor	ቻንስለር :
Dean	ዲን :
Director	ዲሬክተር :
Ambassador	አምባሳደር :
Patriarch	ፓትሪያርክ :
President	ፕሬዚደንት :
Ministre d'état	ሚኒስትር : ዲኤታ :
Attaché	አታሼ :
Registrar	ሬጂስትራር :
Expert	ኤክስፔርት :
Education	
Masterate	ማስትሬት :
Bachelor	ባችለር :
Certificate	ሰርቲፊኬት :
Encyclopaedia	ኢንሳይክሎፖዲያ :
Dictionary	ዲክሽነሪ :
Diploma	ዲፕሎማ :
Degree	ዲግሪ :
Lecture	ሌክቸር :
Scholarship	ሰኩላርሽፕ :
Education	ኤዲኬሽን :
Academic	አካዲሚክ :
College	ኮሌጅ :
Course	ኮርስ :

University	ዩኒቨርሲቲ :
Faculty	ፋኩልቲ :
Fields of Knowledge	
Psychology	ሳይኮሎጂ :
Geography	ጅላግራፊ :
Cultural anthropology	ካልቸራል : እንትረፖሎጂ :
Biology	ባዮሎጂ :
Chemistry	ኬሚስትሪ :
Climatology	ክላይማቶሎጂ :
Statistic	እስታቲስቲክስ :
Engineering	እንጂኔሪንግ :
Economics	ኤኮኖሚክስ :
Theology	ቲሎሎጂ :
Biochemistry	ባዮኬሚስትሪ :
Mathematics	ማቴማቲክስ :
Liberal Arts	ሊበራል : አርትስ :
Hygiene	ሐይጅን :
Science	ሳይንስ :
Pharmacology	ፋርማኮሎጂ :
Journalism	ጅርግሊዝም :
Machine	
Tractor	ትራክተር :
Helicopter	ሂሊኮፕተር :
Hydrogen bomb	ሐይድሮጂን : ቦንብ :
Microscope	ማይክሮስኮፍ :
Radio	ራዲዮ :
Television	ቲሌቪዥን :
Aeroplane	አይሮፕላን :
Observatory	አብዛዘርባቶሪ :
Parachute	ፓራሹት :
Rocket	ሮኬት :
Seicento	ሴይጅንቶ :
Subtonic	ሰብቶኒክ :
Telegraph	ቲሌግራፍ :
Transmitter	ትራንስሚተር :
Telephone	ቲሌፎን :
Auto-bus	አውቶቡስ :
Automobile	አውቶሞቢል :
X-ray	ኤክስሬይ :
Stereoscope	እስቲሮዩስኮፕ :
Cliché plotter	ክሊሺ : ፕሎተር :
Generator	ጀኔሬተር :

Jet	ጂት :
Gramophone	ግራማፎን :
Frigidaire	ፍሪጂደር :

Military Terms

Colonel	ኮሎኔል :
Brigadier-General	ብርጋዲየር : ጄኔራል :
Lieutenant-General	ሌፍተናንት : ጄኔራል :
Etat-Major	ኤታ : ግጆር :
Division	ዲቪዥን :
Tactic	ታክቲክ :
Tank	ታንክ :
Battalion	ባታሊዮን :
Brigade	ብሪገድ :
Regiment	ሬጅሜንት :
Mortar	ሞርታር :
Military	ሚሊታሪ :
Admiral	አድሚራል :
Captain	ካፒቲን :

Measure

Metre	ሜትር :
Centimetre	ሳንቲ : ሜትር :
Metre Carré	ሜትር : ካሬ :
Square miles	አስኳየር : ማይልስ :
Liter	ሊትር :
Milligram	ሚሊግራም :
Tons	ቶንስ :
Kilowatt	ኪሎዋት :
Centigrade	ሴንቲግሬድ :
Calory	ካሎሪ :
Kilometre	ኪሎሜትር :
Quintal	ኩንታል :
Gallon	ጋሎን :
Pint	ፖይንት :
Hectare	ኔክታር :
Percentile	ፔርሴንታይል :
Zero	ዜሮ :
Billion	ቢሊዮን :
Second	ሴከንድ :

Miscellaneous

Papaya	ፓፓዬ :
Piazza	ፒያሳ :
Platform	ፕላትፎርም :

Jacket	ጃኬት :
United Kingdom	የናይትድ : ኪንግደም :
United States	የናይትድ : ስቴትስ :
Copy	ኮፒ :
Critique	ክሪቲክ :
Cravat	ክራቫት :
Tuberculosis	ቱቦርኩሎዲስ :
Transit	ትራንዚት :
Tourist	ቱሪስት :
Villa	ቪላ :
Renaissance	ሬኔሰንስ :

B. European loanwords abound in the conversation of educated young Ethiopians. No study has been made of this, but here are a few examples from notes I took down at a meeting of such people:-

personally	report
officer	chair (at a meeting)
committee	president
point (of an argument)	order
motion	floor
form	ordinary
impartial	interpretation
compound	alumni
service	rapport (= report)
suggestion	election
membership	agenda
blackboard	periodical
programme	item
nominate	(open) nomination
alternative	office
modification	complication
post (position)	important
influence	interest (Inclination)
policy	group
report	success
consider	exactly
information	approximately

C. In order to give some idea of how the loanwords appear in context, I give below a few extracts from the May 26 issue of the Addis Zāmān. The loanwords are underlined.

ከ : አንድ : በአካውንቲንግ : ዲግሪ : ያለውና : በአዲቲንግ : ወይም : በአካውን
 ቲንግ : በቂ : የሥራ : ልምድ : ያለው : ደመወዝ : እስከ : 800 ብር : ለፖስታ :
 ቱሌፎንና : ቱሌግራም : ማረጋገጫ :
 አንድ : በቢዝነስ : አድሚኒስትሬሽን : ቢ : ኤ : ዲግሪ : ያለው : ደመወዝ :
 400 ብር :

፪ ፡ ለእርሻ ፡ ማኒስቴር ፡
 አንድ ፡ ከእርሻ ፡ ኮሌጅ ፡ ሁለተኛ ፡ ዓመት ፡ ኮሌጅን ፡ የፈጸመና ፡ በአዝር
 ዕት ፡ የኪራንቲን ፡ ሥራ ፡ በቂ ፡ ልምድ ፡ ያለው ፡ ደመወዝ ፡ እስከ ፡
 ብር ፡

፫ ፡ ለመከላከያ ፡ ማኒስቴር ፡
 ሁለት ፡ አዲተሮች ፡ በቢዝነስ ፡ አድማሲስትሬሽን ፡ ቢ ፡ ኤ ፡ ዲግሪና ፡ በሂ
 ሣብ ፡ ወይም ፡ በአዲት ፡ በቂ ፡ የሥራ ፡ ልምድ ፡ ያላቸው ፡ ደመወዝ ፡ 500
 ብር ፡

፬ ፡ አንድ ፡ ሰከሬታሪ ፡ ታይፒስት ፡ ፲፪ኛ ፡ ክፍል ፡ የፈጸመ ፡ ወይም ፡ ተመሳሳይ ፡
 የትምህርት ፡ ደረጃና ፡ በአማርኛና ፡ እንግሊዘኛ ፡ ታይፒንግ ፡ እንዲሁም ፡
 ሸርት ፡ ሐንድና ፡ በዚህ ፡ ሥራ ፡ በቂ ፡ ልምድ ፡ ያለው ፡

፭ ፡ በአዲሱ ፡ የአስተዳደር ፡ ሥርዓት ፡ የፖስታ ፡ የቴሌግራምና ፡ የቴሌፎን ፡
 ማኒስትር ፡ ዴታና ፡ በኢትዮጵያ ፡ ንጉሠ ፡ ነገሥት ፡ መንግሥት ፡ የቴሌ
 ኮሙኒኬሽን ፡ ቦርድ ፡ የዲሬክተሮች ፡ ቦርድ ፡ ፕሬዚዳንት ፡ ሆነው ፡ የተሾ
 ሙት ፡

APPENDIX II

In the summer of 1962, a group of my students from the Ethiopian Languages Department and myself translated and partly adapted a series of Science textbooks for elementary schools from English to Amharic. We found it necessary to coin many new words for the new concepts and objects that came up. We then attached brief glossaries of such terms to books IV, V and VI. The following gives a few examples from each of the glossaries that were made:-

BOOK IV

Aquarium	መርእይ ፡ ገንዳ ፡ (ኤሣ—ኢኒር) ፡
Amoeba	አሚባ ፡
Balloon.....	ላስቲክ ፡ ፊኛ ፡
Carbon dioxide	ካርቦን ዳዮክሳይድ ፡
Cell	ሴል ፡
Condensation	ማጤዝ ፡
Crab	ሸርጣን ፡
Experiment	ሙከራ ፡
Film-negative	የፊልም ፡ አሌፖ ፡
Gas	ጋስ ፡
Gravity	ስበት ፡

Insulator	ከረንቲ : አግድ :
Magnet	ማግኔት :
Mammal	አጥቢ :
Mercury	ባዜቃ :
Morning-glory	ክብረ : ንጋት :
Octopus or squid	ስምንቶ :
Parachute	ድባብ :
Penguin	በረዶ : ወፍ :
Pressure	ግፊት :
Programme	መርሐ—ግብር :
Pulley	መዘውር :
Ray fish	ጅራቶ :
Sea-anemone	አቁማዶ :
Slug	ቀርፋፌ :
Sponge	ሰፍነግ :
Steel	ዓረብ—በረት :
Wheel	ተዘዋሪ :

BOOK V

Antitoxin	ጸረ—መርዝ :
Catfish	ድመት : ዓሣ :
Chemical compound	ኬሚካል:ኮምፓውንድ:
Crystal	ባልጨት :
Eclipse	ግርጃ :
Fire-retardant	እሳት : አግድ :
Flatfish	ጠፍጣፋ : ዓሣ :
Flying fish	በራራ : ዓሣ :
Fossil	ቅሪተ : አካል :
Geology	ሥነ—እብን :
Hypothesis	መለ—ምት :
Infra-red	ትገተ—ቀይ :
	(ኢንፍራ : ሬድ)
Laboratory	ቤተ : መከራ :
Lava	ትፍ :
Milk-teeth	ምስራ :
Psychology	ሥነ—ልቡና :
Quartz	አዛሐት :
Radar	ራዳር :
Rayfish	ጨረር : ዓሣ :
Reflex (of nerves)	ንጥቀት :
Screen	ጥላ : አዛይ :
Snow	ጥጥ : በረዶ :
Ultra-violet	ልዕለ—ሐምራዊ :
	(አልትራ : ባዮሌት) :

BOOK VI

Absorbent	ውጠ—ቀር :
Absorption	ውጠት :
Artery	ደም—ቅዳ :
Atmosphere	አካባቢ : አየር :
Average	ምጥነት :
Chlorophyll	ቀመልሚል :
Frequency	ደግግም :
Furnace	እትን :
Germination	በቅላት :
Insulation	እግደት :
Lever	መረንቅል :
Maximum	መልዕል :
Membrane	በራና :
Minimum	መንእስ :
Packet	ባኮ :
Power	ሥልጠት :
Precipitation	ርደት :
Projector	ጥላ : ጣይ :
Radiation	ጨረራ :
Satellite	ጭፍራ : መሬት :
Space	ኅዋ :
Spark-plug	ካንዴላ :
Spring	ሞላ :
Step down (transformer)	አውርድ—መለውጥ :
Step up (transformer)	አንጣ—መለውጥ :
Tension	ውጥረት :
Transformer	መለውጥ :
Ultra-sonic	ልዕስ—ድምጽ :
Valve	መተንፍስ : (ከዳን ፣ እፊያ) :
Vein	ደም : መልስ :
Wave	ዌቭ :