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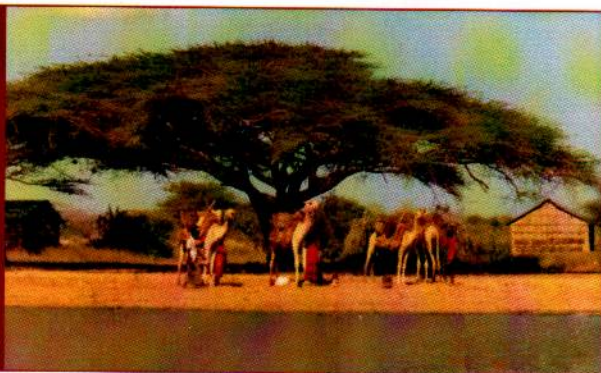
**LESSONS IN SURVIVAL:
THE LANGUAGE AND CULTURE
OF SOMALIA**

Thirty Years of Somali Studies

edited by

Annarita Puglielli

Dipartimento di Linguistica
Università degli Studi Roma Tre



L'Harmattan Italia

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Annarita Puglielli INTRODUCTION

1. *The project*

1.1. *The context*

Thirty years have passed since our Somali Studies Project began. This is certainly a long time and it is worth looking back to see what these years of research have produced and what we can expect for the future. Indeed, these were the reasons behind the organization of '30 Anni di Studi Somali: Giornata di studio' (30 Years of Somali Studies: A Day of Study) which took place on February 26th 2008 at the Facoltà di Lettere e Filosofia of the Università degli Studi Roma Tre.

On the front page of the program we wrote: "The celebration of this anniversary in a period in which the situation in Somalia appears to be without any possible solution, is meant to focus our attention once more on that country and ensure that it is not forgotten. Continuing our Somali Studies means that we continue to nurture hope."

The decision to publish almost all the works presented on that occasion, as well as the results and future developments of our project, is in line with making this information available to a wider audience, and to all those interested in the culture of Somalia. All of this has been done in the hope that Somalia and its problems are not forgotten by the international community.

The day's program started with an overall description of the areas in which research has been carried out, as well as a report of some of its applications in various contexts. The papers presented, and the poster session, offered a substantial overview of several of the areas of investigation. There was also an exhibition, with documents collected in Somalia, and

a multimedia section: photos of shop signs, posters collected in Somalia publicising particular events, a short documentary on some aspects of nomadic life with Somali traditional music as soundtrack and finally, databases and other computer programs developed for research purposes. The meeting concluded with a round table, 'What future for the Somali: language and country', in which several personalities from the academic, cultural and political fields participated.¹

1.2. Background and developments

Studi Somali was launched in 1978 as one of several programs of the Department for Cooperation and Development of the Italian Ministry of Foreign Affairs, with the Somali National University in Mogadishu.

We will limit ourselves to a brief description of the various areas in which this project developed and show how the papers presented relate to them. We worked not only on the description of several aspects of Somali language and culture, but also on their application and implications for education with the creation of specific activities.

The main area of investigation was the Somali language where we can distinguish three main areas:

- *Lexicon*

Lexical research has led to the production of the Somali Italian Dictionary (1985), the Italian Somali Dictionary (1998) and the Somali Dictionary (great monolingual dictionary) still in progress.² A thorough description of the methods and objectives of the lexical research can be found in Banti (1981), Agostini (1981) and Puglielli (1994, 1995, 2000).

- *Grammar*

In this area we include all the works relative to the description of Somali regarding the basic system of phonology, morphology and syntax, as well as specific aspects at different levels of analysis.

- *Texts*

Written and oral texts have been collected. These include poems, tales, proverbs, novels, and also recordings of conversations of the Elders of the Academy of Arts and Sciences on topics relating to traditional culture.

Anthropological and other cultural aspects have also been the object of research and have resulted, for example, in the description of the structure and organization of a village (*Studi Somali 10*). Several documents and materials relating to different fields were collected. Finally, extremely interesting research was conducted regarding the intercultural cognitive attitudes of university students. To a certain extent, this latter activity represents a bridge between the theoretical and the applied aspects of our work in the field of education. In fact, the skills and the knowledge we developed over the years through our work in Somalia has had a very important impact both on our activities there and subsequently on our work in Italy.

The activities we developed in Somalia had various aims. The first was to train Somali linguists so that they could carry on the work once the Italian cooperation project had finished. This was done through work on the Somali language as well as the setting up of courses and seminars. The second major activity was teaching Italian to Somali university students; knowledge of Italian being a prerequisite, since all the courses in all the faculties of the Somali National University were held in Italian and taught by Italian professors. For this reason we developed materials using important methodological innovations regarding the teaching of Italian as a foreign language.

The final area of intervention was the creation of a Faculty of Foreign Languages. The curricula we designed were quite different to those that existed in Italy at the time and were aimed at the training of skilled professionals in the field of languages, both for teaching and translation purposes etc., and also with further training for research purposes.

As mentioned earlier, the Somali experience also had an impact on our own Italian context, in particular on our university courses as well as in the field of continuing education. Indeed, when we had the opportunity to reform our degree course and relative curricula in 2001, we introduced a special syllabus aimed at the training of mediators in cultural communication, while the teaching of some of the languages and cultures of immigrants present in Italy became a university discipline in its own right; Somali, naturally, became one of the languages in which our students could graduate.

As for the training of in-service teachers, we planned and delivered courses with the focus on the teaching of Italian as an L2. However, this activity developed into a new approach for the teaching not only of Italian as an L2, but also the teaching of 'grammar' in general (that is part of the teaching of language) both to Italian and to immigrant children. This new method exploits the presence – in a multiethnic classroom – of typologically different languages so that students become aware of the way languages work.³

1.3. *Future perspectives*

Our objectives for the near future are twofold: first the continuation of the research work on the various aspects of Somali language and culture, and second, the creation of a new structure for the conservation of all the materials and documents collected over the years.

The realization of the first objective should result in the completion of the *Qaamuuska Af Soomaaliga* (The Great Somali Monolingual Dictionary) and the finalization of several other works in progress, as well as the publishing of several hitherto unpublished materials (collections of tales, poems etc.).

As for the second, our aim is the creation of a Centre for Somali Studies, where all the documents in our possession can be collected and made available to other researchers and all those interested in Somali culture. There are also plans for a

website, created for the dissemination of data and to make research products and tools available. It is, for example, our intention to put the Somali Monolingual Dictionary on line prior to publication so that it can be consulted easily in order that other Somalis can give their contributions via a discussion forum. All this, however, will only be possible if we receive sufficient support from our own university and from other Italian institutions.

2. *This volume*

The papers in this volume relate to different aspects of the Somali Studies project and are representative of many of the areas of investigation. For different reasons some of the oral presentations did not become written papers, therefore we included them in the DVD.

There are papers related to language description with different objectives: M. Frascarelli and A. Puglielli give a description of Somali from a typological point of view, showing how this language has features that support various aspects of linguistic theory. Study of the language has therefore been important, both in relation to how this particular language works and how language works in general. A. Puglielli and F. Bitocchi report on the work for the Somali Monolingual Dictionary, giving an overview of the lexicographical work conducted over the years. Different methods have been used for different areas and an indication of the areas that still need further work is included. Turchetta's note refers to botanical and zoological terms and the type of investigations undertaken up till now. More closely related to habitat and its relation to culture, but still pertaining to linguistic research, is the work on toponomastic conducted by M. Svolacchia. Meanwhile, *G. Banti's⁴ contribution focuses on the characteristics of written Somali.

The Somali diaspora and the new technologies have also determined a particular growth of internet sites with a massive

use of Somali. Ahmed A. Ahmed's paper describes this phenomenon and *F. Antinucci's contribution explains how these means are now used for the continuation of the traditional way of making poetry, describing similarities and differences between this new modality and the traditional one. Also linked to the use of computers and their possible use in helping the standardization of written Somali is Jamac Musse Jamac's paper.

With reference to the cultural context, Abdalla Omar Mansur's paper gives his interpretation of the tribal organization of Somali society and *F. Giannattasio presents a state of the art investigation into Somali music.

Finally M. Bandiera's paper discusses students' cognitive attitudes at the time of our work there, and S. Ambroso refers to the methodological innovations that provided the basis to our teaching of Italian in Somalia.

Taken as a whole, we hope that the papers give a composite picture of the type of research work that we have undertaken over these many years, undertaken in parallel to our various academic duties and other research interests.

NOTES

¹ The round table was chaired by Prof. Emeritus Biancamaria Tedeschini Lalli, former Rector of the Università degli Studi Roma Tre and former President of the Linguistic Technical Committee of the Italian Ministry of Foreign Affairs for the Somali National University in Mogadishu. The other participants were: Prof. Guido Fabiani, Rector of Università degli Studi Roma Tre, Dr. Pierluigi Malesani, Director of International Relations and Institutional Affairs for the RAI (state broadcasting company), Mohamed H. Muktar, professor of African History at Savannah State University USA, Ministro Giovanni Polizzi, responsible for Somali affairs at the Italian Ministry of Foreign Affairs, and the Italo-Somali writer Cristina Ali Farah. The round table contributions, as well as some of the documents of the exhibition, are included in the DVD distributed with the book.

² Complete bibliographical references are given in the bibliography in the Appendix.

³ A description of this new approach can be found in Puglielli, A. (2006),

"Cos'è una lingua? Riflessioni metalinguistiche in classe", in Russo D. (a cura di), *Questioni linguistiche e formazione degli insegnanti*, Quaderni GISCEL, Milano: Franco Angeli, pp. 141-155; Puglielli, A. (2005), "Ancora sull'educazione linguistica" in Voghera, M., Basile, G., Guerriero, A. R. (a cura di), *E.LI.CA., Educazione linguistica e conoscenze per l'accesso*, Perugia: Guerra Edizioni, pp. 37-50; Puglielli, A., a cura di (2002), *Qui è la nostra lingua* (CD – Corso di formazione per insegnanti di Italiano come L2), Roma: Università degli Studi Roma Tre.

⁴ The * identifies the oral presentations in the DVD.

THE LINGUISTIC AND ETHNO-CULTURAL HOMOGENEITY OF SOMALI PEOPLE

The Somalis, like other peoples of the world, have different origins, with groups from different areas characterized by different activities. They reached the Horn of Africa at different times and were Camitic hunters and Camitic shepherds (both from the border area between Sudan and Eritrea), Arab traders (from Arabia) and Bantu farmers (mostly from southern East Africa, particularly from present day Kenya and Tanzania). In spite of such varied origins, Somalia has always been described as one of the rare state-nations of black Africa, together with Swaziland, Lesotho and Botswana. In other words, in Sub-Saharan Africa there are very few people as compact as Somalis from a linguistic point of view, regarding their uniform somatic features and the large number of cultural aspects they have in common.

In the whole area of the Horn of Africa inhabited by Somali people (Somalia, Somaliland, Ogadenia (Ethiopia), Djibouti and the Northern Frontier District of Kenya) only one language, Somali (of Cushitic origin) is spoken.¹ Of course even this language is divided – as all languages are – into different dialects. And only one religion is professed: Sunni Islam. This contrasts with other African countries, such as Ethiopia, where there are 73 languages spoken and where different groups belong to different religions, or Nigeria where there are over 200 languages.

In analysing various aspects of the Somali oral tradition, there are mainly three factors involved in determining the linguistic and ethno-cultural homogeneity of Somali people: *the migration of Somalis from north to south, the practice of exogamy and the nomadism of camel-herders.*

1. The north to south migration

In the seventh century A.D. Arabs and Persians began arriving on the coast of the Horn of Africa. The contact between these communities and the Somalis was the origin of a new kind of society of Islamic culture, in which the Arab merchants and the Islamized Somalis were considered a sort of *aristocracy*. Such a culture spread from the many coastal cities where the Arabs arrived, both in the north and in the south of Somalia.

Around the twelfth century, the northern Somali shepherds, following intermarriage with Arabs, started to migrate towards the south; this occurred mainly because of the continual scarcity of rain in their territory and as a result of later defeats inflicted on them by the kingdom of Abyssinia and the Adel sultanate in the sixteenth century. This migration continued up to the beginning of the 20th century. In fact, there is mention in the Somali oral tradition of migration always taking place from north towards south and never vice versa, and there is a Somali saying which says “*Soomaalidu waa ab’ogaa iyo abaari-keentey*” (the Somalis are autochthonous and migrants for reasons of famine).

Every migrant group settled in places where integration with the autochthonous community took place. The forms of integration were varied and were determined by the number of the immigrants involved and by their power.

1. When an emigrant group is not able to defend itself on its own, it is forced to “rely upon” or to integrate with the local clan, as the proverb says: “*haddaadan Buur ahayn buur ku tiirsanow*” (if you are not a mountain try to lean on a mountain) and for this reason the group becomes *sheegato*, i.e. someone who declares they belong to a clan which is different from his original one. As a result, such a group is obliged to give up its genealogy and its original clan totally.

2. When a group of immigrants is not able to survive by itself as an independent clan, but needs the territory that belongs to

the autochthonous clan, they become their allies and need to take the name of the indigenous clan although they do not lose their own original genealogy.

3. On the contrary, when the immigrant group is more powerful than the indigenous one, the latter will be sent away or will be *sheegato*.

According to tradition, the Somali nation is represented symbolically by a great family tree and so nearly all Somali people are said to descend from a single founder, the mythical *Hiil*. According to the Somali tradition, there are four great clans or *tol*, which descend from this founder (*Dir*, *Daarood*, *Hawiye* and *Digil-Mirifle*). In turn, each of these is divided into various clans and sub-clans, and the segmentation continues and even takes place within a family. Analysing the structure of the *genealogy* and various *sayings* of Somali tradition, we notice that the members of each *tol* are not blood related, as is often thought, but come from various groups that merged into one clan for common interests. In the savannah and on the dry land of the Horn of Africa, blood ties (natural or acquired) contributed to make communities which were fairly united and peaceful in order to assure the production of the means of survival. In addition they guaranteed all members a personal identity, defence from aggression, and observance of the rules of living together.

1.1. *The sayings*

Various Somali sayings bear witness to the cohesion between the people and at the same time the composite nature of the clan family:

- *Tol waa tolane* (the clan is like something sewn together)
- *Tol waa tog* (the clan family is like a large river made up of the confluence of small streams)
- *Tol waa qobtola*, (the clan is like *qobtola*, i.e. a kind of blanket

made up of pieces of different materials sewn together that is used on the back of animals before loading them with baggage).

- *Reewin kebda aroos wu* (the Raxaweyn family clan is like the mass of vegetable fibre mats that the women of the village collect in order to build a hut for a new bride).

1.2. *The genealogy*

Family trees show that many clans or sub-clans are made up of various groups that joined together.

1.2.1. *Associated groups*

In the genealogy, we notice some clans' names through which we can discover the individual members of the groups that formed the clan. Examples include the following clans with the number of associated groups added in brackets:

- *Shanta Aleemo (Digil)* (the 5 of Aleemo)
- *Shan-Gamaas (Tunni, Digil)* (the 5 Gamaas)
- *Ciise (Dir): saddex Ciise iyo saddex Sooraac* (the Isse clan is divided into 3 (native) Isse and the 3 associated ones, i.e. *Sooraac*).
- *Hadama (Mirifle): seddex Olyari iyo seddex Okuri* (Hadame clan is divided into 3 Olyari and 3 Okuri)
- *Todobada Aw Digil* (the 7 clans of Holyman Digil)
- *Lite Aw Edde (Mirifle)* (the 6 clans of holyman Edde in the Mirifle sub-clans)
- *Mirifle: Sagaal iyo Siyeed* (the Mirifle clan is divided into two groups called *Nine* and *Eight*, which means that in the past there were groups made up of 9 and 8 subgroups)
- *Sagaal ilma Samaale* (the 9 sons of *Samaale*, the forfather of most Somali).

1.2.2. Two associated groups, dualism

Another frequent manner in which groups associate is when: two groups join to form a clan. Observing the segmentation of the genealogical tree we notice a frequent phenomenon: a progenitor or ancestor gives birth to only two sons, from whom all the people of the clan or (those of) sub-clans descend. And one wonders, why those ancestors gave birth to only two sons given that at that time there was obviously no system of birth control. In reality those "two sons" represent the ancestors of two different groups that joined together in remote times.

This binary system seems to be represented even in the basic organization present in different spheres of Somali culture, where two different elements combine to make a single whole.

This is shown by linguistic data, in usage which relates not only to a general sphere but also to social and economic areas.

There are words that have opposite meanings, but which become complementary. They are combined in pairs, and they are often alliterative. Some examples are:

a) In the general area:

- *cad* iyo *caano* (meat and milk, the main nutrition of Somali shepherds)
- *biyo* iyo *baad* (water and pasture, the main food of domestic animals)
- *miyi* iyo *magaalo* (the countryside and city)

b) This binary structure is again applied with respect to social organization where:

- *Sab* iyo *Samaale* (Sab and Samaale are considered the two ancestors for nearly all Somalis)
- *May* iyo *Maxaatiri* (dividing Somali society according to the names of the two main dialects)
- *Culmo* iyo *Caamo* (Islamic scholars and illiterate people)

- *Dhalyo* iyo *Dhareerwadaag* (relatives and relatives by marriage)
- *ab'ogaa* iyo *abaarikeentay* (indigenous people and famine-induced immigrants)
- *xidid* and *xigaal* (relatives acquired through wife & relatives).

Incidentally, this binary articulation can also be found in other Cushitic populations who consider themselves the result of a merging of two groups, for example:

- Oromo: *Borana* and *Baraytuma* (the Oromo are divided into two groups: Borana (the native clan) and Baraytuma (the non-native clans))
- Afar: *Asaw Mara* and *Adow Mara* (the brown Mara and the white Mara)
- Beja: *Badawiye* and *Banuucaamir*
- Sidamo: *Side* and *Moldaa*.

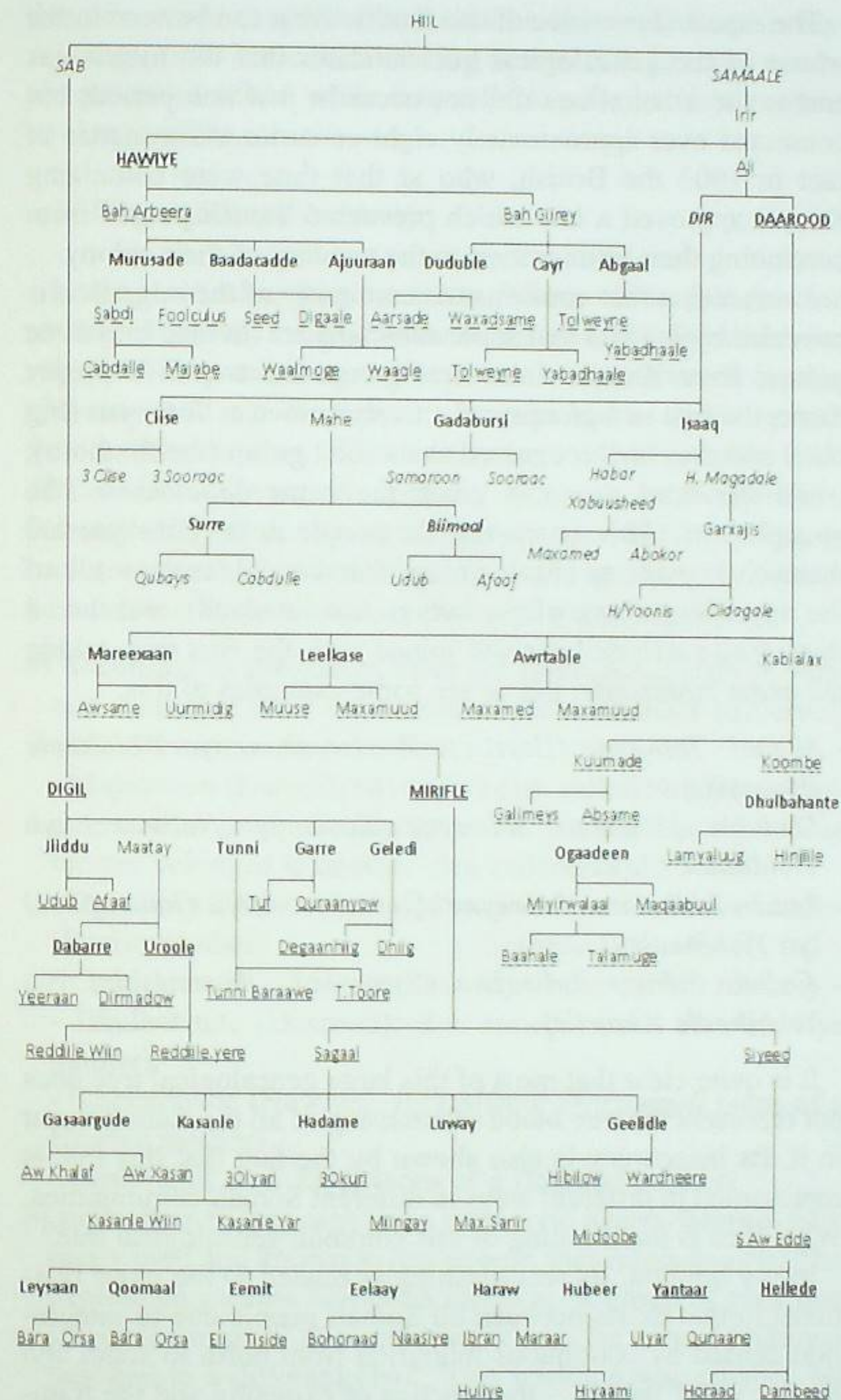
c) In the area of genealogy.

If we go back to Somali genealogy, in every Somali clan we find this kind of dualistic division that represents the joining of two groups of people. In some genealogies this phenomenon is noticed in an explicit way, reflected in the names of two different groups, as in the example of the following clans of *Dir* and *Digil-Mirifle*:

- Geledi (Digil): *Dhiig* iyo *Degaan* (blood and environment)
- Hubeer (Mirifle): *Dhalad* iyo *Dhaqan* (native and tradition)
- Jiidddu (Digil): *Udub* iyo *Afaaf* (the pole of the hut and the entrance)
- Hadama: *3 Olyari* iyo *3 Okuri*
- Biimaal (Dir): *Udub* iyo *Afaaf* (the pole of the hut and the entrance)
- Ciie (Dir): *3 Ciise* iyo *3 Sooraac* (the 3 Isse and the 3 followers)
- Gadabursi (Dir): *Makadoor* iyo *Sooraac* (Makador and followers).

When a person asks to become part of a clan that is different to his original one, he must take an oath renouncing his previous clan identity and cancelling any trace of it. This person will be accepted as a member of the clan and he takes the name and the genealogy of the new clan. After centuries, the descendants of that individual will become a sub clan that has no memory of his origin.

Here is a synthesis of the great genealogy tree that represents clan organization in Somali society. The clans and subclans that illustrate the dualism under discussion are highlighted.



The repeated presence of this dualism that can be seen in the whole of the genealogical tree indicates that the migrations and/or the integrations did not occur in just one period, but continued over approximately eight centuries. As a matter of fact in 1903 the British, who at that time were colonizing Kenya, approved a law which prevented Somali people from continuing their immigration to the territory of their colony.

Another fact that confirms the continuity of the migration is provided by the fact that some sub-clans are divided into three groups. Even if each of the three groups has a specific proper name, the first two groups collectively known as *Tolweyne* (big clan) and they are recognized as the first group (the firstborn), while the third group is given the name *Yabadhaale* (the younger son). This means that the people in the *Tolweyne* are themselves made up of two groups that merged (as the result of the migration of one of the two groups involved), and then a third group arrived later and joined with the first two, taking the name *Yibidhaale*. Let us see some examples of this:

- *Abgaal: Tolweyne (Harti iyo Wachuudhan) iyo Yibidhaale (Wacaysle)*
- *Duduble Awraadeen: Tolweyne (Xasan iyo Nabiraac) iyo Yibidhaale (Aadan)*
- *Baadacadde Ciise: Tolweyne (Quraanjecel iyo Quuriwaaye) iyo Yibidhaale (Gacal)*
- *Geledi Subag: Tolweyne (Yarow iyo Warantable) iyo Yebidhaale (Guurile).*

It is quite clear that most of this large genealogical tree does not represent the true blood relationship of all the clans present in it. Its inaccuracy is also shown by the fact that this tree is represented in different ways in different Somali communities. What then is the meaning of this common genealogical tree?

In my opinion, its real meaning is related to the close relationship that exists between all Somali people due to integration caused by continuous migration from north to south and by two other factors – the practice of exogamy and the tradi-

tion of nomadism – which will now be discussed. For this reason, there is no sense in describing Somali communities as ethnic groups or tribes, while it is valid to refer to them as clans or clan families.

2. The practice of exogamy

In the past, according to the traditions of Somali pastoral society, it was a sin for anyone to marry a girl from his own sub-clan. This was comparable to a marriage between brother and sister and was the reason why men had to choose a wife from a different clan. This tradition was still alive in the middle of last century in northern Somalia or Somaliland. Subsequently, there was a campaign launched by religious heads to convince people that this tradition was not part of Islamic law. There is clear evidence of such a tradition:

- a) According to genealogy, there are some groups within various clans that have the names of their mother's (different) clan. Here are some examples:
 - Majeerteen (Darood) have a sub clan called *Bah Dir* (which means this group originally came from offspring whose mother belonged to another clan called *Dir*),
 - Ogaadeen (Daarood): *Bah Xawaadle* (sons of a Xawaadle-Hawiye mother)
 - Cayr (Hawiye): *Bah Aji* (sons of a Daarood/ Dir mother)
 - Dhulbahante (Daarood): *Bah Hawiye* (sons of a Hawiye mother)
 - Gugundhabe (Hawiye): *Bah Abgaal Warsangeli* (sons of a Hawiye mother)
 - Ciise (Dir): *Bah Xarle* (sons of a Daarood mother)
- b) In the Somali language there is the term *heerin/heeran*, now rarely used and known to few people, that refers to girls. The expression *gabdho heerin ah* refers to "a group of girls that leaves the original clan and travels with the aim of finding a husband in a different clan". This tradition was recalled by the elders of the Academy of Arts and Sciences (whose con-

versations about themes in Somali traditional culture were recorded in Mogadishu in the 1980s). The elders remembered that those girls used to go to the house of the chief of the clan saying “*rag iyo Rabbi doon baanu nahay*” (we are looking for husbands and God, i.e. faith”. It was then a duty for the head of the clan to look among the members of the clan to find some young man that would marry the girls.

c) When the conflict between two clans came to an end, girls were often exchanged in marriage to forge a lasting peace. This is testified by the saying “*Meel xinjiri ku daadatay xilo iyo xoolo ayaa lagu bogsiiyaa*” (where bloodshed occurs, it must be healed with marriage and camels (in payment for the bloodshed).

The tradition of marrying a person from a different clan also exists among other Cushitic people who are related to the Somali people from a linguistic point of view such as the *Oromo*, *Sidamo*, *Iraqw* and *Rendille*. An *Oromo* man cannot marry a woman of his clan if they are not inter-related for at least seven generations.

It is traditionally thought by Cushitic people that children born within exogamic unions are better than those born of parents who are relatives, both in terms of personality and intelligence. For example the *Harru*, who belong to the *Rendille* group, believe that children born from exogamic relations are more active and better equipped for the difficulties of everyday life. Among the southern Somali people there is even the expression “*but who do you think I am? The son of my aunt!*” (intending to mean “I am not stupid!”).

3. The nomadism of the camel herders

Most Somali people raised *camels*, *cattle* and *sheep*, although they have always given, and still give, greatest importance to the *camel*. This animal, more than any other domestic animal, represents among other things a means of survival, a symbol of prestige and a means of social relations. But the

shortage of water and pastures rendered the life of the shepherds and their flocks extremely difficult. The camel-herders were therefore forced to move from place to place, thus becoming permanent nomads. The camel-herders never respected territorial borders, going wherever they could to find water and pasture. Unfortunately, this fact, together with the practice of raiding camels, became the main cause for the antagonisms that over time developed between various groups of animal breeders. However, peace was often achieved among them according the usual custom, sealing it with an exchange of girls in marriage. This prevented the continuation of the conflict.

Raids were frequent since the *camel* was considered the most valuable and indispensable thing in the life of the Somali shepherd. This is clearly conveyed by sayings such as “*geel la'aan waa geeri*” (a lack of camels means being dead). For this reason cooperation between camel herders is necessary in pastoral society in order to defend the camels belonging to one group against the raids of another group. Therefore the camel creates strong ties between relatives or clan members (whether they are related by blood or acquired). The following lines by the poet *Cilmi Carab* summarizes this concept:

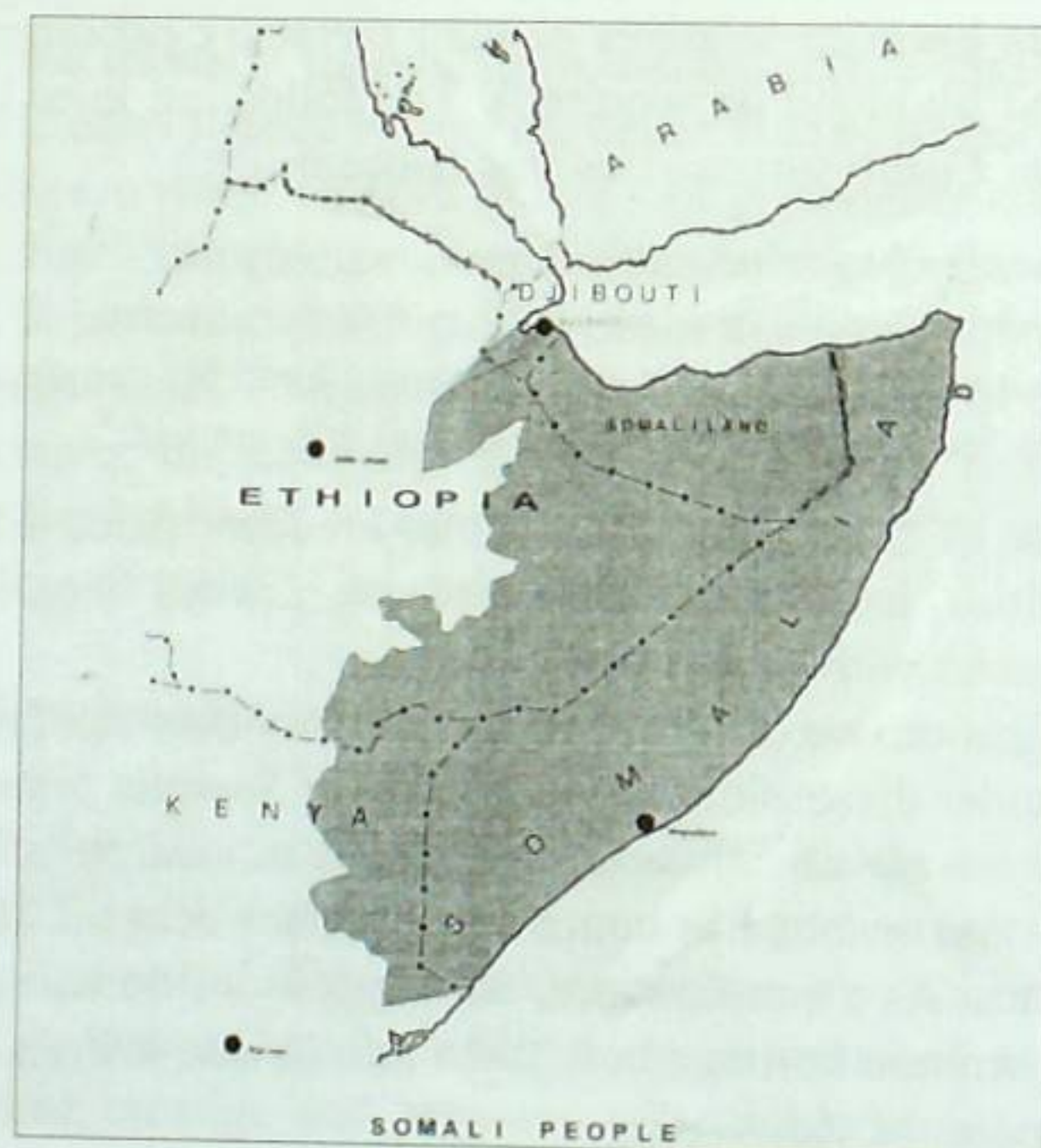
*Xejin waayey geel niman tolkii lagu xurmaynayne
Kol hadday xigtadaadu kugu yartahay kuu xasili waaye
'The man whose clan is not strong, cannot keep his camels
If he has few relatives, they (the camels) will not last.'*

Because of their nomadism, camel-breeders from different communities, have, for better or worse, always been in frequent contact with each other.

In conclusion, we can say that the interplay between the three factors under discussion: *the migration of Somalis from north to south*, *the custom of exogamy* and *the nomadism of camel herders* - has resulted in continuous contact between the different clans. As a consequence, the majority of Somali people share a common heritage both from a linguistic and an ethno-cultural point of view.

Furthermore the Somali language can be divided into three main groups. Because of the frequent contact between the communities of nomadic shepherds scattered across the entire Horn of Africa, the homogeneity of their dialects strengthened enormously and they are generally called *Maxaatiry*.

The Somali people in the inter-river zone, even if most of them raise animals (cattle, camels and sheep), do not have to move since in the area of the two rivers there is enough water and pasture; many of them are also sedentary farmers. This kind of life leads to less frequent contact between such agro-pastoral communities while the two rivers create something of a barrier in their contact with nomadic communities. For these reasons we find two groups of dialects there, "May" and "Digil", which are quite different from each other and unlike the *Maxaatiry* group of dialects. Nonetheless, there has been a certain amount of contact between these communities and the nomads migrating from north to south, and this is shown both by their genealogy and by their sayings. This has also resulted in the presence of common somatic and cultural features.



NOTES

¹ In some very isolated places in the south of Somalia, Swahili dialects are also spoken.

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SOMALI IN A TYPOLOGICAL COMPARATIVE PERSPECTIVE: FROM DATA TO THEORY

1. Introduction

Working within a framework that assumes universal principles of grammar, the description of a language is only the first step of linguistic investigation. The morpho-syntactic and intonational properties of a language should, in fact, inspire the scholar to reflect and make a wider consideration regarding the structure and functioning of languages in a comparative perspective, in order to reach a deeper understanding of the language-system as a unified whole. For this reason, once the description of data has reached a satisfactory level, linguistic investigation must then proceed towards theory.

Thirty years of studies on Somali in the generative framework can be considered an important contribution in this direction: several works have been produced in which the analysis of specific phenomena has led to the formulation of relevant proposals for the theory of grammar.

The aim of this paper is to offer a short but, hopefully, significant overview of this analytical approach. In particular, section 2 deals with morphological classification, sections 3 and 4 with NP-internal phenomena (relative modifiers and Case marking, respectively), section 5 is concerned with the sentential level, focusing on subordinate clauses and, finally, sections 6 and 7 deal with the syntax-discourse-prosody interface through the analysis of Focus constructions.

2. Morphological properties: for a typological classification

As is known, languages of the world can be classified as inflectional, agglutinative, polysynthetic or isolating, according to their morphological properties (cf. Comrie 1981, Croft 1991). According to standard assumptions, every language is said to belong to one specific group. Let us therefore consider Somali in this respect.

At first glance, Somali could be classified as an inflectional language. This is the conclusion that we reach through the observation of its verbal paradigms. Consider, for instance, a verb like *sheeg* ('say') in the following table:

	present tense	present continuous	past tense
1SG	<i>sheegaa</i>	<i>sheegayaa</i>	<i>sheegay</i>
2SG	<i>sheegtaa</i>	<i>sheegaysaa</i>	<i>sheegtay</i>
3SGM	<i>sheegaa</i>	<i>sheegayaa</i>	<i>sheegay</i>
3SF	<i>sheegtaa</i>	<i>sheegaysaa</i>	<i>sheegtay</i>
1PL	<i>sheegnaa</i>	<i>sheegaynaa</i>	<i>sheegnay</i>
2PL	<i>sheegtaan</i>	<i>sheegaysaan</i>	<i>sheegteen</i>
3PL	<i>sheegaan</i>	<i>sheegayaan</i>	<i>sheegeen</i>

TABLE 1

As we can see, in the relevant paradigm the verbal stem (*sheeg-*) and a number of suffixes combine to realize person, number and gender features (the so-called 'phi-features'). These morphemes pattern fairly consistently across tenses. For instance, first singular and third singular masculine are always marked by the same suffix, as well as second singular and third singular feminine. We also notice that present tenses are characterized by a final long central vowel (-aa), while past tense mainly shows a final diphthong (-ay). Regular patterns are typical of inflectional morphology, thus confirming our initial hypothesis. However, proceeding with a morphological investigation, we notice the presence of other properties that do not belong to the inflectional type and require

some reconsideration. The most evident fact is the presence of a “Verbal Complex” (VC) in the sentence, that is to say, the existence of a clitic cluster in which arguments are realized as pronouns and elements are disposed in the templatic structure shown in Table 2:

impersonal SUBJ CL <i>la</i>	one Obj cl	Preps (2 at most)	Obj cl (poss. pron.)	deictics <i>soo / sii</i> of place manner	some Verb adverbials
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TABLE 2

The VC can be therefore considered as a “microstructure of the whole sentence” (Puglielli 1981: 15), in which all elements of predication are represented. Consider the following sentences:

- (1)
Axmed baa guri-gii [nooga (= Ø+na+u+ Ø+ka)
 Axmed FM house-AN OCL3-OCL1PL-for-OCL3-from
soo qaaday]
 take.PST
 ‘Axmed took it from home for us’

- (2)
Xaawo baa [igu (i+ku) kaa aamintay]
 Xaawo FM OCL1SG-a you (lit.: your) entrust.PST
 ‘Xaawo entrusted me to you’

This morpho-syntactic property led Svolacchia and Puglielli (1999) to propose that Somali is a polysynthetic language (in the sense of Baker 1996), that is to say, a language in which clitics are only visible for q-role assignment through incorporation onto the verbal head. A crucial consequence of this analysis is that full NPs are realized in a ‘dislocated’ position and can never carry argument role.¹

The polysynthetic proposal is supported by additional data. For instance, incorporation is not only specific of verbal arguments, but can also be found in the NP. Consider the following:

- (3)
Wiil-kaa-gan-u waa fiican yahay
 boy-POSS2SG-DEM-NOM DECL nice is
 ‘This boy of yours is nice’

Clearly, determiners and possessives do not modify Nouns as independent elements in the NP, but they are cliticized onto the head-noun. Somali thus appears very similar to polysynthetic languages, as described in works by Jelinek (1988), Mithum (1987) and Baker (1988, 1996). Of course, incorporation in Somali is not a pervasive phenomenon as it is in languages like Mohawk, Oneida, or Cayuga, in which full sentences are realized as a single word, as shown in (4), from Evans and Sasse (2002):

- (4)
E̱-s-kakhe-hona ʔá-yə̱thw-ahs (CAYUGA)
 FUT-ITER-SCL.1SG/OCL.3PL-potatoes-plant-PERF
 ‘I will plant potatoes again for them’

Nevertheless, the presence of incorporational phenomena in (1)-(3) cannot be denied. Indeed, the recognition of a polysynthetic nature in Somali allows for important predictions. In particular, we can notice that not every ‘dislocated’ NP is resumed by a clitic pronoun in the VC. Consider the following:

- (5)
Annag[oo guri-ga fadhina] bay (*na)
 we-PRT house-DET stay FOC.CLSG.3PL 1PL
yimadeen
 come.PRS-3PL
 ‘They came while we were at home’
 [lit.: ‘we, who were at home, they came’]

As we can see, the NP *annago* (‘we’) cannot be resumed in the relevant VC, while resumption is obligatory in sentences like (1)-(2) above. Since the VC is a ‘microstructure of the sentence’ in which all arguments must be realized, this kind of data leads us to hypothesize that it can only contain elements selected from the verb. As a matter of fact, *annaga* in (5) is not

part of the semantic grid of the verb 'to come', which only subcategorizes a <theme> (projected as the sentential subject).

This kind of analysis has far reaching consequences for cross-linguistic investigation, since it implies that VCs in polysynthetic languages can be used as valid diagnostics to check the argument structure of verbs, defining whether a constituent is an argument or not (depending on the presence of clitic resumption). As semantic structure is assumed to be universal, this would be of great significance for the theory, since the definition of theta-grids is very often a problematic issue and the source of longstanding discussion between scholars.

Turning back to morphological classification, Somali also shows the possibility of modifying the argument structure of the verb through affixes in the verbal stem, a typical property of agglutinative languages. For instance, the causative infix *-i(s)-* can be added to a monoargumental stative verb like *buux* ('to be full') yielding a biargumental transitive (hence, dynamic) one²:

(6)
Koob-ku waa buuxay
 glass-DET.NOM DECL be.full.PST.3SGM
 'The glass was full'

(7)
Cali koob-ka waa buux-i-yay
 Ali.NOM glass-DET DECL be.full-CAUS-PST.3SGM
 'Ali filled the glass' (i.e., 'Ali made the glass full')

Then, if the morpheme *-am-* is added to *buuxis*, we obtain a verbal form that is traditionally considered as 'passive' (cf. 8). Unlike passives, however, the <agent> cannot be realized with this kind of verb (cf. 9):

(8)
Koob-ku waa buuxsamay (buux-is-am-ay)
 glass-DET.NOM DECL be.full-CAUS-STAT-PST.3SGM
 'The glass filled up'

(9)
**Koob-ku waa ka buuxsamay, Cali*
 glass-DET.NOM DECL from be.full-CAUS-STAT-PST.3SGM Cali
 '*The glass filled up by Cali'

Cross-linguistic consideration can provide an explanation. Indeed, languages like Italian and English show that the <agent> of passive structures can always be 'rescued' through a (non argument) PP, while this is not the case with stative (unaccusative) verbs:

(10)
 a. *La porta è stata aperta dal vento* (PASSIVE)
 'The door was opened by the wind'
 b. *La porta si è aperta (*dal vento)* (STATIVE)
 'The door opened (*by the wind)'

The explanation for this difference rests on the eventive structure of the verb: passive constructions are dynamic events and, as such, they imply an <agent> which – though 'removed' as an argument – can be rescued as a circumstantial constituent. On the other hand stative verbs describe a state/property of the subject (semantically a <theme>); since there is no <agent>, it cannot be introduced as a PP. As a result, *-am-* infixed verbs should be classified as statives (for further discussion and data concerning the passive-stative dichotomy cf. Puglielli and Frascarelli 2008).

Resuming the typology issue of this section, we can finally conclude that in a language like Somali polysynthesis, inflectional and agglutinative properties coexist and concur in the interpretation of different phenomena. This means that typological classification is not always a clearcut distinction and 'mixed' types must be recognized. As a matter of fact, the interaction of different morphological properties can stimulate linguistic reflection and must be considered an interesting area for research in a comparative perspective.

3. Morpho-syntactic properties of NP modifiers: the case of relative clauses

Relative clauses in Somali are neither introduced by Complementizers (as in Italian, cf. 11a) nor by relative pronouns (as in Russian, cf. 11b) and the NP heading the clause is not resumed by a pronoun within the sentence (as is the case in Persian, cf. 11c), from Comrie 1981). Relative clauses in Somali thus belong to the 'head-deletion' type (cf. 12):

(11)

- a. *Il ragazzo **che** hai incontrato è mio fratello*
'The boy (that) you met is my brother'
- b. *Devuška [kotor-uj videla] maja sestra*
girl.NOM PRO.REL-3SGF.ACC see.PST.SGF POSS.1SG.F sister
'The girl (that) she saw is my sister'
- c. *Man zan-i-ra [ke Hasan be u]*
PRO.S.1SG woman-DET-ACC that Hasan to PRO.O.3SG
jije-ra dad] mišenasad
chicken-ACC give.PST.3SG know.PRES.3SG
'I know the woman to whom Hasan gave a chicken'

(12)

- a. *Wiil-ka [Maryan la hadlayaa] waa*
boy-DET.M. Maryan with talk.PRES.PROG.RED.NOM DECL
walaal-kay
brother-POSS.1SG
'The boy speaking with Maryan is my brother'
- b. *Wiil-ka [af talyaani-ga ku hadlayá]*
boy-DET language Italian-DET in speak.PRES.PROG.RED
baan jeclahay³
FM.SCL.1SG love.PRES.1SG
'I love the boy that is speaking Italian'
- c. *Moos-ka [aad cunaysaa] waa cerin*
banana-DET.M. SCL.2SG eat.PRES.PROG.2SG.NOM DECL unripe
'The banana that you are eating is unripe'

From a semantic point of view, relative clauses can be divided into restrictives and appositives, depending on their function with respect to the NP they modify. In particular, restrictive relative clauses provide a reference value for the NP-head (and are therefore necessary for interpretation), while appositives only supply additional information (and are therefore considered as 'circumstantial elements').

This semantic distinction is very often not associated with any morphosyntactic difference in the languages of the world and the relevant interpretation only relies on phonological means or pragmatic information. This is the case of Italian, illustrated in the following sentence:

(13)

- Il tuo vicino di casa [che incontro spesso] è molto simpatico*
'Your neighbour [that/who I often meet] is very nice'

If the relative sentence is produced within a single prosodic group with the NP-head, it receives a restrictive interpretation (in that case, the relevant neighbour is identified, among others, as the one that I often meet); on the other hand, if the relative clause is realized as an independent prosodic phrase (a sort of parenthetical), it is interpreted as appositive with respect to the NP-head (in that case, the relevant neighbour is not part of a set and its reference is independently identified).

Conversely, in a language like Somali appositive clauses are introduced by a specific morpheme, namely *oo*. Consider the following contrast:

(14)

- a. *Wiil-kaas [Maryan la hadlayaa]*
boy-DEM.M.NOM Maryan with talk.PRES.PROG.RED.NOM
waa walaal-kay
DECL brother-POSS.1SG
'That boy that is speaking with Maryan is my brother'
- b. *Wiilkaas [oo Maryan la hadlayaa] waa walaal-kay*
'That boy, who is speaking with Maryan, is my brother'

Given this formal difference, the morpho-syntactic properties of relative clauses in Somali can be studied without any doubt regarding their semantic nature. Consider for instance *stacking* phenomena:

- (15)
- a. *Wiilka* [*hadlayá*], [*oo aan ku*
boy.DET talk.PROG.RED PRT SCL1SG OCL2SG
baray], *baa Landan ka yimid*
introduce.PST.1SG FM London from come.PST.3SGM
'The boy that is talking, whom I introduced you before,
came from London'
- b. **Wiilka* [*oo aan ku baray*], [*hadlayá*], *baa Landan ka yimid*

In a sentence like (15a) we can unambiguously distinguish restrictive from appositive and see that appositive clauses cannot precede restrictives. This is evidence that the relation between a restrictive relative clause and the NP-head is somehow 'closer' and, consequently, these two types of relative clauses cannot be analyzed in a uniform way (as in other languages; for a discussion, cf. Frascarelli and Puglielli 1995b). The study of languages like Somali, in which semantic differences have a morpho-syntactic correlation, can be therefore very important for a deeper understanding of structures and their derivation.

4. Morpho-syntactic properties of syntactic functions: case marking

The realization of syntactic functions shows different strategies cross-linguistically. Some languages realize them through independent morphemes, namely *particles* (as in Chinese and a number of Creole languages) or *prepositions* (as in most European languages), while others use bound morphemes (i.e., *affixes*). Among the latter we can distinguish languages marking the NP (like Tzutujil in 16) from languages marking the verbal head (as in Standard Arabic, cf. 17). This difference

determines the distinction between 'dependent-marking' and 'head-marking' languages, according to Nichols' (1986) terminology:

- (16)
- x-ø-kee-tij* *tzyaq ch'ooyaa?*
ASP-PRO.S.3SG-PRO.O.3PL-eat cloths mouse
'The mouse ate the cloths'
[lit.: 'it ate them, the cloths the mouse']

- (17)
- 'asbaha* *'akūh-u* *mumaththil-an*
become.PERF.3SGM brother.PRO.O.3SGM-NOM actor.ACC-INDEF
'His brother became an actor'

As we can see, in Tzutujil subject and object pronouns are incorporated in the VC, while in Arabic the object pronoun (here interpreted as a genitive) and the NOM Case marking (indicating the subject function) are realized on the nominal element. In this respect, Somali can be classified as a dependent-marking language, as is clear from sentences like (18): Case marking is realized as the rightmost suffix in the NP, while the verbal head only presents inflectional morphemes:

- (18)
- Wiil-kaa-gan-u* *waa yimid*
boy-POSS2SG-DEM-NOM DECL come.PST-3SGM
'This boy of yours has come'

It is therefore interesting to notice that, in the case of complex NPs, some languages mark both the head-noun and its modifiers and, in coordinated structures both NPs are marked. This is the case of Standard Arabic and Turkish, illustrated respectively in (19) and (20) below:

- (19)
- [*al-lugha al-'arabiyya*] *sa'abah*
DET-language.NOM DET-Arabic.NOM difficult
'Arabic language is difficult'

(20)

Ahmet [uskumru-yu te istakoz-u] pişir-di
 Ahmet prawn-ACC and lobster-ACC cook-PST
 'Ahmet cooked the prawn and the lobster'

In Somali, on the other hand, only the rightmost element within the NP is marked. From a syntactic point of view, this means that Case marking appears on the *most embedded* constituent. Consider coordination:

(21)

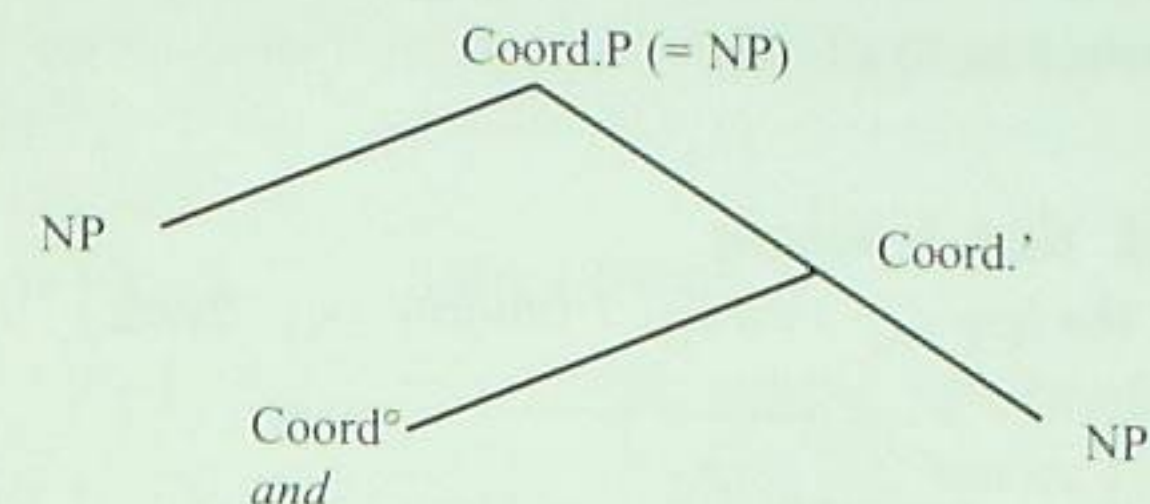
[qalin-ka iyo buugag-gu] miis-ka way
 pen-DET and book.PL-DET.NOM table-DET DECL.SCL3PL
 saran yihiin
 stay.PRES.3PL
 'The pen and the books are on the table'

As we can see, NOM Case is only seen on the second member of coordination (*buggag*), while the first NP (*qalin*) shows the unmarked (non-nominative) Case marking.

This morpho-syntactic property allows for a clear and straightforward identification of the right boundary of NPs and – more importantly – it leads to significant considerations about the internal structure of coordination. Indeed, this kind of data shows that coordinated NPs are included in a 'bigger NP' and that, within this structure, the rightmost NP is syntactically the most embedded one. This is perfectly in line with an analysis of coordinated NPs as members of a 'Coordination Phrase', based on the binary-branching X-bar model (as proposed in Kayne 1994).

According to this proposal, coordinated phrases are inserted in the Specifier and Complement positions of a CoordP, which assumes the categorical specification of its internal members. In other words, the CoordP containing two NPs is, in turn, a 'big NP':

(22)



The rightmost constituent in this structure is necessarily the most embedded one, hence – in languages like Somali – the NP carrying morphological markings. No other stipulation is needed to explain this order of facts.⁴

Syntactic embedding is therefore the key to understand rightmost Case marking in any type of complex NP. Interestingly, in a language like Somali this analysis also applies to the relative clause, a type of nominal modifier that is rarely marked for Case in the languages of the world. Consider the following sentence:

(23)

[wiilka aan af Talyaani-ga ku hadlin-i] waa
 boy-DET NEG language Italian-DET in talk.NEG-NOM DECL
 walaal-kay
 brother-POSS1SG
 'The boy that cannot speak Italian is my brother'

The fact that the head-noun (*wiilka*) has no Case marking, while NOM Case is present on the relative verb (*hadlin*) shows that these elements are contained within one and the same NP. Hence, Case marking proves that a relative clause is a NP-internal constituent and that the relative verb is its most embedded element.

This piece of evidence strongly supports a *raising* analysis for (restrictive) relative clauses⁵, as proposed in Kayne (1994). According to this analysis, the relative clause (a CP) contains the NP-head and is inserted as the complement of the functional D° head. The NP-head then *raises* to scope position

(24)

a. The **book** that I bought

b. [DP [D' the [CP [C' that [IP I bought [NP book]]]]]

The diagram illustrates the movement of the object 'book' from its base position in the NP to the specifier position of the CP. In the structure [DP [D' the [CP [C' that [IP I bought [NP book]]]]], the word 'book' is underlined in the NP. An upward-pointing arrow indicates its movement to the C position, which currently contains the word 'that'. A second downward-pointing arrow shows 'that' moving to the D position, which currently contains the word 'the'.

Once again, we have seen that linguistic reflection on the morpho-syntactic properties of a single language can lead to wider considerations about universals and the theory of grammar.

5. Morpho-syntactic properties at the sentential level: subordination

(25)

<i>gabar-dhii</i>	<i>oo</i>	<i>[mar-kaas</i>	<i>guri-ga</i>	<i>gashay]</i>
girl-AN	PRT	time-DEM	house-DET	enter.PST.RED
<i>baan</i>	<i>arkay</i>			
FM.SCL.1SG	see.PST.1SG			

b. [goor-ta qorrax-du dhacdó] imaw
moment-DET sun-DET.NOM set.DEP come.IMP
'When the sun is setting, come'

The sentences in brackets, interpreted as adverbial clauses, are introduced in English by elements that can be considered as Complementizers. In Somali, on the other hand, these clauses are dependent on noun: the nominal nature of these elements (*markaas*, *goorta*, *sida*) is in fact unquestionable, since they are modified by demonstratives or determiners. This means that the relevant clauses are included within NPs or, in other words, that sentential subordination is realized as *nominal subordination*. This is a crucial conclusion, which deserves further investigation. First of all, let us see whether this property only concerns adverbials or can be extended to all types of subordinate clauses.

(26)

<i>Waxay</i>	<i>doonaysaa</i>	[<i>in-ay</i>	<i>bisha</i>	<i>dambe</i>
FM-SCL3SGF	want.PROG.3SGF	that -SCL3SGF	month-DET	next

tagtó]

leave.DEP

‘She wants to leave the next month’

[lit.: ‘she wants that she leaves the next month’]⁶

(27)

<i>in</i>	<i>lacag</i>	<i>ah</i>	<i>i</i>	<i>sii</i>
part/thing	money	be.PRES.3SG	OCL1SG	give.IMP

'Give me some money' [lit.: 'give me part of what is money']

This means that completive clauses – like adverbials – must be also considered on a par with relative clauses. Morpho-syntactic evidence in this respect is discussed in Antinucci (1981) and additional support has been provided in recent analyses on intonational properties (Puglielli and Frascarelli 2006).

As a matter of fact, prosodic investigation has shown that *in* is pronounced with a *pitch* and marks the beginning of a *prosodic domain* concluding its (falling) curve at the end of the subordinate clause. This is exactly the prosodic behaviour of NPs heading relative clauses (contrary to COMPS, which are never marked by any prominence). Consider, for instance, the intonational contour of sentence (28), shown in Figure 1 below:

- (28)
 (waxay ila tahay) Cali in-uu
 FM.SCL3SGF OCL1SG-IMPERS seem.3SGF Cali part/thing-SCL3SGM
 cajiin qasayaa la moodaa
 pasta make.3SGM.DEP IMPERS imagine.PRES.3SGM
 ‘It seems to me that Cali is making pasta, I think’

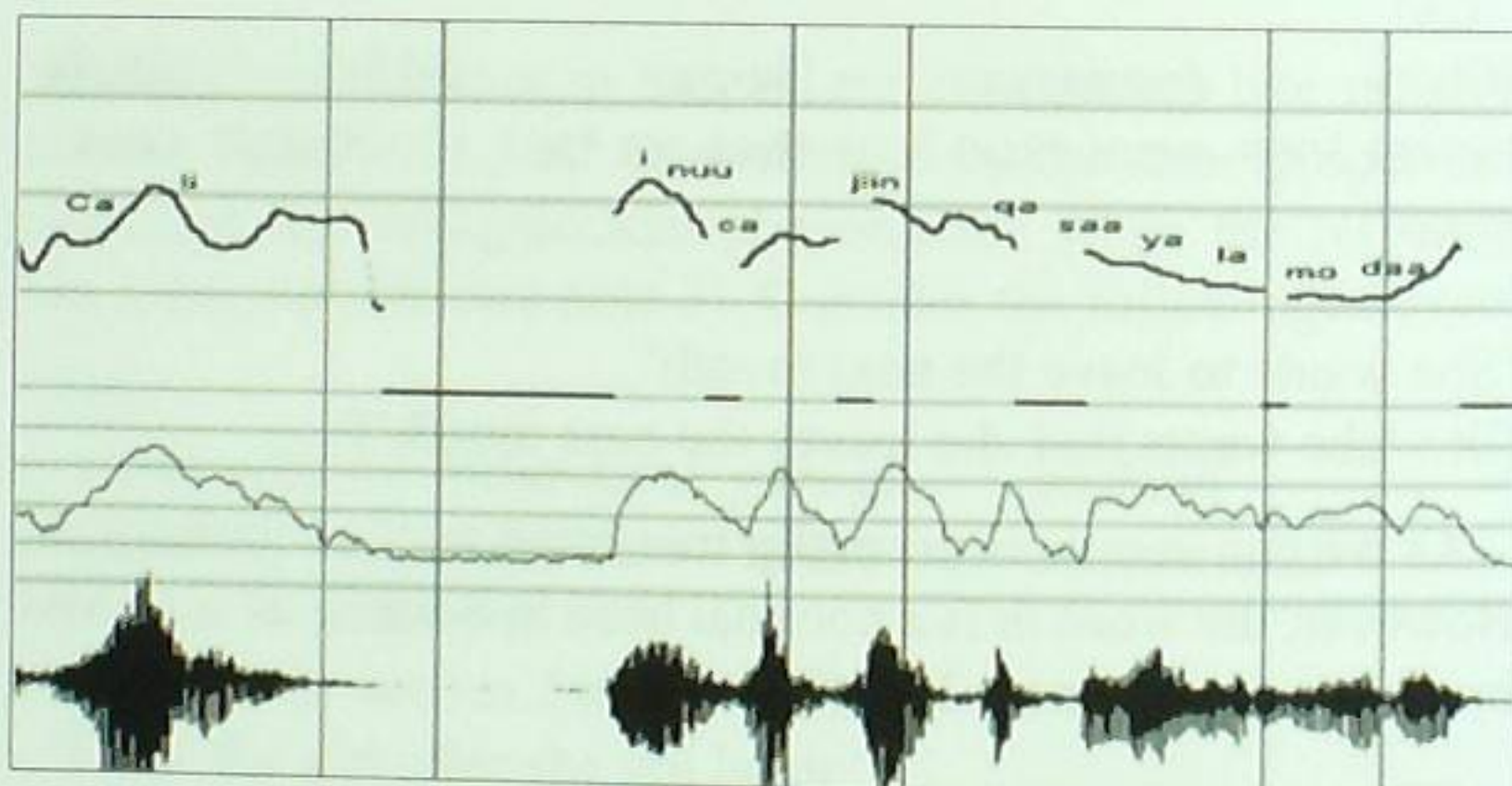


FIGURE 1

As we can see, *in* represents the highest F0 point in the sentence, while the curve reaches its baseline after the verb *qasayaa*. We can therefore conclude that the “COMP” *in* is in

fact the head of a relative clause. It is now important to acknowledge that the morpho-syntactic properties discussed for subordinate clauses in Somali do not represent an isolated case cross-linguistically. Indeed, subordinates are realized as nominalized constructions in a number of (typologically diverse) languages. In Turkish, for instance, subordinate verbs show a nominalizer infix and the adverbials are introduced by generic NPs (‘time’, ‘place’, ‘reason’, etc.) located at the end of the relevant clause, consistent with the head-final nature of the language. This is exemplified in (29a-b) (from Kornfilt 1997):

- (29)
 a. *Müdür* [tatil-e çik-tiğ-i zaman]
 manager holiday-DAT go-NOMIN-3SG.POSS time
ofis kapa-n-ir
 office close-RIFL-AOR
 ‘When the manager is on vacation, the office is closed’
 [lit.: ‘The manager, the time he is on vacation, the office is closed’]
 b. *Hasan* [kitab-i san-a ver-diğ-im
 Hasan book-ACC PRO.S.2SG-DAT give-NOMIN-1SG.POSS
takdir-de] çok kız-acak
 case-LOC very get angry-PST
 ‘Hasan got very angry because I gave you the book’
 [lit.: ‘Hasan, at the instance that I gave you the book, got very angry’]

Similarly, adverbial clauses in Maori are introduced by generic NPs and the embedded verbs are not preceded by any tense/aspectual morpheme, while this is always present in matrix clauses. Consider the following (from Bauer 1993):

- (30)
 a. [*kia* tae mai koe] ka kai taatou
 time arrive here PRO.S.2SG T/ASP eat PRO.S.1PL.INCL
 ‘When you arrive, we will eat’

- b. *I hoki maatou ki te kaainga*
 T/ASP go back PRO.S.1PL.EXCL to DET house
 [*i te mea e ua ana*]
 from DET thing T/ASP rain PST
 'We went back home because it was raining'

Also in these languages – as in Somali – the nominal nature of the elements introducing the adverbial clauses is made clear by the possibility of being modified by determiners and preceded by prepositions (cf. (30b)).

Adverbial clauses are also introduced by nominal heads in Austronesian languages, as is shown below for Tagalog (for additional data and discussion, see Puglielli and Frascarelli 2008):

- (31)
 [*bago natulog*] *ang mga bata uminom ng gatas*
 precedent ATT.sleep TRIG PL children ATT.drink.PST DIR milk
 'Before sleeping, children drank milk'

Given these data, it is feasible to hypothesize that sentential subordination actually originates from nominal subordination in a cross-linguistic perspective. In this line of analysis, wh-constituents introducing embedded clauses in languages like English or Italian should be considered as NPs heading relative clauses; on the other hand, COMPs introducing completives introduce in fact the complement CP of a NP whose head is null (i.e., phonologically unrealized). In other words, subordinate clauses like those in (32a) and (33a) originate from nominal subordinate structures like the ones shown in (32b) and (33b):⁷

- (32)
 a. [*Quando arriverai*], *saremo tutti molto felici*
 'When you arrive, we will be all happy'
 b. [*Nel momento [in cui arriverai]*], *saremo tutti molto felici*
 'In the moment in which you arrive, we will be all happy'

(33)

- a. *Ricordo [che ti sei comportato molto male]*
 'I remember that you behaved very badly'
 b. *Ricordo [<il fatto> [che ti sei comportato molto male]]*
 'I remember the fact that you behaved very badly'

The nominal nature of embedded clauses is undoubtedly an interesting hypothesis that languages like Somali present to the attention of scholars. Evidently, this kind of analysis has far reaching consequences that need further research and supporting data in a cross-linguistic perspective (see also Testa 2007 for discussion).

6. The syntax-discourse interface: focus constructions

The realization of Focus⁸ is a much debated issue in the literature and different theories have been proposed. As a matter of fact, languages show different strategies to realize the constituent carrying new information, based on different grammatical means (i.e., prosody, morphology, syntax – or a combination of them).

Despite the great variety of details, however, authors agree in the identification of two main strategies to realize Focus cross-linguistically, namely, the *in situ* and the *extra situm* strategy (cf. Aboh *et al.* 2007). The former is apparently the simplest, since the Focus constituent remains in its basic position (as in Italian, cf. (34)), while the latter requires Focus to move to scope position, left-adjacent to the verbal head (as in Hungarian, cf. (35), from Horvath 1995):

- (34)
Ho incontrato LEO ieri
 'I met LEO yesterday'

- (35)
MARI jött el tegnap
 Mari come.PST PV yesterday
 'MARI came yesterday'

Focus is a crucial notion in Somali since it is a 'Focus-prominent' language (cf. Kiss 1995), that is to say, one constituent must be overtly signaled as new information in the sentence. In particular, Focus is identified by means of its syntactic position (obligatorily before the VC) and for the presence of a right-adjacent Focus marker (*baa*):

(36)

- a. *Shalay jamacadda CALI baan* (*baa* + *aan*)
 yesterday university-DET Cali FM.SCL1SG
ku arkay
 to see.PST.1SG
 'Yesterday I saw CALI at the university'
- b. **Shalay CALI jamacadda baan ku arkay*
- c. **Shalay jamacadda baan CALI ku arkay*

The question is, which Focus strategy does Somali belong to? Given the syntactic position of Focus we might suppose an *extra situm* case. However, deeper consideration of morpho-syntactic data shows that this conclusion is not correct.

First of all, the sentence following the Focus has the morpho-syntactic properties of a relative clause, in contrast to languages like Hungarian. Hence, when the Focus is interpreted as the subject of the sentence, antiagreement effect appears. Consider the following sentence:

(37)

- NIMANKAAS baa hilibka cunaya*
 men-DEM.NONNOM FM meat.DET eat.PROG.RED
 'THOSE MEN are eating the meat'

As we can see, the 'subject' NP 'those men' is not marked with the NOM suffix (i.e., *-u*, cf. section 4) and the verb shows the reduced paradigm. Hence, the relevant NP does not show any of the typical morpho-syntactic properties which characterize a grammatical subject (though it is semantically interpreted as the subject of the sentence). Second, the *extra-situm* strategy does not include Focus markers, whose presence must

be explained. In this respect, diachronic research has played a crucial role, shedding light on their *copular origin* in a number of languages (cf. Frascarelli and Puglielli 2005a,b, 2007a,b, Frascarelli 2008).

We must therefore conclude that Somali uses a different strategy for Focus, which includes a relative clause and a copular construction. Let us therefore proceed in the analysis of data, in order to understand this type of construction in detail, starting with the correlation between Focus and relative clauses.

Enlarging the spectrum of our observation, it is important to notice that this correlation has been pointed out by many authors (starting with Schachter 1973) for a number of typologically different languages, like Tigrinya (from Appleyard 1989), Wolof (from Kihm 1999), Byali (from Reineke 2004), Berber (from Ouhalla 1999) and French:

(38)

- NKSSU 'Kyyu waga 'ab katāma zāxKbbKr* (TIGRINYA)
 PRO.3SGM COP.3SGM price in town raise.REL
 'HE raises the prices in the town'

(39)

- FAS wi la jaaykat bi jënd* (WOLOF)
 horse DET COP.3SG merchant DET buy.PST.REL
 'The merchant bought A HORSE'

(40)

- Biig è ù n yi yambK kK* (BYALI)
 child.OCL COP SUBJ.3SGF REL PST see.PERF OCL
 'She had seen THE CHILD'

(41)

- TAMGHARTA ay yzrin Mohand* (BERBER)
 woman.DEM PRON.INDEF see-PART Mohand
 'Mohand saw THAT WOMAN'

(42)

- C'est MOI qui est tombé dans l'escalier* (FRENCH)
 'It's ME who fell from the staircase'

As we can see, in all these languages Focus is followed by a relative clause expressing the presupposed part of the sentence. How can we explain its presence and contribute to the theory of grammar in a cross-linguistic perspective?

In recent analyses in the Generative framework a *cartographic approach* has been proposed to account for the syntax and interpretation of discourse categories (cf. Rizzi 1997). According to this approach, the original CP node has been 'split' into a number of functional projections, each dedicated to the interpretation of a specific discourse category (Focus, Topic, Contrast and so on). The left periphery therefore shows a very complex structure, which can be (minimally) represented as follows:⁹

(43)

[ForceP [TopP [FocP [TopP [FinP [IP]]]]]]

For the purposes of the present analysis, this means that Focus moves to the FocP projection in languages with the *extra situm* strategy.

The morpho-syntactic restrictions observed in Somali Focus constructions strongly support this kind of approach. Indeed, the rigid word order observed in sentence (36) above can be easily accommodated in the functional structure given in (44):

(44)

[TopP_{shalay} [TopP *jamacadda* [FocP_{Cali} [Foc' *baan*
[TopP_{panigu} [IP_{ku arkay}]]]]]]]

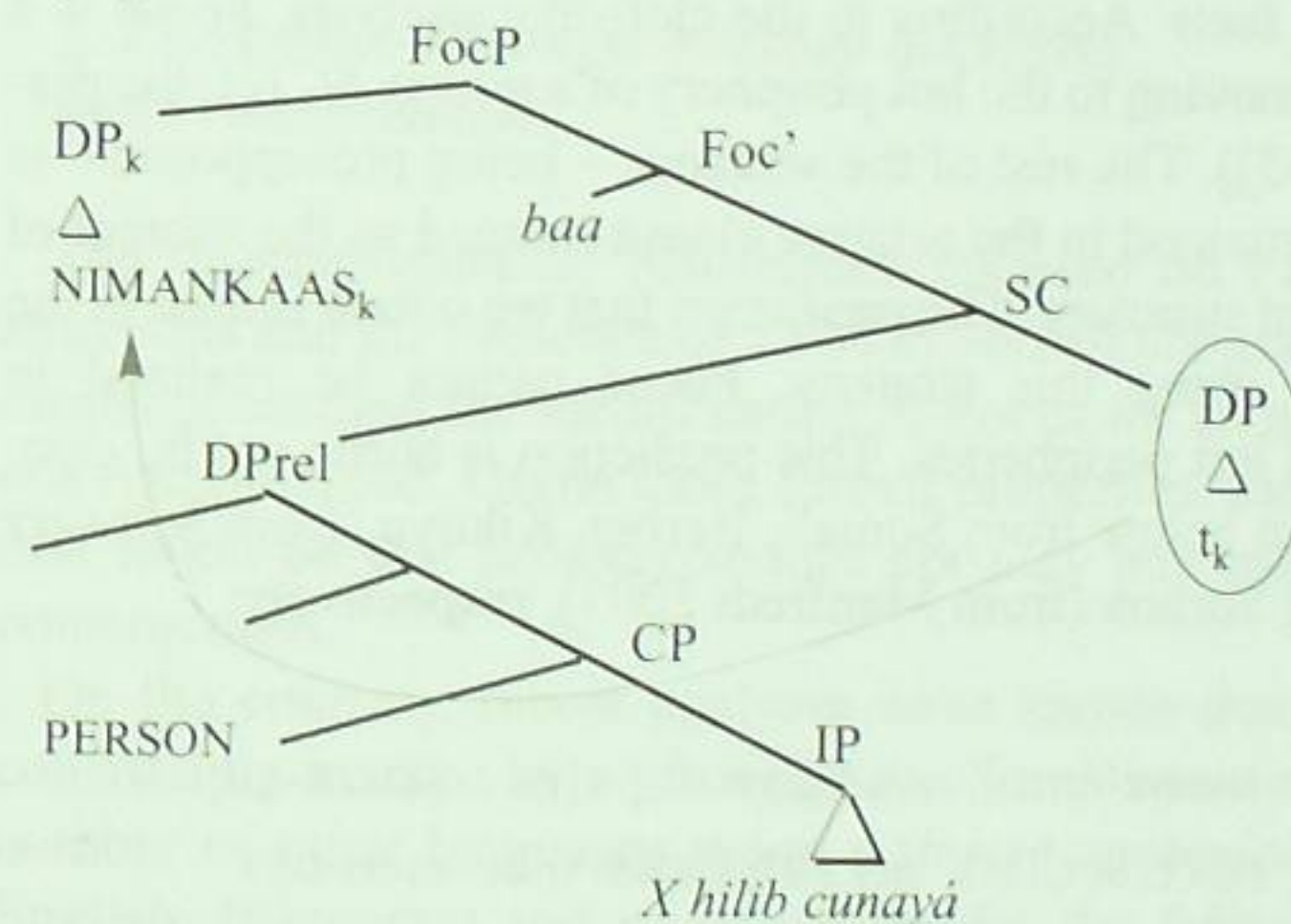
'Yesterday I saw CALI at the university'

The ban against alternative orders (cf. 36b-c) can be thus considered as a direct consequence of the cartographic order of functional projections in the left periphery. This is a very important issue, since the realization of Focus has been regarded as a mere pragmatic concern for a long time; on the contrary, the crucial role of syntax is made clear by languages like Somali.

However, the cartographic approach by itself cannot explain the presence of a copula, the presupposition embedded in a relative clause and the morpho-syntactic properties of a focused 'subject' (cf. (38)). Theory must be improved to comprehend the realization of Focus in languages like Somali and Tigrinya. Therefore, a third syntactic strategy is needed, which can be defined as the '*cleft-like*' strategy (cf. Frascarelli and Puglielli 2005a, Frascarelli 2008).¹⁰

Given the presence of a copular construction, this strategy requires the presence of a Small Clause (see Moro 1997), in which Focus is inserted as the *predicate*. Presupposed information, on the other hand, is nominalized and realized as a (free) relative clause (as is the case of all embedded clauses in Somali, cf. Section 5), inserted as the subject of the relevant structure. Finally, the relative clause is headed by a generic null NP (e.g., 'person', 'thing', 'time'), whose value is specified by the Focus after movement to scope position (i.e., SpecFocP). The derivation of sentence (38) can be thus represented as follows:

(45)



Therefore, this analysis does not exclude the cartographic approach, but integrates Focus movement into a more complex structure in order to account for the morpho-syntactic properties so far observed.

Indeed, the copular structure in (45) accounts for the fact that a Focus cannot have the properties of a grammatical subject since it is not inserted as an argument of the verb (being the predicate itself). It also accounts for the presence of a relative clause: it is the syntactic realization of the set of elements within which the Focus operates, providing a value for an open variable ('X', in 45). In other words, a sentence like (42) implies the recognition of [someone who ate the meat] as the subject of predication and that of a nominal predicate (*NIMAN-KAAS*) providing a value for the entity having such a property.

The idea of Focus as a predicate has been proposed in different frameworks with different results (cf., among others, Higgins 1973, Szabolcsi 1981, Kiss 1999). Chomsky (1971) also claimed that "the focused constituent is the predicate of a *dominant sentence*" (Chomsky 1971: 72, *italics mine*). The originality and the typological relevance of the present proposal rests on the assumption that the 'cleft-like' construction qualifies as a *syntactic strategy* to realize Focus in some (non-related) languages.¹¹

Finally, the existence of the cleft-like strategy is supported by additional facts. According to the cleft-like analysis, Focus is a predicate moving to the left periphery of a *matrix SC* (cf. the diagram in (45)). The rest of the sentence – being presupposed – is always contained in the relative clause merged as the subject of the relevant structure. The prediction that we obtain is that, in the languages using this strategy, Focus cannot be realized in embedded left peripheries. This prediction is borne out by data, as is shown below from Somali, Berber, Kikuyu (from Schwarz 2004) and Yoruba (from Manfredi 2007), respectively:

- (46)
 **Hilib-ka waan sheegay [in NIMAN-KA_i*
 meat-DET DECL.SCL1SG say.PST.1SGM that men-DET
baa cunayá]
 FM eat.PROG.RED
 'I said that THE MEN are eating the meat'

- (47)
 **Nna-n qa [TAMGHART-A ay yzrin Mohand]*
 say.PST-1SG that woman-DEM PRO.INDEF see.PST.PART Mohand
 'I said that THIS WOMAN saw Mohand'

- (48)
 **Abdul, [ne IBUKU o-dom-ire] á-nyu-ire mae*
 Abdul COP book 3SG-read-PST 3SG-drink-PST water
 'Abdul, who was reading a BOOK, was drinking water'

- (49)
 **Won bèèrè pe [boya mo rà FILA ni l'anàa]*
 3PL ask say if 1SG buy hat COP yesterday
 'They ask whether I bought A HAT yesterday'

Given these data we can reach the conclusion that Focus is a discourse feature linked to the left periphery of matrix clauses. This conclusion has important consequences for the theory, and its cross-linguistic extent and validity can be a fruitful subject for future research.

7. The syntax-discourse-prosody interface: focus interpretation

The morpho-syntactic restrictions imposed on Focus constructions and the presence of a FM in Somali are grammatical means permitting the identification of Focus for an unambiguous interpretation. Given these formal properties, the expectation might be that prosody should not play any role in such constructions.

On the contrary, recent analyses have shown that Focus is consistently marked by a pitch (H*) in Somali as well, as in a number of other languages using different strategies (Italian, English, Hungarian and so on). Consider the following sentence and its intonational realization in Figure 2 (from Puglielli and Frascarelli 2006):

(50)

dhinaca waxaan (wax+baa+aan) *u jeedaa* *BAKEERIGA*
side FM.SCL1SG thing-FM-SCL1SG see.PRES.1SG glass.DET
MARYANUU (= *M.+buu*) *horyalla*
Maryan.FM.SCL3SGM be in front of.PRES.3SGM
'On a side, what I see is a GLASS (and) it is in front of MARYAN'

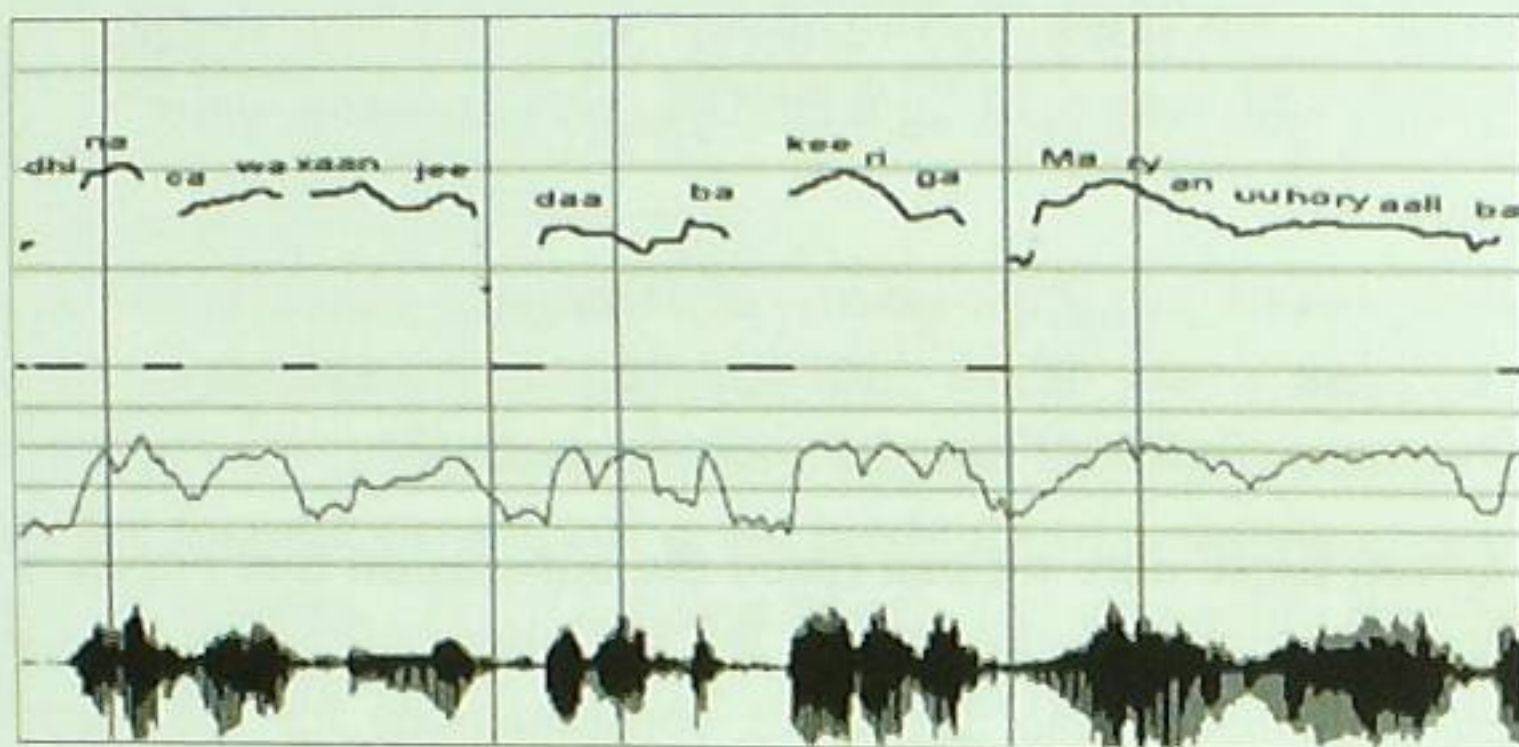


FIGURE 2

As we can see, both *BAKEERIGA* ('the glass') and *MARYAN* are marked by a pitch (H*) and represent the highest point within their intonational phrases. On the other hand, the FMs (*waxaa* and *baa*) are prosodically unstressed.

Both these results are perfectly in line with the cleft-like analysis we propose: Focus moves to Spec,Foc and, as such, is recognized at the syntax-discourse-prosody interface as the element checking the Focus feature. Hence, it is marked by a pitch. The FM, on the other hand, is nothing but a copula, namely, a mere functional head carrying inflectional features and serving as a 'linker' between the presuppositional subject and its nominal predicate. Intonational analysis thus supports the proposal discussed in section 6 and functions as valid diagnostics in verifying the validity of syntactic proposals in cross-linguistic works.

A final suggestion for linguistic reflection concerns the so-called 'division of labour'. As we have seen, despite the richness of morpho-syntactic means to signal Focus, prosody is not

'silent', as might be expected. This means that the economy of system does not work blindly, simply avoiding redundancy of grammatical means, and that a deeper analysis is needed to understand why, especially in the realization of discourse features, syntax, morphology and prosody seem to be jointly required for interface interpretation. This is a crucial issue for the theory of grammar, which can lead to a deeper understanding of data in future research.

NOTES

¹ This means that full NPs are realized in an extrasentential position and associated with a specific discourse value (as Topics or Foci). This is a crucial characteristic of Somali that is not discussed in this paper. The interested reader can refer to Puglielli (1981), Svolacchia et al. (1995), Frascarelli and Puglielli (2005a, 2007a,b, in press).

² On the stative-dynamic dichotomy and its morpho-syntactic consequences, cf. Puglielli and Frascarelli (2008).

³ As we can notice, when the NP-head has a subject role in the relative clause (cf. (12a-b)), verbal inflection appears in a 'reduced' form (the so-called *Antiaffirmation* phenomenon; see section 6.1). The 'reduced paradigm' has three forms: one for 3SGF, one for 1PL and one for all other persons. It can be therefore considered as a participial-like kind of inflection (cf. Puglielli 1981, Puglielli and Frascarelli 2008).

⁴ This implies that non-configurational ('flat') coordinated structures, having all members on the same syntactic level have no explanatory power and must be therefore excluded.

⁵ As discussed in section 3, restrictive and appositive relative clauses cannot be given a uniform syntactic analysis.

⁶ Evidently, Somali does not allow for infinitive subordinate clauses, a property deriving from its polysynthetic nature (cf. section 2; on the morpho-syntactic consequences of polysynthesis, cf. Baker (1996)).

⁷ Null elements are indicated in angle brackets, as in standard use.

⁸ As agreed among scholars, the term 'Focus' refers to new information in the sentence. Its extent and semantic value can vary and many distinctions have been proposed (for an overview and some discussion, cf. Rizzi 1997, Frascarelli 2000, Puglielli and Frascarelli 2008). For the purpose of the present work, we only refer to Focus in its *narrow* syntactic realization (i.e., limited to one constituent in the sentence), with a semantic *informative* role (i.e., as the element answering a wh-question).

⁹ Indeed, after Rizzi (1997) – from which the structure in (44) is taken – many

authors have provided evidence for the necessity of additional functional projections in the CP area. For the purposes of this paper we concentrate on the original proposal, but refer the interested reader to Puglielli and Frascarelli (2008) for discussion and references.

¹⁰ It is important to insist on the fact that this strategy is used to realize *information* Focus. So, even though this structure is reminiscent of cleft constructions, it is *not* associated with a contrastive interpretation of Focus, as is case of clefted foci in most European languages (like Italian).

¹¹ For reasons of space we cannot add further details here; the interested reader is referred to Frascarelli (2008).

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Annarita Puglielli and Francesca Bitocchi

QAAMUUSKA AF SOOMAALIGA THE GREAT SOMALI MOOLINGUAL DICTIONARY

1. Background

Now that work on the first edition of the *Qaamuuska Af Soomaaliga* (Dictionary of the Somali Language) is in its final stages, it is worth reporting on what has been done so far by examining the various phases of the project.

Lexicographical work was one of the central aims of our research from the very beginning, being part of the systematic description of Somali that we had embarked upon. Indeed, the adoption of Somali (officially transcribed in 1972) as the language of instruction showed that there was a need for the language to cover fields that had hitherto not been part of normal contexts of use.

When we commenced our work, the only existing monolingual dictionary was Yaasiin Cusmaan Keenadiid's dictionary, a seminal work for Somali lexicography, which was published in 1976 and comprised approximately 3,500 words.

Over the years our project has evolved through several stages, moving towards the production of a 'comprehensive' monolingual dictionary, but, at the same time, also towards the creation of a lexical database that could be easily consulted and updated. This research is of particular importance since these data were the outcome of the first systematic and large-scale work on the language. In the future it is expected that the lexical databases can be expanded and specific research undertaken to include different areas that at the moment are scarcely present for reasons which are more than evident.

Let us now go rapidly through the different phases of our lexical project in creating the *Qaamuuska Af Soomaaliga* (QAS).

I. Our lexical work began with the production of the Somali-Italian Dictionary. The reasons for this choice were, as we have stated on previous occasions, the following:

- a) the definitions for the lexical entries were implicit rather than explicit. If we had started with the monolingual dictionary we would have probably had to face the need to coin new terms even before we had developed enough competence in Somali to be able to be of help to the native speakers involved in the work and who were at the same time being trained on the job;
- b) Somali had been officially transcribed only five years before our work started; this meant there was a certain amount of instability in the writing system;
- c) there was the need for Italian and Somali researchers to become acquainted with each other on the job in order to build up a solid and positive working relationship.

We started with the collection of all the relevant existing lexicographical sources. These were systematically checked with our informants and Somali experts, and then transcribed according to the official orthography. We then proceeded with the scanning of texts that had been published since the application of the official writing system in order to find words and different usages that were not recorded in our sources.² The result of this work was the *Dizionario Somalo Italiano* (approximately 30,000 lemmas) published in 1985.

II. The completion of the bilingual dictionary required the subsequent compilation of the Italian-Somali Dictionary which was produced mainly in Italy with the assistance of bilingual Somali experts. In this case the input language had to be Italian and the selection of entries was made on the basis of criteria such as frequency etc.

The Somali Italian dictionary was then reversed (through

computer elaboration), thus producing correspondences between Italian and Somali items with the Italian word as input. Evidently, this was only the initial input for the writing of the lexical entries since the final entry was the result of the work and skills of the various people involved in the compilation of the dictionary. The Italian-Somali dictionary was published in 1998.

III. Work on the QAS started as soon as the *Dizionario Somalo Italiano* was completed and, in this case too, the work involved several researchers and was split into various activities. These could be considered sub-projects due to the fact that different choices had to be performed given the different semantic fields that were being covered. The next paragraph will describe the aims and methods adopted for the compilation of the monolingual dictionary.

2. Phases

The work to be carried out was, on the one hand, to provide definitions for all the lexical entries in the bilingual dictionary, and on the other, to expand the lexical database towards an objective of 50,000 words. The work was carried out in both directions right from the start, and while one group of experts was writing the definitions for lemmas present in our database, different methods for collecting new words were determined.

We will briefly describe the various methods adopted for different lexical areas.

- a) Regarding the 'Humanities', we proceeded with the scanning of texts, articles and essays and any words that were not present in our corpus were added and defined. Other terms deriving from research into specific fields – for example ethno-musicology – were collected by the experts in the field and handed over to the dictionary team in order to have them included.
- b) For terms relating to all fields necessary for school text-

books – whose revision appeared to be an urgent need since books written by different authors used different terms – we worked alongside a Committee of the Curriculum Development Centre of the Ministry of Instruction since they were deemed responsible for the revision of the textbooks. For each subject – History, Geography, Mathematics, Physics, Biology, Chemistry – we chose a number of basic terms that we considered necessary (ranging from 150 to 300 for each area). They decided which words would be used in Somali for these terms and wrote the definitions for the dictionary. These same terms would then be used in the revision of the textbooks, the intention being uniformity of terminology.

- c) For terms relating to plants and animals, research started with the collection of bibliographical material produced by researchers and experts in the field and a bibliography of over 300 publications was compiled. The principle works were consulted and data relative to vernacular names as well as data concerning their classifications were put on a separate database. Clearly, the plan was also to check all the collected data through field work. There were obvious reasons for this: our materials had been collected at different times and by different authors in different places and therefore the corpus contained, for example, different names supposedly for the same animal or plant. The reasons for this ranged from the erroneous transcription of the name provided by informants to possible variations due to local differences.
- d) In order to collect data – both from a linguistic and an ethno-anthropological point of view – relating to traditional arts and crafts we prepared questionnaires to be used for field work in different regions of the country.

Predictably, this collection and/or checking of data through further field work was not possible as the civil war started in 1990. Therefore, some of the areas we intended to cover systematically and on scientifically solid grounds, will unfortunately be barely present in the current version of the QAS.

3. The format

The important thing to stress is that the present lexical corpus, whose origin and development we have described, and on which the first edition of the *Qaamuuska Af Soomaaliga* is based, is now a database of approximately 50,000 lemmas that can be consulted, expanded and questioned. This is the result of successive developments of the computational applications to our initial corpus.

From the initial computer format of the lexical entries in the Somali-Italian dictionary that we used for several computational elaborations³, we first expanded the lexical bases by adding additional entries through a system of semi-automatic comparison and at the same time decided to move to a new format – the Lexical Database – where we elaborated entries with all the relevant information. For each lexical entry we have: the grammatical category (both in Somali and in Italian), the inflection (plurals for nouns and the different paradigmatic forms for verbs), a semantic classification, the source, the Somali definition, the Italian translation and the English translation. The last two are not present for all the Somali words, while Italian equivalents are present for all entries deriving from the Somali-Italian Dictionary, but not for all the entries from other sources. Naturally the aim is to complete these at a future date.

Information relative to other aspects is also available, but will not be discussed here.

This is an example of a lexical entry:

GEEL

Lemma	1	geel
CtGrS	2	m. l. u.
CtGrI	3	n. m. coll. (con art. geela)
Fless	4	(-lal, mdh.)
CodFl	5	103+++36
CodSe	6	cum zoo
Var	7	
Fonte	8	DSI
Scol	9	N
TradI	10	Cammello.
Con.sin	11	Geelal g.:
EsprI	12	Più mandrie appartenenti a diverse persone.
Con.sin	13	Neef g. ah, tulud g. ah:
EsprI	14	Un cammello.
DefSo	15	Xoolaa la dhaqdo midka ugu weyn, lehna hal kurusama laba iyo cag ballaaran, harraadka u adkaysta, sidkiisuna yahay laba iyo toban bilood, oo looga faa'iideys; cad, caano, saan subag iyo gaadiidsi.
DefE	16	Camel.

This lexical database can be questioned for each individual entry or field.

It is therefore evident that the lexical data base is a flexible research instrument which will not only allow for our preliminary stage, i.e. the production of the monolingual dictionary, but also for future developments. These can be foreseen both in terms of the enlargement of the monolingual dictionary and in terms of a possible expansion of the Somali-Italian Dictionary.

4. The present state and future prospects

We are now completing the final revision of the QAS and the intention is to make it available for consultation on the Internet. Our objective is to encourage Somali speakers to participate in a forum with their observations, comments and so

on. Even if only a small part of the information we obtain is included in the first edition of the dictionary, it is worth obtaining people's reactions and, potentially, their suggestions to add to our database. Even when the first edition of the *Qaamuuska Af Soomaaliga* is published, we certainly will not consider that our work is complete.

In fact, we hope that our work can proceed towards expanding the QAS, drawing upon data which are to a certain extent already available since they can be derived from various existing sources. These are:

- Words and expressions that can be derived from cross-checking the Somali definitions in the Italian-Somali Dictionary with the entries in our lexical database;
- Additions from the scanning of literary texts (novels etc.);
- A corpus of oral language (90 hrs.) obtained from recording conversation among the elders of the Academy of Arts and Sciences in Moqdishu in which themes relative to traditional culture are discussed;
- Consulting internet sites in Somali which will certainly uncover neologisms as well as additional meanings for words already present in the database.

Evidently, the QAS will be the initial result of a lexical project that we hope will continue and be continued by Somali and Italian researchers.

In concluding this report, we would like to mention all the people who since 1985 have contributed in some way to this project. There have been many people involved, with different roles, at various periods and for various lengths of time; some of them are still alive in our memory, even after they have disappeared, or died, in the civil war.

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NOTES

¹ Other bilingual dictionaries had been published: Reinisch (1902), Da Palermo (1915), Abraham (1964), Stepancenko-Osman (1969), Panza (1974), Philibert (1976).

² A more detailed description of the method adopted in the *Dizionario Somalo Italiano* (1985) can be found in the Introduction to the dictionary itself.

³ In collaboration with the Istituto di Linguistica computazionale del CNR di Pisa, we produced several models that could be used for different research purposes: an inverse dictionary, lists of words ordered by digrams, trigrams, lists of words according to grammatical category etc.

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Marco Svolacchia

INSIGHTS INTO SOMALI PLACE NAMES

In memory of Giorgio R. Cardona

"The light that burns twice as bright,
burns half as long". Philip K. Dick

1. Introduction¹

The toponymy of Somalia is not a subject that appears to have captured the attention of scholars. Apart from some sporadic indications in maps or travel books of the colonial age (as in Robecchi-Bricchetti, 1899), the only works worthy of attention are an old and largely provisional paper by Cerulli (1931) and a brief paper by Tosco-Milanese (1996).

To be sure, both Italian and British cartographers did much work in the attempt to provide maps with consistent toponymy, in spite of the remarkable problems with language and transcription.

The introduction of a national writing in 1972, along with a better understanding of Somali phonology, gave cartographers an incomparably better means for the transcription of toponyms.²

The present paper is not meant to be an exhaustive study – whatever that might possibly mean for a subject such as this – or intended to be used for reference purposes. Nor is it meant to be an essay in classical toponymy, i.e. historically-reconstructively oriented. Rather, it aims to offer a general and, possibly, holistic overview of the phenomenon, its concerns being linguistic and anthropological. It will address questions such as: *What geographical items are named? How are they named? Why are they named? What role do toponyms play in traditional Somali life? What do Somali toponyms tell us about the people that make use of them and their relation to the Land?*³

We will first address some general characteristics of Somali toponymy, its *uniformity* – as far as language and geography are concerned – and some major *issues of interpretation* comprising the problems of different transcriptions, subsequent layers of reference and the somewhat fuzzy distinction between proper and common nouns.

1.1. *Uniformity and transparency*

We are going to deal here with the question of how far a general description of Somali toponymy can be achieved, i.e. to what extent it is constant in language and type, in spite of differences in space, time and geomorphic features.

Multilingualism

A remarkable aspect of Somali toponymy is its extensive uniformity. This is in line with the overall linguistic uniformity of Somalia, an unparalleled case in sub-Saharan Africa, where multilingualism is the rule.

A number of non Somali toponyms do occur, but they are generally confined to specific regions or domains. Bantu toponyms occur in the Juba region (*Kisimayu*, *Raas Kiamboni*), while some Arabic, religious names are found in the 'Land between the Rivers', the lowland surrounded by the rivers Shebelle and Juba (*Masaajid* 'Mosques', *Janna* 'Paradise'). Names relating to sea geography are also Arabic (*raas* 'Cape', *bender* 'Port'; *khoori* 'Lagoon'; *qubbad* 'Bay'; *jasiiro* 'Island'). There is a residue of toponyms, mostly relating to the oldest cities, which have a different origin: Oromo inland, and Semitic along the coast (an example of which is *Mogadishu*, which most probably has its origins in some Arabic dialect).

Dialects

Somali is a rather uniform dialect cluster, with the exception of the Lowland, whose dialects are grouped under the generic name of *maay*. Toponymy echoes this situation and the most

remarkable phonological and lexical differences in toponyms are found in that area. Nonetheless, except for some geomorphically related differences, there is no remarkable typological variation between northern and southern toponyms.

Diachrony

It is reasonable to assume that, *in principle*, toponyms have a degree of transparency which is inversely proportional to their age. An evident fact regarding Somali toponyms is that most of them are remarkably transparent, at least as far as their literal meaning is concerned. Therefore, it is plausible to suppose that most of them are fairly recent (in part, this may be a consequence of the rationale of this research: the database upon which the analysis is based is made up of names whose interpretation is reliable, i.e. potentially more recent).

Evidently, it is unrealistic to believe that the toponymy of Somalia has not undergone changes of any kind. Nonetheless, there are reasons to assume that the types of Somali toponyms (i.e. place names created by Somali speaking people) have changed very little, if at all. First of all, Somali toponyms are extremely uniform in type. Secondly, and most remarkably, even the areas that were only quite recently inhabited by Somali people (like Jubaland) have exactly the same kind of toponyms as the rest of Somalia.

As will be argued below, uniformity and transparency have crucial importance in determining the special function that toponymy has for Somali, the only population in Africa where nomadic pastoralists still constitute the majority.

These facts lead to a rather paradoxical consequence as far as traditional studies in toponymy are concerned: the possibility of studying Somali toponymy through a systemic-synchronic approach, rather than an atomistic-etymological approach.

Geographical variation

There is some degree of variation in place names that merely depends on geography. A typical case is that of horonyms: terms such as *cal* or *qarqar*, which refer to mountain ranges,

occur in the largely mountainous North, and not in the South, which is mostly plains with just a few isolated and low mountains. Similarly, the term *webi*, 'river', is only seen in the South, not due to linguistic differences, but to the sheer fact that rivers (i.e. permanent streams of water) only exist in that region.

1.2. Issues of interpretation

Besides the usual problems of interpretation, the state of the art of research into Somalia's toponymy gives rise to some particular problems that will be addressed in this chapter.

Transcriptions

A problem concerning both the identification and the interpretation of Somali place names is caused by discrepancies in transcription as a name can often appear in different variants. This is the result of a stratification of different cartographic traditions.

Apart from a few Arabic transcriptions, the oldest transcriptions of the bulk of Somali place names are Italian (often accompanied by an English transcription in Somaliland and Jubaland). A major problem with these transcriptions is that they are grossly inadequate in representing Somali phonology, leading to serious difficulties in the task of identifying names. Nonetheless, they retain an official status and are still widely used.

A second layer consists of the transcriptions in the national writing of Somali, which was introduced only in the Seventies. In spite of the fact that Somali writing is incomparably more adequate than Italian or English to transcribe Somali names, some variation still occurs. Some variants are purely graphic, ultimately due to some morphophonological processes in Somali (e.g., a diphthong such as 'aw' can be written either as 'ow' or 'oo'; postvocalic 'q' can be represented as 'kh'). Other variants arise from dialectal differences (for instance, some guttural consonants of Standard Somali are absent in Southern

Somali: e.g. Somali *ceel* 'pit' is *eel* in Maay). As a consequence, the likelihood that there may be up to three or even more variants for the same toponym, a problem which does not particularly seem to bother Somali people.

Time Layers

Another issue affecting the correct interpretation of toponyms is that their constituent parts do not necessarily belong to the same time layer. A good number of instances of this kind are provided by toponyms in which the name of a near place is embedded. The embedded place name can be accompanied by a modifier (e.g. *weyn/yar* 'big/small') – as in *Buhoodleh Yara*, which is related to *Buhoodleh*, a city in North-western Somalia – or be preceded by a category noun, as in *Webi Shabeelle*, which is obviously related to *Shabeelle*, an area around the upper course of the river Shebelle, where it is simply named, not surprisingly, as *Webiga* 'The River'.

It is quite clear that these toponyms are temporally subsequent to the place name they embed, i.e. they were conceived in relation to the latter. As a consequence, the translation must take into account the correct referential relationship of the name. As an example, *Buhoodleh Yara* should be interpreted as 'Little Buhoodleh', instead of 'Place with small oasis' (vs. *Buhood-leh* 'oasis-with'); *Webi Shabeelle* is 'River of (the) Shebelle (region)', and not *'River with leopards' (vs. *Shabeel-le* 'Leopards-with').

A different type of diachronic layering is shown by those toponyms in which a foreign name is embedded, a familiar situation for scholars of toponymy. A well known example is *Webi Ganaane* (another name for the river Giuba), which is formed by *webi* 'river' and *ganaane*, again 'river' in Galla Borana (and in some varieties of Sidama). The curious redundancy in this toponym is apparent. The name *Ganaane* was adopted by Somali people when they settled in a region formerly inhabited by Oromo people, for whom the name was transparent. On the contrary, the name was not transparent for Somali, who added the category noun *webi*. As a result, the

correct translation is 'River Ganane' (not *'River river'), while the original Oromo form was simply *Ganaane* 'The River'.

Proper or common noun?

It is worth considering a further point which has a bearing upon this discussion. In more familiar countries – due to long established traditions of registering place names and the fact that they are rarely transparent – toponyms are clearly distinguished from common nouns, so that problems of categorization very seldom arise. On the other hand, in countries such as Somalia – in which standardization of place names is more recent and less comprehensive, and most nouns are blatantly transparent – issues of ambiguity do arise.

A few Somali names only consist of a generic noun – such as *pond*, *mountain*, etc. – so that it is not clear whether they should be considered as proper nouns in the ordinary sense. It is possible that in some cases cartographers misinterpreted some descriptive expressions as proper names which were not considered really specific by natives.⁴

2. Which geographical items are named?

What follows is a list of the major geographical categories to which Somali place naming makes refers and which cover nearly all Somali toponyms. In many instances, these nouns are embedded in the name itself. The geographical super-categorisation is in part borrowed from the maps of Somalia and in part derives from general conventions applied to the particular Somali territory.⁵

2.1. Elevations

Elevations include mountain ranges, mountains, hills, dunes and parts of mountains. Some are confined to specific areas: mountain ranges are only found in the North; some types of hills are specific to the South; dunes are typically found along the coasts.

MOUNTAIN RANGES	<i>buuraha</i> ; <i>cal</i> (high and rocky); <i>qarqar</i> (low and rounded)
MOUNTAINS	<i>buur</i>
PEAKS	<i>duud</i> ; <i>dul</i>
SHOULDERS	<i>dhabar</i> ; <i>san</i>
HILLS	<i>garab</i> 'hill, ditch'; <i>dabo</i> , <i>doon</i> (in the land between the Rivers); <i>tuur</i> , <i>gumbur</i> , <i>qar</i> (in the North)
HIGHLANDS	<i>kuunyo</i> 'hill made of red, flood ground' (in the South)
SLOPES	<i>deg</i> 'slope, river bank'
DUNES	<i>bacad</i>

2.2. Depressions

'Depression' is a blanket term referring here to both round and elongated landforms below the surrounding area. Given the hydrological features of Somalia, in which almost all bodies of water are seasonal, no clear distinction between dry depressions and depressions with water can be drawn.

RIVERS	<i>webi</i> (only applied to the rivers Shebelle and Juba)
WADIS	<i>waad(i)</i> , <i>tog/tug</i> , <i>dix</i> 'small wadi'; <i>bohol</i> , <i>doox</i> 'river valley'; <i>far</i> , 'canal, affluent', <i>keli</i> (canal in the Shebelle area), <i>durdur</i> (in the North), <i>laag</i>
BASINS	<i>balli</i> , <i>weel</i> 'basin'; <i>billiq</i> , <i>faaf</i> 'swamp'; <i>caag</i> , <i>war</i> 'pond'; <i>gal/gel/kal</i> 'marsh'; <i>haro</i> 'small lake'; <i>saxaa(x)</i> 'rain water basin'; <i>uur</i> 'depression'; <i>dhesheeg</i> 'depression along a river'
HOLES	<i>god</i> ; <i>hog</i>

2.3. Subterranean water

'Subterranean water' includes both artificial watering holes, such as pits – both deep and superficial – and natural underground sources, such as wells and natural pits.

PITS	<i>ceel</i> ; <i>laas</i> (in dry riverbeds); <i>ran</i> (in sand or gravel soil); <i>qod-qod</i> (cluster of small <i>ran</i>); <i>biyo</i> ⁶
WELLS	<i>il</i> ; <i>buq</i> ; <i>biyo</i>

2.4. Human settlements

'Human settlements' refer to a variety of geographical items of human origin, such as permanent or temporary dwellings, fields, watering places, and burial sites. Dwellings and territo-

ries (for which see below) are the least restricted as far as category nouns are concerned. The reason is that almost every aspect of the land, or element on it, can be used to identify a place. Names of cities have a tendency to be less transparent because in most cases they are older in origin, sometimes even pre-Somali.

A particular case of dwelling is religious settlements. They are confined to the Land between the Rivers and generally relate to agriculture. The names are almost always Arabic and have a religious quality.

DWELLINGS	<i>buulo</i> ; <i>beled</i> (along the river Shebelle);
POSTS	<i>mooro</i> 'corral'; <i>xuddur</i> 'camp, fort'
BURIAL SITES	<i>xawaale/xabaale</i> ; <i>xawl</i> ; <i>qabri</i> (in Northern Jubaland); <i>xawaal tiirri</i> (ancient burial place, with stone cairns)
RELIGIOUS SETTLEMENTS	<i>masaajid</i> , <i>buulo</i> , <i>beled</i> , <i>bender</i> , <i>janna</i>
WATERING PLACES	<i>ceelo</i> , <i>malka</i>
FIELDS	<i>beer</i> ; <i>shambe</i> , <i>adable</i> (in the South)

2.5. Lands

'Lands' includes a number of natural geographical items of considerable extension, such as territories, forests, deserts, etc. and items relating to the sea. *Bender* 'port' can refer both to sea and river ports, although the latter is uncommon. Being a human-related item, it should be included in the 'human settlements' category, but it has the same more-Arabic-than-Somali character of the other names relating to the sea.

LAND ELEMENTS	<i>carro</i> 'territory'; <i>gelgel</i> 'pastureland'; <i>ban(-an)</i> 'clearing'; <i>cayn</i> 'forest' (in the North); <i>hawd</i> 'bushland'; <i>sol</i> 'dry land' (in Migiurtinia)
SEA ELEMENTS	<i>bender</i> 'port'; <i>khoori</i> 'lagoon'; <i>qubbad</i> 'bay'; <i>raas</i> 'cape, headland'; <i>jasiiro</i> 'island'

2.6. Routes

Reference to routes are found, although not frequently. These include mountain passes, paths, and fords.

PATHS	<i>jid</i> , <i>tob</i>
PASSES	<i>karin</i> 'mountain pass'
FORDS	<i>dabbaan</i> 'ford'

3. How are geographical items named?

This section deals with the form and the content in the naming of Somali geographical elements.

3.1. Form

The word structures which underlie the vast majority of Somali place names are as follows (MOD = Modifier; DET = Determinant; C = Clause; NP = Noun Phrase; AP = Adjectival Phrase; IMP = Impersonal; REL = Relative; CONJ = Conjunction; PRES = Present; HAB = Habitual):

1. [[NP] Mod] NP
2. [[[NP] Mod] NP Mod] NP
3. [[NP] [[Mod] Mod]] NP
4. NP = N (Det)
5. Mod = AP/NP/(C)

As the above patterns show, nouns with a Determiner occur, but are not very common.⁷

In what follows, the common types of Somali toponyms are given and exemplified. They are divided into *phrasal names*, which are by and large the most common ones, and *clausal names*, which are relatively rare.⁸

a. Phrasal Names

N(pl.)	<i>Buur-o</i> mountain-s 'Mountains'	<i>Berde</i> fig tree 'Fig tree'
N+Det	<i>Gumbur-tii</i> hill-the 'The hill'	<i>Jiif-ta</i> slope-the 'The slope'

N+AP	<i>Buur Cad</i> mountain white 'White mountain'	<i>Balli Weyn</i> pond big 'Big pond'
N+ [N-le] _{AP}	<i>Ceel Garab-le</i> pit ditch-with 'Pit with ditch'	<i>Buur Dawac-ley</i> mountain jackal-with 'Mountain with jackals'
N+NP	<i>Bohol Baar</i> stream dum_palm 'Stream of dum palm'	<i>Buq Berde</i> 'Well of fig _tree' 'Well of fig tree'
N+Det+AP	<i>Buur-ti Biyoo-le</i> mountain-the water-with 'The mountain with water'	
N+Det+NP	<i>Buq-da Aqab-ley</i> well-the acacia-with 'The well with acacias'	<i>Deg-tii Caliima</i> slope-the Alima 'Alima's slope'
N+[[NP]+AP]	<i>Ceel Biyo Mac</i> pit water sweet 'Pit of sweet water'	<i>Bacad Qorio Madoobe</i> dune wood black 'Black wood dune'
[[N+[NP]]+SA]	<i>Buur Barbar Cad</i> mountain spotted white 'White spotted mountain'	<i>Buur Dhagax Yaro</i> mountain stone small 'Small stone mountain'
N+[[NP]+NP]	<i>Bacad Ceel Xamar-a</i> dune pit tamarind_tree-s 'Dune of tamarind trees' pit'	<i>Buur Madax Maroodi</i> mountain head elephant 'Elephant head's mountain'
[[N+[AP]]+AP]	<i>Buur Biyo Caddo Yar</i> mountain water white small 'Small mountain of white water'	
N+(CONJ+)N	<i>Hal Iyo Nirig</i> She-camel and camel_foal 'She-camel and foal (mountain)'	<i>Xarar Jilico</i> carissa_harar cadabe_jili' 'Carissa (and) cadabe plants'

Note that toponyms with conjuncts are rare; those with an overt conjunction are exceptional.

a. Clausal Names

(N)+C	<i>God La Qoday</i> hole IMP dug 'Dug hole'	<i>Biyo M-aal</i> water not exists '(Land) without water'
	<i>Iska Duubo</i> itself-with folded (REL) 'Which is folded with (stone)'	<i>Geel Joog-aa</i> camel stay-PRES/HAB. '(Land) where there are camels'

3.2. Content

Let us now consider the content of Somali toponyms.

- The minimal type of a place name is one in which *only the place category* occurs – which is obviously rather uncommon given its weak power of identification. Less frequently, it may occur in the plural or be preceded by a quantifier, such as a number. The examples below illustrate this:
Buur 'Mountain'; *Bacado* 'Dunes'; *Lamma Durdur* 'Two streams'
- The item can be identified by referring to a *nearby place*:
Buur Caanoole 'Mountain of Anole'; *Buur Dhinsor* 'Mountain of Dhinsor'
- In most cases the identification is performed by referring to a remarkable feature of the item.
 - A very frequent specification is *colour*:
Buur Cad 'White mountain'; *Buur Madoob-a* 'Black mountain'; *Buur Cas* 'Red mountain'
 - Another parameter to which reference is extensively made is *dimension* (specific dimensions – such as height, size, depth, etc. – obviously depend on the particular element under consideration):
Buur Dheer/Gaabo/Weyn 'High/low/big mountain'; *Tog Dheer* 'Deep wadi'
 - A type of specification which is occasionally mentioned is some remarkable *geomorphic feature*:
Buur Jab/Madaxlaa 'Broken mountain'/Headless [i.e. without a peak] mountain'

- *Theriomorphic and anthropomorphic metaphors* are not very common but occasionally found, particularly for the names of mountains:

Gacan Libaax 'Lion's paw (mountain)', *Hal iyo nirig* 'She-camel and foal (mountain)'; *Naasa Hablood* 'Girl's breasts (mountain)', *Buur Shan Jilib* 'Mountain of five necks' [i.e. rounded tops]

- d) Another very common referential strategy consists of referring to some remarkable element which occurs in the place.
- In water-related toponyms, a feature which is very often made reference to is the *presence of water and its organoleptic quality*:
Wadi Cusbale 'Salted wadi'; *Malabley* 'Honey [i.e. sweet] (water)'; *Wadi Xangeye* 'Dry wadi'; *Wadi Mayrood Ooman* 'Thirsty [i.e. dry] wadi of *phoenix reclinata*'.

- Descriptive *metonyms*, although not common, are found:
Duusa Mareeb 'Which does not hold farts in' [referring to a pit with thermal water]

- A highly recurrent specification for each category of toponym is the *flora* found in, or in the vicinity of, the place. It can be trees (one remarkable tree, a group of trees or a wood) or some kind of shrub or grass. Of the trees, some species of *acacia*, *poinciana*, *dobera* and *fig tree* are particularly recurrent; among shrubs and herbs, *Pennisetum divisum* (a shrub eaten by camels) and *Mormodica dissecta* are frequent:

Buur Cadaad/Lebi/Garas/Berde 'Mountain of acacia 'adaad'/poinciana elata/dobera/fig tree'; *Buur Dhalan* 'Mountain of *Pennisetum*'; *Buur Dabayood* 'Mountain of *Mormodica*'

In a common variant, vegetation noun is accompanied by *leh/ley* 'that has (mas./fem.)':

Buur Qurac-ley/Lebi-ley 'Mountain with acacia ombrellifera/poinciana elata'

- References to *animals* are also extremely common, particularly those which pose a danger to men or cattle:

Buur Abeesaaley/Dawacley 'Mountain with poisonous

snakes/with jackals'

- Finally, there is reference to any *remarkable element* which is found in the place:

Buur Baqti Weyne/Duddum Caddo/Qoryo Guban 'Mountain of the big carcass/white ant-hill /burned wood'; *Wadi Laf Maroodi/Qorya-le* 'Wadi of elephant bones/with wood'

- e) *Person's names*, often associated with a nickname, are another fairly common specification:

Buur Cali Gaagaab/Nuur Guduud 'Mountain of Ali the Shortest/Nuur the Red' [i.e. light skinned]

Since the maps usually report a burial place in the area (often with the same name), it is highly plausible that these toponyms originated with the name of a notable man who was buried nearby.

- f) A small group of names is related to *ethnonyms*:

Buur Midgaan 'Mountain of Midgan' [a Northern group of Somali]

4. Why are geographical items named?

It might appear pointless, if not bizarre, to ask why elements of the landscape are named. In fact, when careful consideration is made, one has to conclude that, as far as cognition is concerned, there is more to the process of naming than meets the eye.

This seems to be particularly evident in Somalia, where most people have lived a nomadic or semi-nomadic life for centuries, lifestyles that impose an intense pervasive interaction with vast areas of the land and thus require a profound knowledge of it.

More specifically, evidence suggests that, apart from the most apparent function, i.e. to refer to a unique referent (in a given context), there are at least two other functions to naming, both of which have a predicative nature.

4.1. Identificational function

The transparency of the vast majority of Somali toponyms results in the fact that their association to the elements they refer to is perceived as motivated. Thus, a name such as *Buur Madaxlaa*, 'Headless mountain', is not just a word which arbitrarily refers to any geographical item whatsoever, but one which predicates some kind of quality about its referent. In most cases, as it has been shown, this quality is objective in that it can be verified.

This property has two consequences:

1. from the learner's point of view, this information will make the process of memorising a toponym more effective;
2. from the user's point of view, it implies that only by knowing a name will he have a number of fairly detailed expectations about a geographical item. These are useful in order to identify it and orientate oneself, particularly when conditions are not optimal (i.e. imperfect knowledge of an area, conditions of insufficient visibility, high incidence of elements of the same category in a territory, etc.).

4.2. Pragmatic function

We will refer to the other function which emerges from the place names of Somalia as 'pragmatic'. A good many Somali toponyms go beyond giving descriptive information about the item they refer to, also providing a sort of operative instructions, specifically about:

- *dangerous animals* that may be encountered (e.g. *Buur Abee-saaley* 'Mountain with vipers', *Maroodile* 'With elephants');
- *trees* providing rest for men and cattle, and *plants* for pasture (*Gel Yaaqley* 'Pond with baobab', *Canoole* 'Milky' [i.e. an area with grass which is suitable for dairy animals]);
- presence and quality of *water* (*Ceel Biyo Mac* 'Sweet water pit', *Biyo Maal* 'Without water');

- presence of *resources* (*Wadi Qoryooley* 'Wadi with wood', *Cusboley* 'With salt').⁹

5. Conclusions

The evidence strongly suggests that Somali toponyms have complex, multilayered meanings, presumably unparalleled in other more familiar traditions of toponymy. In addition to naming a specific item in the territory, they often add some information about it: the presence and quality of water, vegetation (with particular reference to pasture and cover) and (dangerous) animals found there, the presence of other resources (such as wood or stone), etc. It is therefore quite reasonable to assume that Somali herdsmen had (and in most cases still have) a relation with their toponyms which is markedly different from that to which we are generally accustomed.

Much more than in our society, Somali toponyms, at least for those who share the same culture that generated them, seem to represent a kind of cognitive map of the environment, one which informs them and reminds them of various notions which are crucial to their way of life.

The conclusions that can be drawn from data is that the toponyms of Somalia describe an inland people that make a living from semi nomadic stock raising with all the consequences and hardships that this entails: constant movement in search of grass for the herd and dependence both on watering holes, which are mostly seasonal, and on sites which offer shelter to men and herds.

On the other hand, other activities are, not surprisingly, represented marginally: agriculture related toponyms are confined to a restricted area (mainly along the two Rivers) and have a very special character. Sea toponyms are simply identification-al, having no reference to fishing in particular, and are of foreign origin. Finally, reference to hunting is not evident, but cannot be excluded.

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Given the transdisciplinary character of the subject under consideration, it would be arbitrary, if not impossible, to try and give contextual references to all the works consulted. I will limit myself here to refer to them in a topic ordered way, in alphabetical order. For maps and list of cities, see below under *Cartography* and *Websites*.

Botany: Glover (1947), Quattrocchi (2006), Robecchi-Bricchetti (1899).

Culture: Cerulli (1957-64), Lewis (1983).

Cushitic: Abdalla Omar Mansur (1988), Fleming (1964), Heine (1977), Heine (1978), Sasse (1979), Sasse (1980).

Dialectology: Antinucci and Puglielli (1984), Banti (1985), Lamberti (1986a), Lamberti (1986b), Moreno (1955), Reinisch (1904), Tosco (1989), Tosco (1993), Tosco (1997).

History: Cassanelli (1973), Lewis (1960).

Lexicon: Abraham (1964), Agostini et al. (1985), Crevatin et al. (1984), Maffi (1984), Reinisch (1902), Yaasiin Cusmaan Keenadiid (1976).

Morphology: Banti (1985), Bruno (1984), Puglielli (1984), Puglielli and Siyaad (1984), Serzisko (1992).

Phonology: Cardona (1981), Svolacchia (ms.).

NOTES

¹ Strange as it may seem for a small (although long overdue) contribution such as this, I am indebted to many. *First of all*, I owe more than I can say to the late Giorgio Raimondo Cardona, who encouraged me to pursue this subject and patiently gave me direction and support. I also want to thank Giorgio Banti, whose expertise in whatever is related to Somalia was of great assistance. *Last but not least*, I want to express my gratitude to Annarita Puglielli, without whose infinite and generous insistence, which even succeeded in conquering my profound reluctance, this paper would have never come to light, and my debts would have been left unsettled.

² Soviet cartographers were the first to make use of the national writing in maps (cf. *Soviet Military Topographic Maps*, 1978-82). Although the degree of detail is impressive, their toponymy is not entirely reliable because there is a tendency (1) to overstate long vowels, and (2) to obscure dialectal differences in favour of Standard Somali.

³ For two significant studies in this respect, see Boas (1934) for toponyms, and Cardona (1982) for anthroponyms and ethnonyms. Thornton (1997) discusses the idea that place names are an intersection between language, thought and the environment.

⁴ It is noteworthy that in some maps some of these names occur without an initial capital letter.

⁵ The problem of geographical categorisation is an old and tricky one. For some considerations on the subject, see Tomai and Kavouras (2002).

⁶ Biyo 'water' merely marks the presence of water, being a generic noun for a wa-tering hole, either artificial or created by natural underground sources.

⁷ For the sake of simplicity, 'NP' is conventionally used here instead of 'DP'.

⁸ Each toponym is accompanied by a gloss and a translation. The latter is meant to be as unambiguous as possible, not an idiomatic translation into the expected English format of toponyms. For example, *Buur Dawac-ley* ('mountain jackal-with') is translated unambiguously as 'Mountain with jackals', while if it were an English toponym it would probably be rendered as 'Jackal mountain', which would be ambiguous depending on whether one privileges an existential interpretation (i.e. 'where jackals are found') or a descriptive one (i.e. 'resembling a jackal'). In order to keep glosses as viable as possible, functional words are translated with their English equivalent rather than being a literal spelling of their morphological features (e.g. *leh* is translated as 'with', rather than 'have RESTRICTED PARADIGM MASC.').

⁹ A remarkable example of this function is found in the toponymy of the Kwakiutl Indians, particularly in relation to fishing sites. Research on this subject was conducted by Franz Boas and his paper (Boas, 1934) proved to be of practical value for fishing purposes for many years after its publication.

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SOMALI FLORA AND FAUNA: SOME ETHNOLINGUISTIC NOTES

1. The Somali ecosystem

Somalia is part of the eastern Abyssinian Plateau which gradually slopes down from an average altitude of 1,000 meters towards the Indian Ocean. The northern part of the country comprises mountains of up to 2,000 meters in height, dramatically falling toward the coast and the Gulf of Aden. A wide alluvial lowland is crossed by the two main rivers, the Shebeli and the Juba, where most of the agricultural land is concentrated. The rest of the country is semi-desert, an arid savanna where *Commiphora* *Acacia* is the uncontested queen of the landscape. Apart from the aloe, the most common species of the driest areas are *Euphorbia* and *Jatropha*. According to Somali culture, the year is divided into four main seasons according to climatic variation:

- jilaal:** the dry season (December to March)
- gu'**: the main rainy season (April to June)
- xagaa:** the dry season of monsonic winds blowing from the south-west (July to September)
- dayr:** the short rainy season

The division into four seasons is based both on climatic shifts and the needs of agriculture and herding. In agriculture there is a poor irrigation network, partially inherited from colonial times, and the irrigation of fields mainly depends on rains. All sowing, weeding and harvesting activities depend on climatic factors and so the sharp division in weather conditions is highly influential. The differentiation between seasons is also important for the purpose of watering animals and for transhumance in the dry season toward suitable grazing lands.

2. Human communities and knowledge of the natural environment

Somali society is subdivided into two main social groups integrated in different ways in the ecosystem.¹

The *sab* group is mainly concentrated between the two major rivers (the Shebeli and the Juba). The subsistence economy of *sab* people is based on agriculture and hunting. Cattle herding is traditionally practiced, though with less transhumance when compared to the past. Being a common name semantically, *sab* also includes all those who are considered by the Somali community as "outsiders", such as the *tumaal* (blacksmiths), the *midgaan* (wild animal hunters), the *yibir* (jugglers and tumblers) and the *meddo* (fishermen and boat builders).

In contrast, the *saamale* are cattle herders and deal only with goats, sheep and camels; they are politically organized into clans; these are almost totally independent from one another and organized according to a tribal system of a patrilineal and agnatic nature. Camel herding is a male duty, whereas sheep and goat herding is a matter for women. Working activities are neatly divided between the two sexes: men trade, and milk and take care of camels, while women take care of goats and sheep and also have responsibility for the family, food and the manufacture of objects. Knowledge and experiences are shared among individuals belonging to each of the two separate groups. Daily life is spent with those who belong to the same social group: young girls with mothers and old women on the one hand, young boys and men on the other. Because of this essentially separate lifestyle, gender differences are reflected in a different approach to nature and the environment: women have a deeper knowledge of edible and medicinal plants and are able to recognize all useful plants that can be used in the manufacture of tools and implements. Meanwhile, men have a good knowledge of the plants which are useful for feeding camels as they understand the ecosystem regarding camels and large size livestock in general.

3. *An ethnoscience of the natural world*

It had been noted that a detailed knowledge of the environment is highly important for the other large nomadic and semi-nomadic societies in East Africa (Kårehed and Odhult 1997, Heine et alii 1988). The social group is part of an ecosystem which regulates all human activities, social roles and welfare. In this sense traditional knowledge is similar to a common archive, grouping all collective experiences together and passing them on to future generations. Every single individual is part of an ongoing mechanism that can only work if everyone is fully involved in fulfilling his/her own duties for the community. It is a fine balance and in some cases it may give way, owing to abrupt changes in the ecosystem which have profound consequences for all human groups.

The linguistic classification of the natural world reflects this fine underlying balance. Features regarding shape and functional information are fused together in the names of plants, flowers, shrubs, trees and so on. The name of the plant provided by taxonomic scientific classification is usually just one name among others, a way of distinguishing something according to the scientific need to name things. This is a matter of scientific recognition and classification and generally concerns only the specialist. On the contrary, the names of plants according to an ethno-botanical classification bring together language sounds and cultural knowledge, which are widespread among the members of a community. The distinction between science and ethnoscience consists of scientific objectivity on the one hand and culturally meaningful knowledge on the other.

The lack of objectivity in ethnoscience has the misleading consequence of giving different plants the same name. One plant may therefore have several names depending on its vegetative life cycle. In fact, similar use of different plants might cause a community to name them in the same way, while using a single plant for different needs and according to its stage in its vegetative life cycle, might create a need to distinguish it by

different names. When this is the case, what we might see as an apparent contradiction is in fact a culturally relevant reason to interpret and distinguish nature in a different way.

Evidence of this particular aspect of ethnoscience is provided by our database, which contains more than 10,000 names for plants, 30% of which are used as a single entry for more than one plant. (cf. § 4.).

On a macro level, and according to Berlin, Breedlove and Raven (1973), it is possible to group entities into folk taxonomies based on rank. According to this theory, every folk classification is comparable to those which are currently used in biology as a science, grouping elements as taxa in one of the levels of a taxonomic classification. Somali ethnoscience does not seem to fit the theoretical framework of folk taxonomies, but as far as we know it is possible to distinguish hyperonyms under which all plant and animal names can be grouped. In a taxonomic representation of folk biology they would be called "unique beginners":

Plants or 'non breathing living creatures'

geed	any non-seasonal prototypical plant, whether shrub, tree or grass-like, which is useful to human beings and animals
caws	seasonal herbs and grass-like plants or small shrubs useless to human beings and animals

Breathing creatures

xayawaan	edible breathing sea creatures
kalluun	non-edible breathing sea creatures (shellfish, seafood, jellyfish)
haad	birds of prey
shimbir	non birds of prey (hens, ducks and so on)
bahal	untamed wild animals
duunyo	tamable wild animals
xoolo	useful tame animals (camels ² , goats, sheep)

Supernatural creatures, spiritually controlled beings

dad	human beings (unrelated to animals)
jinni	spiritual beings (in the Islamic tradition) some-

nafiley times transformed into human beings and animals
immaterial living creatures (unknown to western
science)

4. The Somali natural lexicon database in the framework of the 'Studi Somali' project

The first scientists who were interested in the flora and fauna of Somalia started collecting data at the end of the 19th century. In colonial times and the early years of the post-colonial era (up to 1957), 60 naturalists worked in Somaliland and 74 naturalists worked in Italian Somalia. The best herbaria, which house all specimens from Somali, are in London and Florence, the Mogadishu herbaria having been destroyed during the recent civil war. Emilio Chiovenda's work (1929-1932) deserves particular mention of all the Italian naturalists who worked in Somalia during the colonial era in the 1930s. The best recent collection of Somali botanic and zoological names is in Kazmi (1985), and this is one of the best sources for the *Studi Somali* database.

Our database is organized on ACCESS software and is based on 212 scientific sources which were published between 1890 and 1985. Every record contains the Somali term, the scientific name, and the scientific classification for all the plants which ultimately share the same name in Somali. The total amount of records in the database is subdivided as below:

Flora	12,243 records, grouping all Somali names for plants
Fauna	tame animals (86 records), reptiles and amphibians (250 records), mammals (252 records), invertebrates (105 records), birds (820 records).

It should be mentioned that the reason for the high number of birds' names is the correspondingly high number of bird species present in the Horn of Africa.

Work was intended to take place on expanding the database though intense field research into the relationship between ethnoscientific knowledge and the natural environment in the

Somali ecosystem. However, all projects have been temporarily canceled because of the serious political crisis that has gripped Somalia for the past fifteen years. A threatened ecosystem compromises the community and involves profound changes in lifestyle. The decline of any specific lifestyle has serious consequences for traditional knowledge and implies great changes in the relationship between language and culture. It is probably this condition that most Somali people have been facing in these recent years of suffering and deep sorrow, and which we sincerely hope will soon come to an end.

NOTES

¹ The best reference for the ecology of language and culture regarding the natural environment in Somalia is Berchem, 1994.

² Banti 1993 is a good reference for ethnoscientific classifications regarding camels in the Horn of Africa.

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SOMALI LANGUAGE AND ITS STANDARDIZATION AS A WRITTEN LANGUAGE: DESCRIPTION AND COMPUTER TOOLS

Abstract

In Africa, it is recognized that the use of Information and Communication Technology in its development and education is a viable way to reduce the gap between the continent and the rest of the world, especially the Western countries. The creation of localized content in African languages, and tools for the development of such content, might be the first step to bridge the so called digital divide. However, there are still a number of obstacles, some of them technical, relating for example to how to handle diverse scripts and extended characters for some African languages (see the UNICODE philosophy in UC [2007]). While the Somali language does not encounter these technical issues, because it is written in basic Latin alphabet (Jama Musse Jama [2006]), there are nevertheless still other problems to be faced in the creation of adequate Somali content. One of the main obstacles for Somali is the unavailability of computer tools that can help and promote the use of the Somali language in storing electronic content. This paper addresses recent developments in ongoing research activities on the Somali language dealing with tools for Information and Communication Technology.

1. Introduction

The central theme of the research activities presented here is to develop computer tools to help the Somali language to approach a standardized form as a written language, and to produce localized content stored as documents or data on computers, and then eventually distributed through the Internet.

This paper should not be considered as a research presentation on linguistic aspects of Somali, but instead it addresses the current state of the art of the linguistic tools developed by the author, which are available for free to both ordinary personal computer users and professionals working on corpus linguistic research. Among the focal issues of these activities, the paper describes how to build an accurate corpus for spell checking dictionaries, tools for syntactic and morphological parsing and utilities converting text to speech for the Somali language.

REDSEA-ONLINE.COM started its activities on the Somali language 10 years ago. As a first tangible contribution of its activities, free word processing software, which includes a spell checker with more than 180,000 Somali mostly used words (list of word roots plus corresponding derivations), has recently been released in a beta version under the name of *Ubbo* 1.0. This word processor is being used by Somalis, mostly those authors who write in the Somali language, to spell check their works before being published. In this paper we will briefly describe how its corpus has been built and how it is continuously updated.

2. 'Ubbo' - Somali Language Online Spell Checker and Word Processor

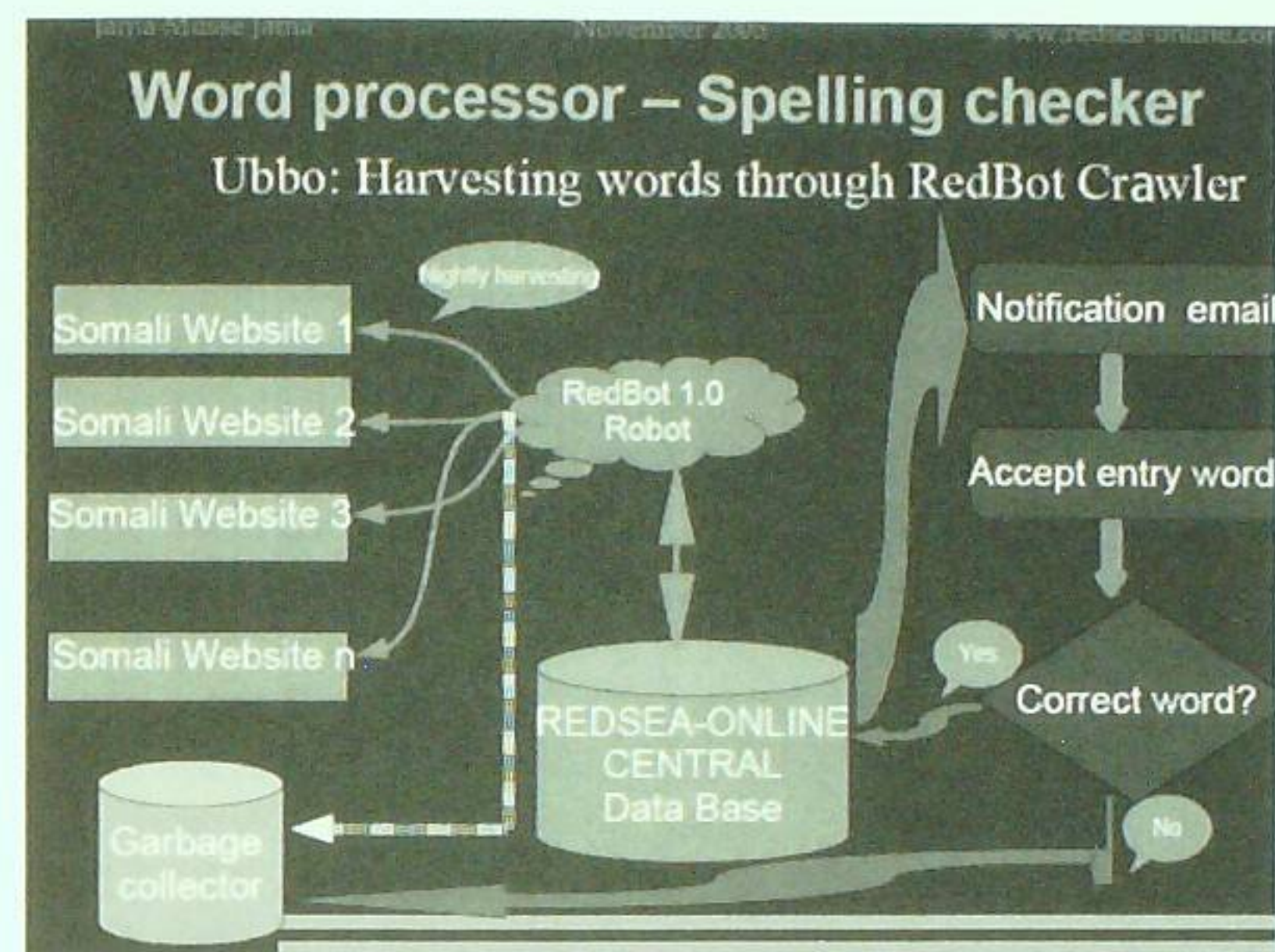
Ubbo is a freely downloadable word processor that runs on Microsoft Windows operating systems. It has a localized Somali language user interface, and is mostly used by Somali authors and website managers basically for the purpose of spell checking. It is also available as a free online tool that allows everyone to check spelling errors in the Somali language text without necessarily installing the *Ubbo* desktop application. This project was the first milestone for REDSEA-ONLINE.COM in contributing to the development of African languages in the era of Information and Communication Technology.

The project is a community initiative to develop a comprehensive Somali word list corpus. The created corpus will be

incorporated into several open source software packages to spell-check the Somali language. Therefore the main target of the project is to create an official Somali word list for universal and standard spell checkers.

As of today, the corpus main dictionary contains the 183,520 most used Somali words (around 42,000 lemmas and their derivations through a simple morphological parser), and it is growing on daily basis, thanks also to the visitors who are using these tools. In fact every new word not yet listed in the main dictionary will be collected from inserted text, and then a notification e-mail will be sent to a group of Somali language experts. The group members will examine the new words and decide whether or not to add these words to the main dictionary.

The dictionary is also growing through the *REDBot* crawler, which is a web crawler or web bot that retrieves text from web pages and follows up hyperlinks they contain. The *REDBot* crawler starts at midnight every night on randomly selected websites, harvesting new words recursively from other websites linked to the just visited pages. The Somali Language Spell Checker accepts all harvested text from the *REDBot* periodically and generates indexes of the all new words found therein. Whenever *REDBot* collects a new word for a predefined number of times (for example, a word which has been found 50 times from different web pages), it assumes that the word is Somali, and therefore it automatically sends a notification e-mail to the dictionary maintainers, who will approve or decline the correctness of the word. If the word is accepted, it will be added to the word list, otherwise it will be put in a "garbage" collection database. Words considered "incorrect" will therefore be put in the garbage collection database and will not be collected during future "word harvesting" through the crawler.



The above scheme shows how the *REDBot* crawler works to collect new words from the Internet.

When used as a desktop word processor, *Ubbo* permits users to add their words in their local dictionary. It also permits them to upload their collected words to the central main dictionary on the REDSEA-ONLINE.COM server. In this case all the suggested words will be notified to the dictionary management committee who will then decide whether to accept the new entries. Once approved, a notification e-mail is sent back to the contributor who can automatically update his/her version of *Ubbo* with his/her words.

3. Syntax and morphological mini parser for the 'Ubbo' corpus

The collected corpus mentioned above contains a tokenized word list which comprises only the base words. Nouns and verbs are written in their basic form. In order to maintain an acceptable size of the corpus, we defined a mini parser that uses simple resources with morphological information, a

derivative suffix and part of speech category definitions. These resources are defined in a rules file that *Ubbo* uses to expand its corpus.

For example, the following rule, defined in the rules file, allows the *Ubbo* spell checker to recognize more words than those that are statically included in its corpus dictionary.

Example 1 – *Definite article for Somali masculine nouns*

The rule defined in the rules file:

DIBRAAC: R 0 k? . dr:ka kii kee keer kaa kaygii keennii kiinnii koodii

The dictionary file contains the following three lines:

nin /R

cad /R

qalin /R

In this case, the *Ubbo* spelling checker recognizes dynamically the following words as corrected:

nin	cad	qalin
ninka	cadka	qalinka
ninkii	cadkii	qalinkii
ninke	cadkee	qalinkee
ninkeer	cadkeer	qalinkeer
ninkaa	cadkaa	qalinkaa
ninkaygii	cadkaygii	qalinkaygii
ninkeennii	cadkeennii	qalinkeennii
ninkiinnii	cadkiinnii	qalinkiinnii
ninkoodii	cadkoodii	qalinkoodii

Example 2 – *Inflection of verbs ending with the vowel i*

The rule defined in the rules file:

DIBRAAC: S 0 i . dr:yi yey nnay day deen yeen yayey nayney yaysey yeyseen yeyney yayaa nnaa daa yaysaa yaan doonaa doontaa doonnaa

The dictionary file contains the following one line:
sahwi /S

In this case, the *Ubbo* spelling checker recognizes dynamically the following words as corrected:

sahwiyi sahwiyei sahwinay sahwiday sahwideen sahwiyeen sahwiyeey sahwinayney sahwiyeeysey sahwiyeeyseen sahwiyeeyney sahwiyeeyaa sahwinnaa sahwidaa sahwiyeeysa sahwiyaan sahwiyeedoona sahwiyeedoontaa sahwiyeedoonnaa

A set of similar rules define different ways to recognize words derived from the base words regarding the vocative case, gender, number, pronoun and indicative mood and inflection of verbs. These are not exhaustive rules but they seem to cover a good percentage of the most used forms in Somali. They are taken from Andrzejewski [1964, 1979], Yaasiin Cusmaan Keenadiid [1976], Banti [1988], Saeed [1993], Abdalla Omar Mansur and Puglielli [1999], Rabi [2004] and Carab [2004].

4. *Word suggestions for misspelled entries*

The main technique for the *Ubbo* spell checker to list suggestion candidates is given by their ‘closeness’ to the misspelled word. This is established through a standard character swap and deletion method to calculate the “distance” of the candidates from the original word. However *Ubbo* also considers specific peculiarities of the Somali language. For example, the replacement of one or more characters by other characters. The following rule in the rules file defines a suggestion based to the replacement of R by Dh and vice versa.

BEDDEL: r 2 - dh

In this case if the misspelled word of the text is “ariighii”, the following list of suggestions will be given:

arigii
adhigii
farriimihii
arrimahaagii

Other examples of Somali peculiarities are the double consonants and the long vs short vowels. *Ubbo* tries to suggest first when there are missing double consonants on the following BDGMNLR consonants as defined in the standard Somali grammar rules (Yaasiin Cusmaan Keenadiid [1976]), or if there is a wrongly doubled consonant. The same happens in the long vs short vowels.

5. Text to speech utilities for the Somali language

"*Waa kuma?*" (*who is it?*) is a software application of which the main purpose was to assist a Somali speaking person with reduced vision problems, to recognize the incoming calls from the home telephone. The software is able to read the calling number from the phone device and then to produce Somali speech using a synthesis method from an open source TTS (text-to-speech) engine. If the calling number is already registered in its address book, "*Waa kuma?*" announces the name of the caller, otherwise it just announces the telephone number in Somali language.

Starting from this tiny application, REDSEA-ONLINE.COM has developed a new TTS system that converts normal Somali language text into speech. The main idea remains to allow people with visual impairments or reading disabilities to listen to works on a home computer. However, there are other applications that can employ these tools (see the paragraph "further developments").

6. Somali poetry parser

Somali poetry is accomplished by a combination of scansion pattern rules and the sound alliteration rules, and although orally composed, a structural analysis similar to Western poetics can be applied to Somali verses. In fact, Somali verse is marked by alliteration and the use of metrical system. This system of metre has recently been documented in Cabdillaahi

Diiriye Guuleed [2003] and Faarax [2007] relying on the research initiated in 1976 by Maxamed Xaashi Dhamac "Gaarriye" (Maxamed Xaashi Dhamac [1976]) and Cabdillaahi Diiriye Guuleed "Carraale" (Cabdillaahi Diiriye Guuleed [1978, 2003]). It is not the purpose of this paper to present the metrical system of Somali poetry. For further details in English, see also Johnson [1979].

The idea of computer assisted poetry is not new to literature. For example, for French poetry, Nell [2003] has developed a method using the computer to detect rhythmic patterns in the traditional isometrical alexandrines. A similar project for Somali was announced recently in Faarax and Liibaan [to appear]. For English literature, the use of the computer started with the early use of computers. In fact, in 1951 a team of scientists tested the capabilities of the world's computer, Mark One "Baby", which was used to experiment in composing love poetry².

Based on these recent publications on the metrical system of Somali poetry, REDSEA-ONLINE.COM has developed a parser to recognize the correctness of the metrical structure and to identify the genre of a given Somali poem. The idea is to check not only the metrical system for Somali poetry, but also to develop a new module for a Robot being able to compose a Somali poem.

7. Further developments

Can a computer compose a Somali poem?

The challenging response to this question might be affirmative if we consider how the above mentioned tools can interact. In fact, the scheme of a robot being constructed by REDSEA-ONLINE.COM, and expected to be released by the end of the year 2009, is based on the following components:

- a comprehensive and accurate Somali corpus (list of base word lemmas) which includes also synonym and antonym definitions;

- a syntactical and morphological parser for the Somali language;
- base knowledge data: a rich database containing a collection of both prose and poetry texts. This includes a wide variety of Somali literature texts;
- grammar checking for Somali (a new module to be developed);
- a parser module for Somali poetry;
- text to speech converter (improvements on the *Waa kuma?* application).

Each module listed above is responsible for a specific part of the work. The following is a rough and simplified scheme of the algorithm to compose a poem:

1. The user provides the Robot with a letter and a subject. For example the letter 'g' and the word for the concept "Gobannimo". Gobannimo is a very complex word and has a broad meaning including freedom and liberty, but also implying a dignified, coherent, independent, giving, tolerant, and respectful approach. In this case all these concepts will be found in the antonym and synonym definitions of the word.
2. The Robot makes an index to obtain, from the lemmas of base words, different words starting with 'g' in the different types of speech (noun, verb, adverb, etc.) It also looks for other words that are synonyms and antonyms of the selected words (here we need to define a synonym correspondence of the lemmas word list).
3. For each word selected in step 2, the Robot performs a new search from the database of prose and poetry, to find sentences that include the word.
4. Each word in the identified sentences will be analysed by the morphological parser module, to find the root of the word, and such root words will be grouped according to their type of speech.
5. Using the grammar checker module on the grouped words, the robot composes new sentences.

6. Using the poetry parser, the robot composes metrically correct verses.
7. Finally, using the text to speech convertor, the robot recites a Somali poem which will certainly be semantically correct, but of which some of the verses may not make sense at all.
8. The recited text will be also printed as output. In the case of nonsense sentences, the user may make the necessary fixes, having at their disposal a list of words that can be used to substitute for the randomly generated words.

The ability of the Robot to produce acceptable results relies much on the knowledge database containing the prose and the poetry text, and the definition and accurateness of the base word list.

8. Conclusions

Linguistic software tools for the Somali language are much needed and, if they are available for free, their impact will be more profitable for the language itself to come to a standard written form. One of the missing modules, which is urgently needed, is the formalization of a morphological grammar. It is understandable that a Somali grammar checker will be difficult to be realized in the near future, because there is a need for more linguistic research on the Somali grammar itself before realizing a software that implements its rules.

The above listed activities are part of a first stage of assistance to those who have access to ICT and who need to write in Somali in their daily activities (spell checker and grammar checker). Of course they cannot cover the demands of a user who expects all the IT tools which are available for other languages. The fact that, as of today, there is no focal point or centre of research for the Somali language, which takes responsibility for coordinating all these kind of activities, makes the challenge yet more difficult. It is time to think seriously of establishing such a centre where experts may be employed in a wide variety of fields, including linguistics and information technology.

NOTES

¹ Internet bots, also known as web robots, WWW robots or simply bots, are software applications that run automated tasks over the Internet. Typically, bots perform tasks that are both simple and structurally repetitive, at a much higher rate than would be possible for a human alone [en.wikipedia.org/wiki/Internet_bot accessed 23/3/2009].

² The Small-Scale Experimental Machine, known as SSEM, or the "Baby", was designed and built at The University of Manchester, and made its first successful run of a program on June 21st 1948. See for the story of "Baby" on [www.computer50.org accessed 23/03/2009].

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Yaasiin Cusmaan Keenadiid (1976), *Qaamuuska Af Soomaaliga*, Muqdisho/Firenze: Madbacadda Qaranka.

WEBSITES

<http://redsea-online.com/ubbo>

<http://redsea-online.com/soomaali>

SOMALI LANGUAGE AND THE MEDIA

With the development of the Internet, Somali has become a language with a vast number of websites, and it is certainly the language with the largest number of sites in the Horn of Africa and in East Africa in general.

One of the reasons for this development is the Somali diaspora, a consequence of the civil war which started in 1990. Somalis, who dispersed throughout the world and across the five continents, use the Internet and access the various sites. These sites are not only used for news regarding internal events, i.e. to provide information about what is happening all over the country in real time, but also for international news, i.e. events taking place in other parts of the world. In other words they serve the function of newspapers.

The various sites are named after some of the regions of Somalia – such as Hiraan, Mudug etc. – or the name of a town – such as Baidoa, Hargaysa, Merca, Jamaame, Janaale, Diinsoor – or even the name of a district of the capital city, such as Dayniile, Boondheere etc. Among these different names are also the names of towns that are in Ethiopia and Kenya but where the majority of the inhabitants are from Somalia. Therefore Somali is now spoken, more than ever before, in the bordering countries of Kenya, Ethiopia and Jibuuti.

Research was undertaken following a strict alphabetical order. It eventually uncovered sites with names which started with every letter of the alphabet, although we have limited our consultation here to those beginning with the first eleven letters. If Islamic sites, commercial sites and those dedicated to sport and other specific fields are added to these, we have a total of 300 websites.

There are very few sites that publicise the name of the clan they belong to (though some examples are Ogadeen, Muddulood, Midgaan, Madhibaan and Gabooye). Generally, however, it is not difficult to detect the clan allegiance of a website, as this can easily be deduced by the names present on the site itself.

In the main menu of the various sites we often find not only the daily news, but also literary events relating to poems, tales and novels. General sites, named after the towns in the centre or the north of the country (that we can presume are run by the people of those places), often present new poems written by young literary talents. Those where literary topics are particularly well covered are Aftahan, Doollo, Golkhaatumo, Gabooye and Dulmane.

As an example, let us consider the site named **Doollo** where we can find:

- A great amount of material that would correspond to more than 200 pages if transcribed. In this site there are 30 poems written by Sayid Max'd Cabduule Xasan who is unanimously considered the greatest poet in the Somali tradition. These poems can be used for a comparative study with the two collections of the poet's poems published by two Somali publishers.
- An article on the different options that were taken into consideration for the writing of Somali before the decision was made to adopt Latin characters.
- A rich collection of other poems and proverbs.
- Several poetic chains such as *Deelleey*, *Guba*, *Rayad*, *Haameey*, etc.
- An article on the role of broadcasting in the development of the Somali Language.
- Plants and birds in Somalia.

The literacy campaign of 1973-74.

In the site named **Golkhaatumo** we find a large collection of materials:

- Women's names in Somali.
- A collection of written and recited poems (that can also be heard).
- A collection of poems from the *Guba* chain.
- A collection of proverbs.
- Articles on Somali history; for example on the Darwiish and the Somalis who opposed them, with a discussion on which of the two groups was in error.
- A poem *Aniga iyo Qabiil* (2003) in which the poet and the clans debate; each asserts that the other is responsible for the Somali crisis and the tragedy which has beset the population since 1991. In fact when the poet uses the term '*aniga*', he refers to any Somali who practices tribalism and thinks his clan is superior to all others, either in terms of power or prestige. In this poem tribalism is considered to be a major cause in the demise of the Republic and of the lack of unity between Somalis.

If we visit sites like **Waagacusub**, **Jilibweyn** and **Aayatiin** we notice that we also find news and chronicles of events that have caused consternation in the population:

- A boy who prevents his mother from getting married again (Mogadishu chronicle).
- The weakening of the paternal role in the Somali diaspora.
- A 124-year-old Saudi-Arabian man who went on his 95th pilgrimage to Mecca this year (and other similar articles).

If we visit the **Aftahan** (*Eloquence*) site we find that it is particularly rich in poems, short stories, proverbs and children's tales. Titles in the latter category include:

- The cat and the rat
- Cigaal and the enemy
- Omar and a hyena
- A silly man and a thief
- The hyena and the jackal

In the **Goobjoog** and **Jilibweyn** sites we find two rather strange articles, with political connotations. The first article, entitled 'The meeting of the animals from Somalia', is about a meeting held at Buurta Fiiqdeher. The participants are delegates of all the species, vertebrates and invertebrates. After long and tiring discussion, a final agreement is reached. The text is fairly long and it clearly refers to the various, unproductive conferences held by Somalis who have not succeeded in reaching a reasonable agreement for a civil solution to the present situation.

The second article – in **Jilibweyn** – is entitled 'The brain and the body'. This relates how the different organs of the body do not want to depend on the brain any longer, but when the brain stops governing them they are unable to carry out their proper functions. The metaphor implies that for the country to survive, the various clans cannot do without a central government.

There is a group of sites that are clearly run by people who are traditionally considered low-caste: **Midgaan.com**, **Madhibaan.com**, **Gaboyee.com**, **Tumaal.com**, **Dulmane.com** and **Somalisix.com**. The subdivision of people into castes was part of Somali tradition and in fact there were various word pairs of contrasting items to distinguish people considered noble from those considered low-caste. Here are some examples:

- *Jileec* and *Jareer* (soft haired vs hard haired).
- *Bilis* and *Bidood* (noble vs slave).
- *Tumaallo* and *Talaammiin* (member of a group of craftsmen vs a non-member of it).

Nowadays, however, there is non longer any reason for these distinctions to exist; there is no longer any difference between different groups of Somalis.

All these sites, and in particular **Dulmane** (the oppressed one) and **Midgaan**, have articles in which the injustice borne by these groups in the past is criticised. The author of an article entitled 'Quursigu ma qiil buu leeyahay?' ('Does discrimi-

nation have any justification or legal basis?') asks himself if the discrimination carried out against them in the past had any kind of justification or if it had any kind of legal basis.

Among the various sites we discovered at least thirty Islamic sites containing much religious material, the translation of the holy book, The Quran, the life of the prophet, translations of various books etc. We also found sites relative to specific professions in addition to commercial sites (see Appendix for list).

As for poems written in recent years, their themes not only concern the Somali situation (the war, the lack of a central government), but poets are also inspired by other events. For example, one poem is in defence of Mohammed on the occasion of when a Danish cartoonist drew a picture of the prophet with a bomb in his turban, while in the poem 'The world disorder' the writer lists the arrogant behaviour of the one remaining world power (the USA), displaying a certain nostalgia for the time when URSS also had some authority.

As a conclusion to our description of Somali websites on the Internet, it is natural to ask oneself why there are so many. Why can't the various Somali communities in North America or in Europe get together and create a smaller number of sites each run by more than one group? Indeed, what would sociologists say about this situation? What they would certainly say is that Somalis lack one of the basic concepts of democracy, i.e. the concept of *representativeness*.

From a linguistic point of view we might consider this phenomenon in a rather positive light; in fact everyday the abundant use of the Internet produces much language material which is very useful for the study of the language. This is particularly true if one considers that Somali has only been officially transcribed since 1972 and so in a relatively short time the language has been exposed to 'changes' that other languages have been absorbing for centuries. This will necessarily have certain consequences.

Limited space has determined our need to make choices regarding the sites to take into consideration. Our choice has

not been determined by political or ethnic preferences; as linguists we consider all the sites as an important sources for our studies and research into the Somali language. It is our belief that Somalis, even now that they appear to be so distant from one another, are, given their cultural and linguistic homogeneity, just one people.

APPENDIX

Radio stations broadcasting in Somali

BBC (Somali Section). - VOA (Somali Section)

1. Radio HornAfrik. (Mogadiscio, Merca, B.Weyn, Dusamareeb, Baidoa, Kisimayo) 2. Radio Mogadiscio (Voice of people). 3. Capital voice (Mogadiscio). 4. Shabelle Radio (Mogadiscio). 5. Simba Radio. (Mogadiscio). 6. Soomaali weyn Radio. (Mog.). 7. Banaadir Radio. (Mogadiscio). 8. Radio Voice of peace. (Mogadiscio). 9. Radio Qur'anka Karim. (Mogadiscio). 10. Radio Hargaysa. 11. Radio Gaalkacyo. (Puntland). 12. Radio Codka Nabadda. (Puntland). 13. SBC: Radio. (Puntland). 14. Xurmo Radio. (Puntland) 15. Danjir Radio (Puntland). 16. Radio Garowe. (Puntland). 17. Radio Laascaanood. 18. Radio Maandeeq. 19. Radio Warsan (Baidoa). 20. Radio Kisimaayo. 21. Radio Gedo. 22. Radio Hormuud. 23. Radio Ogaal. 24. Sagal Radio. 25. Radio Xoriya. 26. Radio Daljir. 27. Radio Jigjiga (Somali Galbeed, Ethiopia). 28. Radio Midnimo 29. Radio Dalmar. 30. Radio Sanaag. 31. Radio Buuhoodle. 32. Sahan Radio. 33. Radio Dawan Press. 34. Somaliland Radio. 35. Radio Horyaal. 36. Radio Fana (S. Galbeed, Ethiopia). 37. Radio Waaheen. 38. Radio Waaberi. 39. Radio Widhwidh. 40. Radio Free Somalia 41. Radio Golis. 42. Radio Nugaal. 43. Somali Radio (Canada) 44. SBC. Radio (Austr) 45. Somali Swiss Radio. (Switzerland). 46. Somali Radio (USA). 47. S.Radio (Sweden) 48. Radio Copenhagen (Denmark). 49. Radio Minnesota (USA).

Internet Sites in Somali

A

1. Alldalka.com. 2. Awdaltribune.com. 3. Albakriyool.com. 4. AmiinArts.com. 5. Allwaddani.com. 6. Alldarwiish.com. 7. Allgedo.com. 8. Allsanag.com. 9. Allsomal.com. 10. Alfaghi studio.com. 11. Allbanaadir.com. 12. Allpuntland.com. 13. Allnugaal.com. 14. AllMudug.com. AllWamo.com. 15. Alljubbaland.com. 16. AllCeeldheed.com. 17. Awdalnews.com. 18. Aftahan.com. 19. Aayaha.com. 20. Ababshe.com. 22. Amsas.com. 23.

Agabso.com. 24. Afdheer.com. 25. Aayatiin.com. 26. Arlaadi.online. 27. Aflax.com. 28. Afgoy.com. 29. Abudwaq.com. 30. Allwariye.com. 31. Arlaadi.net. 32. Axadle.com. 33. Abaaqarow.com. 34. Afrikada Bari.com. 35. Allsomaliforum.com. 36. A.n.c.i.s.(Assoc. naz. comunità Italosomala). 37. Ainanshe.net.

B

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Milena Bandiera

THE CROSS-CULTURAL DIMENSION OF SCIENCE EDUCATION

Abstract

Within the framework of an Italian Ministry of Foreign Affairs cooperation project lasting from 1984 to 1991 the National University of Somalia required students to attend a special preparatory term before enrolling in a scientific faculty. The curriculum comprised various tests designed to explore students' level of disciplinary knowledge and their learning profiles. The data collected revealed relevant issues concerning lexical-based conceptual distortions, study habits, problem-solving procedures, graphic perception and, in general, world views and natural event management. Such data supported a constructivist approach to teaching/learning and, at the same time, suggested the adoption of an intercultural attitude also when it is taken for granted that teacher and students belong to the same culture.

1. The Italian context

In the early 1980s the Italian school system was seriously lacking in homogeneity. The University, although still reeling under the effects of the 1968 student protests, had undergone an initial reform in 1980¹ and another was to be enacted in 1990², whose innovative intention – which nevertheless lacked any significant results – concerned teaching and assessment methodologies. The syllabus of the upper secondary school system, over-burdened by experimentation, was, and still is, subject to laws and regulations dating back to the beginning of the century and which are teacher-centred³. The recently approved lower secondary school syllabus showed the decided influence of behaviourist theories that emphasised didactic

planning based on articulation of disciplinary content, but already prescribed students' engagement in a direct and manipulative relationship with naturalistic objects and events⁴.

Constructivism appeared on the scene in 1985, when the primary school syllabus was issued⁵, and would later provide the unifying and organic foundation for pre-primary education. Thus it was precisely in the 1980s that student-centred teaching methodologies⁶ began to be considered in Italy but, in spite of their ideological appeal, met with difficulty in the face of some of the incompatible priorities that most teachers shared. The need, for instance, to ignore or suppress student conceptions that differed from those of the syllabus or textbook as being "wrong"; or the characterisation of teacher engagement as the duty to "convey" her/his knowledge essentially through the preparation of exhaustive and precise lectures.

As far as research is concerned – and specifically science research – the cognitivist cognitive theories (on which constructivism bases its dynamic conception of learning) initially triggered interest mainly in mental representations and the nature of discrepancies between such representations and disciplinary knowledge.

My personal experience in the field of genetics (Bandiera, 1990 e 1991) allowed me to identify and define a series of widely-shared "incorrect" attitudes and "wrong" ideas ranging from the conviction that, as a result of her intense wishes, a mother can affect her unborn child's features, to the possibility of the immediate emergence – even in people – of inheritable features in response to a changed or stressful environment. This convinced me that it would be necessary to unmask these misconceptions in order to address them while planning out a lesson in the disciplinary subject concerned. At the same time, the frequency and substantial similarity of the "folk" explanations used in various Western countries (since they are the stuff of the common person and adopted by most people) made me realise that I myself had heard and expressed these conceptions in my own lifetime, sometimes for years. Some I had rejected,

and some not (or not completely). From the point of view of my acquired skill as a scientist such conceptions did not appear particularly threatening. Rather they seemed (and still seem) to be markers of cultural contiguity and continuity with the social group of which I felt a member that ensured the possibility of communicating with the other members of that group. They were clearly surmountable without any special or specific engagement by teachers and students: in any case something quite different to the scientific conceptions needed to communicate within the community of geneticists.

I owe a lot to my experience with the Somali culture, gained at that special and crucial moment of my transition from genetic to didactic research. It gave me a perception of the importance of the cultural "weave" that – in Western countries also – effectively helps in coping with natural phenomena (and which scientists and science teachers are inclined to set aside, being satisfied with the reliability of scientific experimentation and thought); it also helped to confirm the heuristic effectiveness of constructivist-based research, and, in particular, the need for a didactic methodology to be implemented in order to get a perspective on teacher-student "differences" capable of undermining the educational process.

2. A cooperation plan

When the National University of Somalia (UNS) was founded the Somali government decreed the introduction of Western cultural models (Western scientific topics, a Western conception of the university, Western-style university degrees), and chose Italian as the academic language (teaching and didactic materials were in Italian). Thanks to an initiative set up by the Italian Ministry of Foreign Affairs (Development Cooperation), university students were provided with a special preparatory linguistic-cultural semester that was obligatory before enrolling in a Science Faculty and after having attended an

intensive beginner Italian language course. The curriculum of this semester included Italian for scientific purposes and some courses in basic biology, physics and mathematics (for some students also chemistry and technical drawing). Within the scope of this project, scientific courses were also to offer a basic introduction to scientific logic and methodology and develop the mastering of fundamental scientific concepts. Linguistic propaedeutic activity was also aimed at improving communication skills and developing "scientific" habits.

A team (of which I was a member and also coordinator) was given the task of designing the curriculum. It consisted of linguist experts and experts in disciplinary didactics. First of all we became aware that we had no information about the Somali school system (i.e. curricula, textbooks, didactic methods, learning habits, etc.) and that two solid presuppositions had to be considered: 1) that the Italian language would be considered as the matrix of scientific thought from the point of view of content and structure (this was the reason the language program was tasked with developing a scientific mentality), and 2) that the cultural (and, consequently, behavioural) models conveyed by the Italian teachers were different from the ones conveyed by the Somali students. This meant that an analysis needed to be made of both models in terms of their didactic implications. It therefore seemed to be necessary to define those learning abilities that Italian university teachers considered indispensable, as well as the basic scientific knowledge and specific characteristics of didactic communication as practiced in Italy. Such an identification could only be achieved along the educational path itself and, therefore, a non-traditional main approach was needed that, at the same time, ensured the successful attainment of predetermined goals and, in the meantime, gave the necessary indications for an optimal implementation of the educational plan.

At a methodological level the essential choices were made through the precise application of constructivist principles (promoting meaningful learning, encouraging students to con-

front all new information on the basis of previously acquired knowledge, supporting students' formation of an elementary conceptual network that allowed for the non-arbitrary assimilation of new concepts).

It was also necessary to combine research (the acquisition and analysis of data, definition of project-related hypotheses) with the need to provide teaching materials for the regular activity at the university, supporting logistic organization and teacher training. It seemed reasonable to approach this goal gradually.

For this purpose the sections of the textbook we designed for the linguistic-cultural semester (Bandiera et al., 1989) contained items widely used both in Western school practices and to investigate people's mental representations and conceptions. In the Somali context such items performed an exploratory function. These tests were called *curricular tests* because they were integrated into the units of the textbook. Moreover, two different multipurpose questionnaires were administered both at the beginning and at the end of the courses with the additional aim of evaluating the efficiency of didactic materials and, thus, providing for their gradual adaptation to the specific needs of Somali students. Thus Somali students were tested on their knowledge (in biology, mathematics, and physics), skill (classification, logical reasoning, time orientation, graphic spatial perception and use, geometric formalisation, dimensional comparison) and ability (to classify, to represent, to explain).

From 1984 to 1991 between 400 and 800 students were admitted every year to the Faculties concerned (Agriculture, Chemistry, Geology, Engineering, Medicine and Veterinary Science) and over the years the use of the textbook by the Italian teachers working at UNS, and analysis of the data collected within their curricular activities, revealed the extraordinary differences, obviously deeply rooted in lifestyles, traditional values and language structures, that showed up with the introduction of an official writing system (Somali history, literature, and traditions had always been handed down orally)

and which, despite students' enthusiasm for absorbing Western cultural models, made the use of disciplinary teaching methods immediately imported from Italy senseless (as well as, more than likely, ineffective).

It was only after subsequent research that I was able to confirm the terms of analysis that had been developed at UNS, and their didactic implications, in light of a rich, albeit dated, bibliography on science teaching in intercultural contexts (from Champagne and Saltman, 1964, to Wilson, 1981). Later I would be consoled by W.W. Cobern (1996) who gave authoritative evidence that a constructivist approach to scientific learning can have a positive effect on educational research and the design of science syllabuses for non-Western nations and peoples.

I propose to show particularly meaningful data (the subject of previous treatments in Tedeschini Lalli and Bandiera, 1988; Bandiera and Serra Borneto, 1994; Bandiera, 1995, Bandiera, 2008), on some aspects of Somali student learning profiles that demand attention on account of their macroscopic divergences from the overall intra-cultural context. I will go on to outline their possible influence the teaching/learning conceptions and on educational practices within the national context (which, in the light of the same data, seems also to be intercultural).

3. Words and communication

It is common knowledge that the quality and quantity of the words available in a language to indicate an object, in one way reflect the speaker's world view and existential peculiarities, and in another way represent more or less refined tools for reading and interpreting reality. Eskimos have many words to indicate snow, and *as a result* can create a very complex and articulate categorisation that is inaccessible and incomprehensible to European people who have only one word at their disposal (Whorf, 1940). The Somali language is no exception: there are over 40 possible words to choose from in translating

the word "camel" (the animal is really a dromedary), that animal on which the entire Somali pastoral system pivots. In the Russian language there are two words for the colour "blue", while the English language has only one at its disposal: it has been experimentally proven (Winawer *et al.*, 2007) that Russian speakers more often and properly discern tone differences in the colour blue as compared with English speakers. But Eskimos, Somalis and Russians are not likely to be aware of the influence of language on their perception of reality and on experience-sharing. The inter-cultural dimension helps such an awareness to emerge.

The example below shows one of the geometry exercises in the questionnaires administered to the students, which asked them, in reference to figure 1a, to "Draw a line indicating the distance between the lines of each of the five pairs shown"

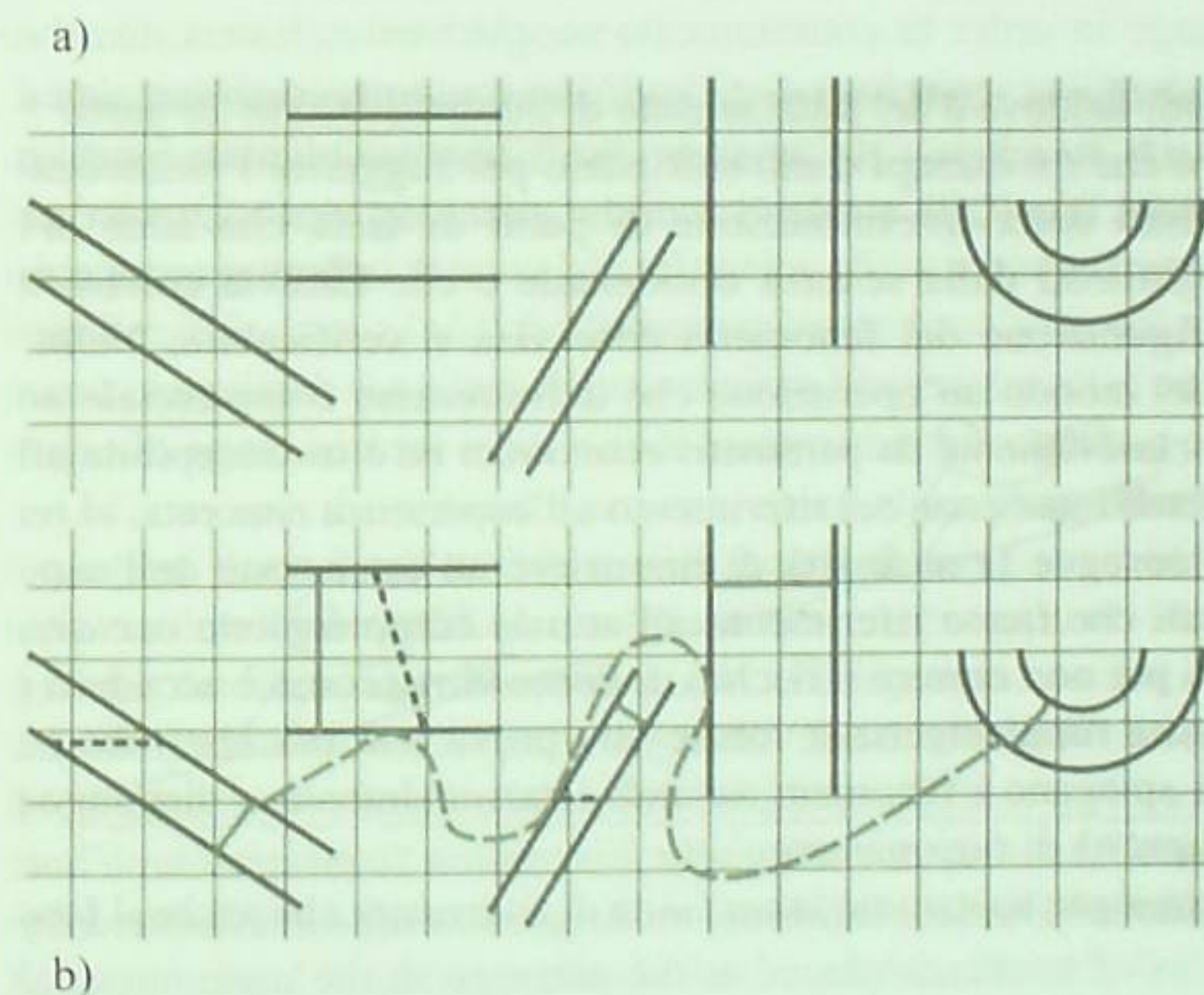


FIGURE 1 – Geometry test asking for a line representing the distance between the lines of each of the pair shown in "a". (In "b" the alternatives discussed in the text.)

The five perpendicular, grey lines indicated in figure 1b were what we expected the students to draw. Even though two thirds of the students took this test (drawing fragments of segments or working on a limited number of line pairs), only one student out of four completed the exercise, suggesting how difficult or puzzling they found it.

The implication of language is borne out by the way that two out of five of the students drew a single grey dotted line touching all the line pairs (as seen in figure 1b). In the Somali language the semantic area of the word "distance" is crowded with the meanings "route" and "journey", and it is very difficult, even in University lecture-halls, to give the term a connotation that makes it useful for the purposes of geometry⁷.

Moreover, "new" words can produce conceptual distortions. Some of the other goals of the Italy-Somalia cooperation project made it necessary to plant new words in the Somali language in order to communicate on extraneous issues. On the basis of its etymology the word "thermometer" was translated as *kulbee*, literally "measure hot" (Abdalla Omar Mansur, 1994). Where Italians – even those able to grasp its Greek derivation – assume the scientifically correct meaning (concerning the measurement of temperature) thanks to their familiarity with the object and with its use, Somalis are destined to form the concept of an instrument with a more limited range of capabilities.

Other new words found their way into the Somali language in a less direct manner in the course of becoming familiar with the Italian language. The students encountered difficulty doing a geometry exercise involving a comparison of arches: it was possible to attribute those difficulties to the conception of "arch" that they drew from the inscription "triumphal arch" on a sort of (horizontal) lintel resting on two pillars formed by piles of trashcans placed at the entrance to the main street of Mogadishu: a perpendicular structure at right angles to its supports!

These few examples suggest how the semantic areas of the same word can diverge and be corrupted when they are practised by interlocutors whose living experiences and backgrounds are different.

4. *School style and habits*

We were told that the inscription in Arabic at the entrance to the University offered thanks to Allah for having taught men everything they need to know. This presupposition would not encourage attendance at lessons and could be an indication of why students rejected scientific statements and theories, such as evolutionism.

The relationship between teacher and students was also compromised by a wide-spread and problematic male student resistance to accepting the leadership of a female teacher (and, more importantly, her judgement).

Also problematic was the refusal by boys and girls to come into physical contact with each other, which made it impossible to carry out a physiology lab as it had been planned, and which was intended to correlate muscular effort with pulse and breathing frequency. Each student measured only his own parameters since they refused to rest two fingers on a fellow-student's neck or to observe – indecently – her/his chest.

As far as specific aptitudes are concerned, during the semester Italian teachers were able to observe, with amazed admiration, that students were so capable of memorizing that it was difficult to distinguish between real skill and simple parroting. On many occasions I myself witnessed the exact repetition of a ten or perhaps twenty-line text read just once, but accompanied by the student's absolute incapacity to paraphrase or comment on it. This behaviour can be regarded as a consequence of Koranic school teaching methods that require students to learn verses written in Arabic by heart, thereby honing their ability to acquire sounds and signs without absorbing direct meaning.

In another example, the textbook designed for the UNS lin-

guistic-cultural semester contained tasks and exercises, each of which was accompanied by a grid made up of smaller or larger number of lines depending on the length of the answer expected. Many of the students avoided writing in the grid (which, by *filling up* the page, made it no longer useable), and instead wrote in the margins, crosswise, or at the bottom of the page. This showed how unaccustomed they were to using graphic space and can be regarded, as W. J. Ong cited (1982), as a consequence of the oral nature of the culture.

Students' attitudes toward images calls for an entirely separate treatment.

5. Production and understanding of graphics

The iconoclastic feature of the Islamic culture suggested the insertion into the textbook of a task/exercise that was originally aimed at exploring student conceptions about the Earth's shape, and which had been administered in many Western countries (Vicentini Missoni, 1981). It was also suitable for testing student skill in representing real and symbolic objects. The task was to draw "the Earth as seen from the outside" and include the representation of four men, four boats, and four birds.

I will ignore the many, either predictable or anomalous, features that the drawings of Somali and Italian students of the same age share, and point out three peculiarities that seem to be very significant, owing to their high frequency, some representative examples of which are shown in figures 2 and 3.

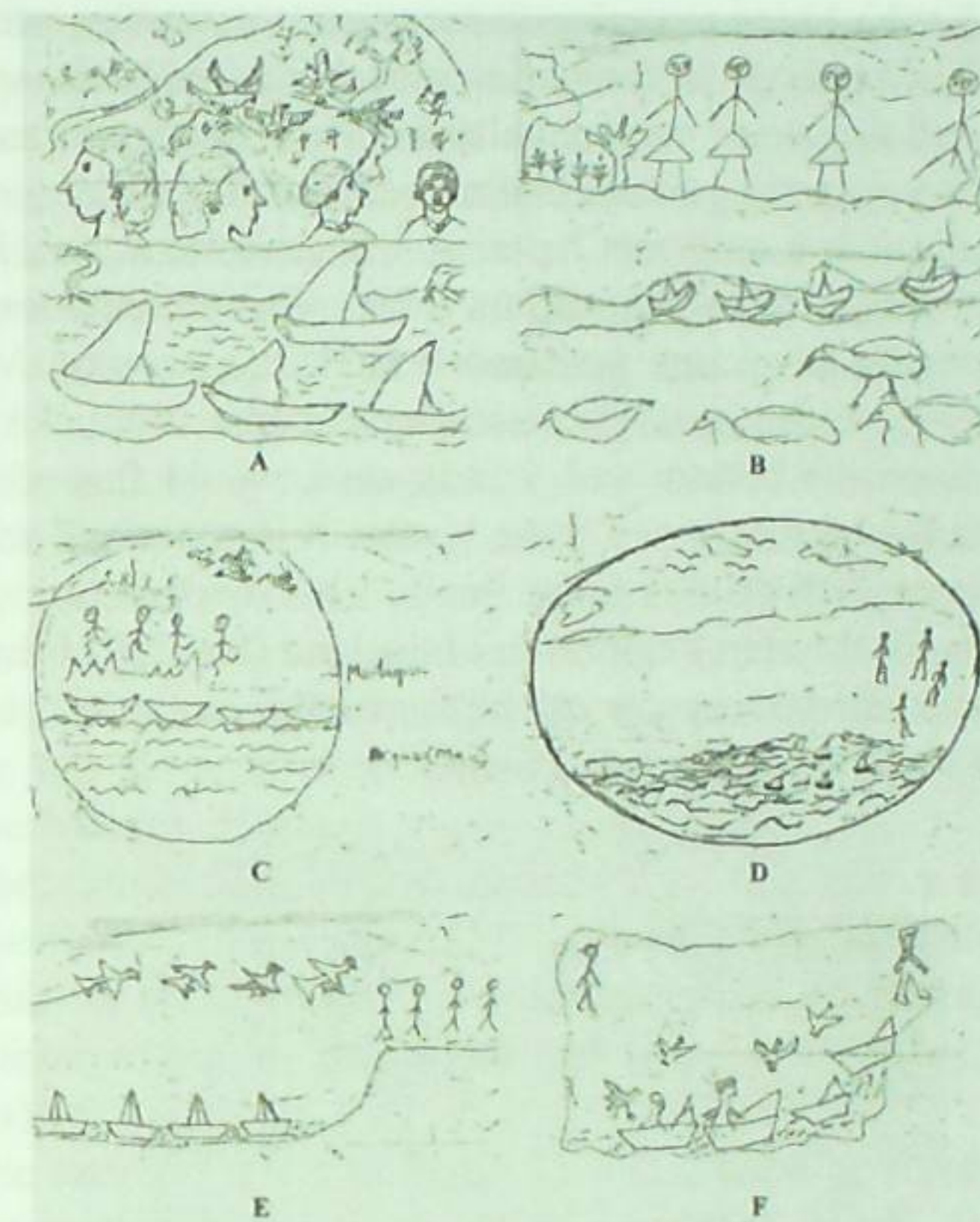


FIGURE 2 – Drawings representing "the Earth as seen from the outside", including men, boats and birds.

Men, boats and birds – either inserted into a hemisphere/planisphere or circular/elliptical framework (see G, C, D, E), or else depicted in scene running off the page (see A, B) – are generally grouped together, reflecting the structure of the task formulation and a preference for modular composition at the expense of overall graphic message. (This paratactic configuration is another one of the traces of the culture's oral nature described by W.J. Ong.)

As far as the *landscapes* are concerned (i.e. the representations of a scene containing the twelve required objects, inserted into a circular or elliptical frame intended to evoke a sense

of the Earth), some recurring features are noteworthy, such as the lack of any scale in comparing men, boats and birds (see C, D, E), and the use of intellectual rather than visual perspective that makes man the greatest in size (see B, C, D). Among other odd features is a recurrent layering – from bottom: sea, land, and sky (see C, D) – that differs from our representations of seascapes (as in picture postcards): land, sea and sky. Many interviews yielded a single astonishing explanation: the sea, water, is on the bottom and, in any case, would flow downward, to the bottom, since at the bottom it is *contained* within the concave “frame” of the land. This explanation also accounts for the step-like profile of the land (see E, F) forming a space in which the water can be contained.

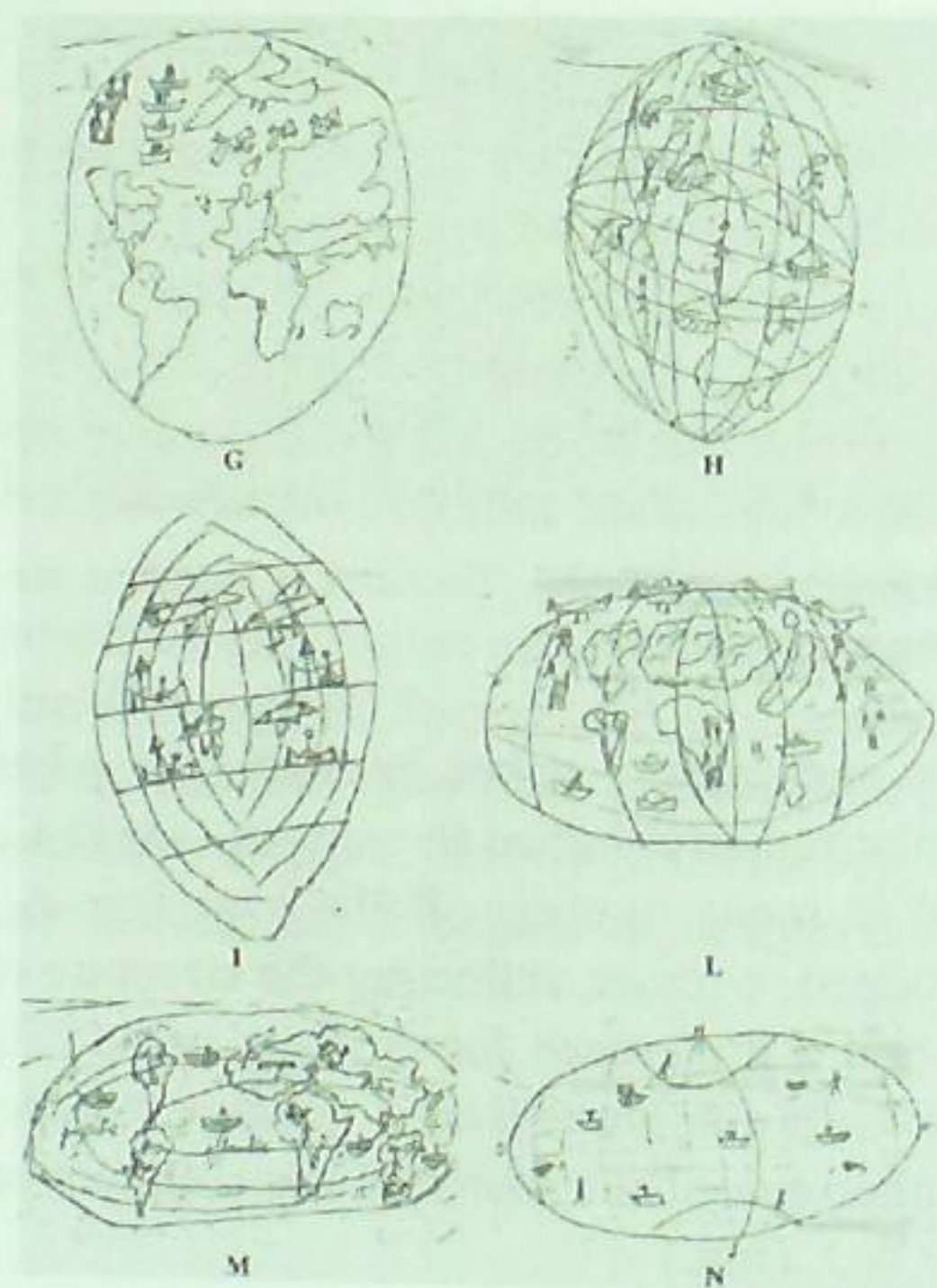


FIGURE 3 – Drawings representing “the Earth as seen from the outside”, including men, boats and birds.

Reference to recollections of the *represented* Earth⁸ induced many students to depict not the terrestrial globe, but a planisphere (see G, H, L, M) and to include anomalously-shaped cartographical elements: parallel (see L) or concentric (see I) meridians, and concentric parallels (see M) or those that converged at the equator (see H). This is proof of a lack of education about images (both reading and producing them). Moreover, I would like to point out the function that students ascribe mainly to the parallels as *supports* (see N: men walking on Polar Circles), which could be viewed as a clue to the supposed *real existence* of meridians and parallels, potentially linked to the primary meaning of the corresponding Somali words: *dhig* (meridian) originally denotes the branches that form the skeleton of a nomad’s dome-shaped hut (Abdalla Omar Mansur, 1994).

The textbook contained a second classic test, known as “hole in the Earth”, (Nussbaum, 1979), aimed at exploring students’ familiarity with physics concepts, specifically with regard to the force of gravity (but which yielded quite different indications).

The exercise refers to figure 5a: “This drawing represents a cross-section of the Earth which is shaped, as we all know, more or less like a sphere. The human figure, who is not drawn to scale, is you: you have a stone in your hand; you are standing in front of a well that has been sunk perpendicular to the Earth’s surface and that goes through to the other side. You drop the stone down into the well”.

In Western countries students asked about the course of the stone drew three alternatives (shown in figure 5b, and) that were strongly correlated with their interests and specific scientific knowledge: the stone will stop at the Earth’s centre, seen as the gravity centre (a “weak” scientific hypothesis, preferred by biologists); the stone will come out at the South Pole and get lost in space (a non scientific hypothesis, preferred by those with a humanities educational background); the stone will first fall down toward the South Pole, and then up toward the North

Pole (a “strong” scientific hypothesis preferred by physicists). The final, correct, option was ignored by Somali students (except a scanty percentage intended to enrol in the Faculty of Engineering). The vast majority hypothesised that the stone would stop at the obstacle, i.e. the line at the bottom of the page sealing off the sphere to the south: this option was never considered by students taking the test in Western countries.

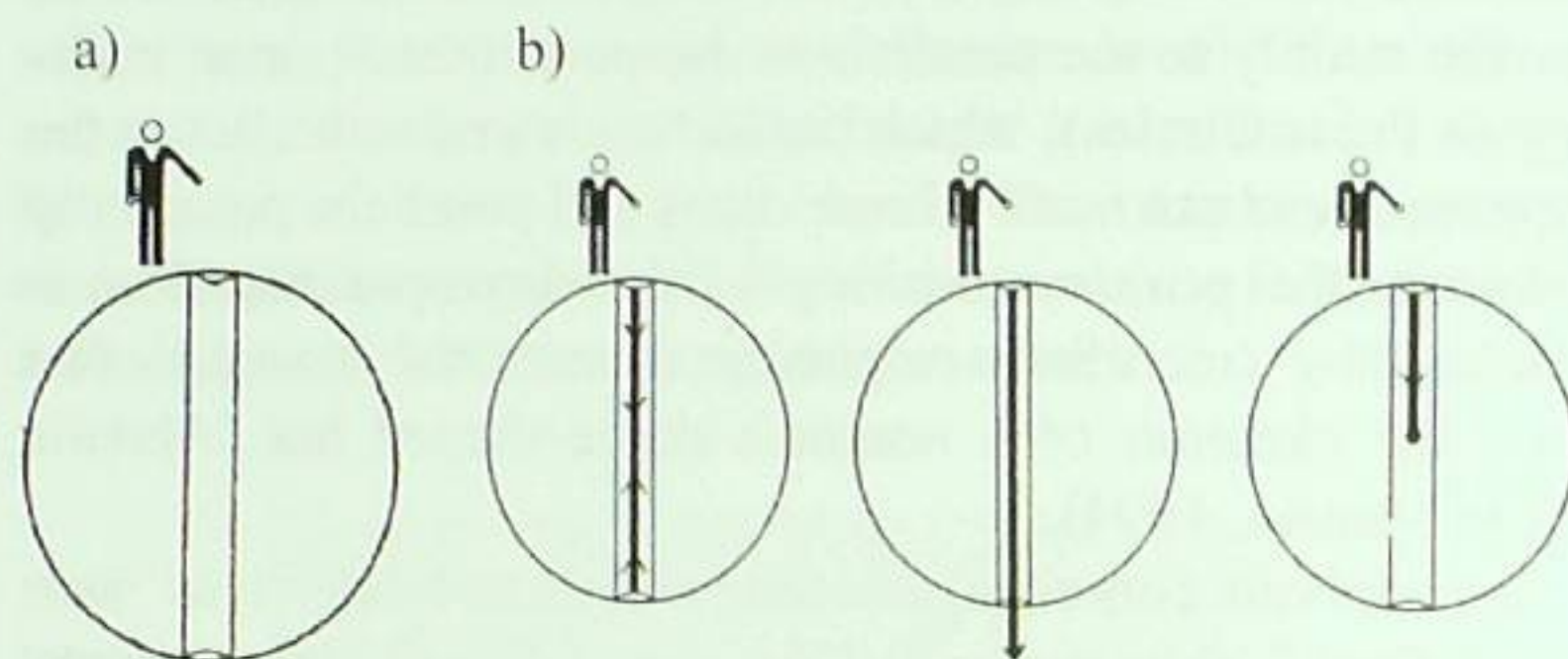


FIGURE 4-5 – Drawing associated with the test known as the “hole in the Earth” (a). Alternatives concerning the course of the stone dropped down into the “hole” (b).

These and many other clues indicated a widespread illiteracy regarding images of reference resulting from the pre-university school system’s widespread use of textbooks devoid of pictures (including biology textbooks). Such clues also supported the idea that the drawing was not a symbol of the reality represented but its reconstruction, to which to apply the criteria and principles of phenomenological interpretation.

6. Explanations and problem-solving procedures

Figure 6 shows a third classic exercise (Watts and Zylbersztajn, 1981): two men, each bracing a car on a slope to prevent it from rolling down. The cars are exactly alike and neither one’s hand brake is engaged. The object is to compare the effort exerted by each of the two men.

Approximately one-third of the Somali students thought that the man at the top of the slope (“A”) was working harder, one-third said the man below, and one-tenth that both were making the same effort (this is the right answer considering the equal weight force deriving from the uniformity of the slope). Justifications for the students’ answers (furnished during clinical interviews) mostly corresponded to those of Western students and pointed to a tendency to adopt school roles, except for a recurring explanation that the greater effort of “A” was due to the length of road he would have to cover in reverse in order to reach the bottom of the slope, i.e. stability.

Remarkable clues were given by one out of five students who adopted positions quite unheard-of in Western experience: some refused to give an answer since there are no slopes in Somalia (in their personal experience) and therefore the problem “does not make sense”; and some contested the wisdom of the question, suggesting the possibility of avoiding any effort at all by placing a stone behind the wheels to block the car.

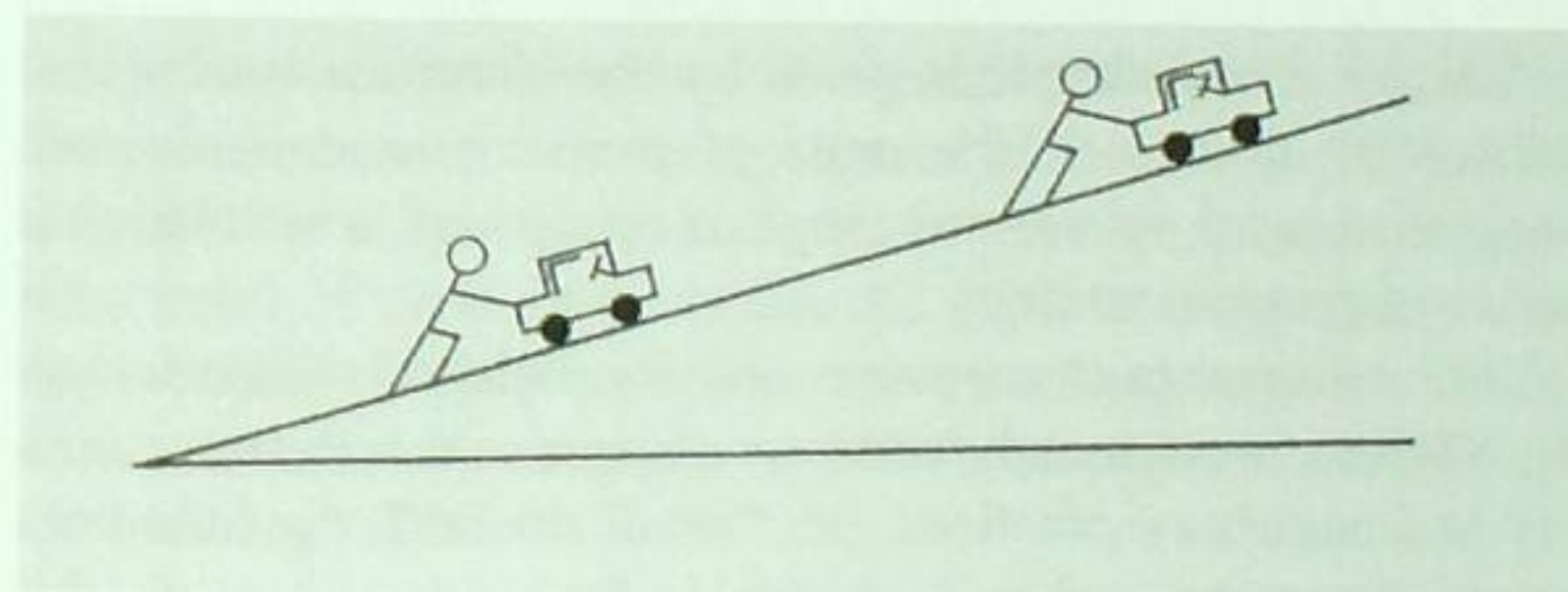


FIGURE 6 – Drawing associated with the exercise involving cars without hand brakes on a slope.

The entry questionnaire section dedicated to elementary mathematics included a “20:1000” exercise. About half of the students answered “50”, explaining that it was impossible to divide 20 objects into 1000 parts, whilst dividing 1000 objects into 20 parts made quite a lot of sense.

The frequency of references to real life, to lived experience,

to the practical relevance of explanations and solutions (one might say, the resistance to abstraction) corresponds with the differences in logic, rationality, and scope that R. Horton underlines (1967) when comparing Western science and African mythology, at the same time highlighting the similarities between their peculiarities and methods. Nevertheless these differences undermine the usual scientific attitude on which Western science teachers would like to base their analyses of phenomena and methods of problem-solving.

7. *The everyday context*

Our theoretical and methodological orientation required that information be collected on Somali students' everyday life, and on their habits, which had some chance of affecting their formation of scientific concepts. This requirement was also taken into consideration by some of the "exploratory" activities included in the textbook, the results of which could and should have directed Italian teachers' attitudes.

A significant example is given by the identification by student work groups of the units of measure used in Somali regions to carry out a broad range of operations, which led to a series of generalizations.

The instruments of measure, and the units of measurement themselves, were mostly concrete objects and reflect customary and necessary practices: the "small tin can", the measurement instrument used by the *madal* in the southern regions; the "little bottle" and the "big bottle" for measuring milk respectively in *dhalo yerey* and *dhucey*. In light of this information the question was how to go about facilitating the transition to non-practical operations (see: measuring the distance between the Earth and the Moon, or the weight of a molecule)?

Units of measure are often related to practices that solicit their establishment: the *geedi* (15-20 km) is equivalent to one day's walk in the bush, and the *masafo* (about 90 km) to one leg of the religious pilgrimage (and also to the shortest distance

that two young lovers' have to cover between their place of residence and the place they can celebrate a marriage their families oppose). How to bridge the meaning gap that certainly marks both the platinum-iridium meter held at Sèvres and the distance traveled by light in a vacuum in 1/299,792,458 of a second?

Moreover, measurements are essentially approximate in nature: referring to a metre-rule students estimate the length of an "arm" (*dhudhun*) as varying from 40 to 80 cm; in general, even consulting informers, it is impossible to define the equivalence between Western units of measure and Somali ones that, since they not established by norms, vary from source to source. How to induce students to employ a strict and rigorously defined set of measures?

8. *The contribution to teaching*

No Western teachers in Mogadishu had the professional training at that time – or even now – to equip them to cope with the differences between their own points of view and those of their students; nor were they prepared to face having to justify the need for a systematic and rigorous *scientific* and *disciplinary* point of view. In any case, the gap was so glaringly evident that the cooperating teachers were willing to adopt immediate and adequate measures even at the expense of established methodological habits.

It was impossible for me, and all the other Italian university personnel cooperating in Mogadishu, not to wonder what would happen when the discrepancies were not so easily perceived. How many Western teachers were aware of the differences between their own points of view and those of the students? How many were willing to consider the students' points of views as their point of departure in planning an educational itinerary?

Being implicit the assumption that student/teacher-shared language, history, and living environment guarantees a solid

foundation for the building of scientific knowledge, it took macroscopic diversity owing to non-shared elements to change an espousal of constructivism based on abstract ideology into a set of behavioural rules.

At this point I would like to specify that by constructivism I intend that derivation of cognitivist theory exhaustively explained by E. von Glasersfeld (1989), that proposes a model for how learning happens rather than a theory on how rationality develops (Yager, 1991), and that describes the quality and quantity of knowledge as the fruit of an individual's own personal direct and indirect experience. This experience is subject to active organization within a framework according to genetically and culturally determined modalities (therefore, also depending on experience). Consequently, although the frameworks of individual members of a social group with a shared history, language and environment are, for the most part, similar, they surely differ in function of the individual's experiences.

Although hacked up by radical interventions, the constructivist theoretical framework still has many positive features: it allows for consideration as obviously physiological both differences in conceptions among subjects and resulting teaching-learning difficulties; it provides tools for the exploration (in the course of research, but also while teaching) of cultural and metaphysical issues that are crucial for an understanding of what scientific education is from different cultural perspectives; and it identifies inter-personal dynamics and communication as the principal terrain on which to work in order to foster meaningful learning (Ausubel, 1968) and negotiation between interlocutors as the route that gradually leads to learning (Bruner, 1986).

The Italian teachers in Somalia were forced to acknowledge the importance of cultural factors in the formation of viewpoints that differed from those accepted by Western science and that, nevertheless, corresponded to a shared and verifiable view of phenomena. In fact they renounced *Western* interpretations of the tests administered, which referred to the prevailing *Western* understanding of phenomena, thereby avoiding the

risk of *proving* (as happened in the case of rural Nigerian communities that were studied using such tests) that the subjects involved were irrational in their explanation of natural phenomena or poorly endowed with the ability to reason (Okebukola and Jegede, 1990). Above all, they began to regard the scientific foundation as a system of beliefs corresponding with cognitive interests and skills, that applies to everyday life objects and events and that often coincides with "local" common sense (R. Horton, 1979). These features give a holistic connotation to the system that makes it incompatible with analogous systems of other social and cultural social groups. Therefore the relationship between a Western teacher and students of a different culture is no less than a *clash of civilisations* that the educational intention is to transform into a *meeting of civilisations*.

Much easier said than done, as witnessed by P. Logan (1981) who taught physics at the University of Technology in Papua New Guinea to 97 students who spoke 76 different languages. He was alarmed by the realisation that he would have to deal with 76 different interpretations of each lesson by students who would have adapted the new concepts to suit their own linguistic and cultural matrices. At the time, in Mogadishu, it appeared that Logan's alarm was not only to be shared by those intending to teach science to non-Western students, but that the same alarm had to be extended to the variety of dialects, regional origin, socio-economic class, living environment and situation where the teaching-learning processes took place. Didactic mediation, nevertheless, was revealed to be an essential moment, suitable for identifying and coping with intra-cultural traps that hinder an effective and sound learning of science (suffice it to think of Italian students who study the solar system and continue to refer to the sun as rising and setting!). Without didactic mediation it is almost impossible to avoid the activation of a parallel, and precarious, cognitive channel for the sole purpose of pleasing the teacher or being promoted.

My experience in Somalia, therefore, led me to consider each school class as a multicultural whole containing the multiplicity of beliefs and knowledge held by both Italian and non-Italian students (individual persons, not members of any particular ethnic group); and teaching/learning as an intercultural activity whenever the scientific sense of what is being taught does not correspond with the student's broader view of reality.

The Somali experience itself can be regarded as a cross-cultural operation as far as validation of the theoretical constructivist framework and promotion of teaching innovation in the national context goes. This in order to redesign a school that – in the still current conception of most people⁹ – remains predominantly the setting for the transfer of knowledge from teacher to student and therefore destined to produce no more than an accumulation of notions. In order to make more systematic the practice of teacher–student dialogue, which constructivists call for based on the conviction that real phenomenology is complex (not traceable to individual disciplines) and susceptible to subjective interpretations both in intra-cultural and inter-cultural contexts. This is a conviction that assigns dignity and responsibility to science, understood as the matrix for a unified world-view shared by all those who practice it and draw upon it for explanations and tools (the R. Horton, 1979, *secondary theory*).

NOTES

¹ "University teaching reorganization, respective training phase as well as organizational and didactic experimentation", D.P.R. July 11, 1980, no. 382.

² "Reform of University didactic regulations", L. November 19, 1990, no. 341.

³ "... the teacher will link not only the anatomy, but vegetable, animal and human physiology; and especially will insist on endocrine, nervous, muscular physiological life and on reflex action with reference to the question of human conscience and activity, and will then present clear notions on hygiene ..." (Syllabus of "Liceo classico", second year, "Geography, Natural Sciences, Chemistry", Gentile Reform, 1923).

⁴ "... pupils will be engaged, individually and in groups, in operative activi-

ties, investigations and reflections, suitably guided and supplemented by the teacher, arriving, according to the nature of the subject matter, more in-depth and general mathematical developments, and, respectively, a consistent framework of experimental results." ("Syllabus, Teaching Time-Tables and State Lower Secondary School Examinations", D.M. February 9, 1979, "Mathematical, Physical and Natural Sciences").

⁵ "Primary School Syllabus", D.P.R. February 12, 1985, n. 104.

⁶ "... it is essential that the teacher is open to the conceptions that they – *the children* – express and to the ways they formulate them, makes room for their questions and avoids prematurely answering, ... exploits personal viewpoints and thinking with one's own head, does not penalize errors that, as expressions of one's own viewpoint and an opportunity for self-correction, foster critical thinking." (Guidance for Educational Activities of the State Pre-Primary School, D.M. June 3, 1991, "Things, Time, and Nature").

⁷ The test also explains students' tendency to refer to their own concrete experiences: those who drew diagonal lines (black and dotted in figure 1b), when interviewed stated that they had referred to the distances they met in the real life, such as the distance between the banks of the Shebeli river: the river's current renders the crossing *route* longer than a simple perpendicular.

⁸ In the years following adoption of the textbook used in the linguistic-cultural semester it was ascertained that the image of the Earth to which all the students referred was a planisphere displayed in the offices of Somali Airlines in the centre of Mogadishu: an oval-shaped hemispherical distribution of all the continents, showing meridians and parallels.

⁹ Proper tools and strategies for supporting a suitable type of teaching role have been designed, validated, and grouped under the label "active and cooperative learning" (Sharan, 1994; Silberman, 1996). The actions presented here have two features in common: the first was the request that those preparing to learn express their experiences and conceptions and have a chance to compare them with disciplinary knowledge; the second was that information be gathered on students' previous knowledge and their way of managing school messages, which then helped teachers plan effective lessons and supplement or change lessons that turned out to be somehow inadequate.

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INNOVATIVE ASPECTS IN THE TEACHING OF ITALIAN AT THE SOMALI NATIONAL UNIVERSITY

1. Introduction

It was in 1977 that the teaching of the Italian language began on a regular basis at the University of Mogadishu (SNU, Somali National University); this was an important part of a larger cooperation project, the so-called *Progetto Somalia*, launched with the financial support of the Italian Ministry of Foreign Affairs. As Italian had been chosen as the vehicular language¹, Somali students had to attend an intensive course in the language during a whole semester. This was devoted to developing the necessary competence in Italian through which they could later learn different disciplines according to the various subjects of the different faculties: Medicine, Agricultural Science, Veterinary Science or animal husbandry, Chemistry, Engineering and Economics.

Thus the primary aim of the Language Project was teaching Italian as a vehicular language to Somali students who had been selected and enrolled in the National University². In other words, Italian had to be taught as a foreign language in an environment where another language was used for everyday communication. This was Italian for specific purposes, namely academic purposes, to fulfil students' language needs in listening to and understanding *ex cathedra* lessons and lectures, as well as reading and understanding texts.

As is known, learners' needs influence the relative language teaching methods. Nevertheless, as far as Italian was concerned, there was no precedent for structured experiences of teaching Italian for specific purposes. For this reason,

Biancamaria Tedeschini Lalli and Annarita Puglielli, the President and member of the Language Technical Committee respectively, along with other specialists who joined the working group over the years, like Milena Bandiera, Anna Ciliberti, Carlo Serra Borneto, Giovanna Stefancich and myself³, had to identify the students' needs. We had to decide *what* sort of language to select, how it was going to be taught and find suitable strategies which would not only maintain student motivation, but also fill the numerous intercultural and conceptual gaps caused by the non-homogeneous Somali education system as far as content, teaching organization and learning strategies were concerned.

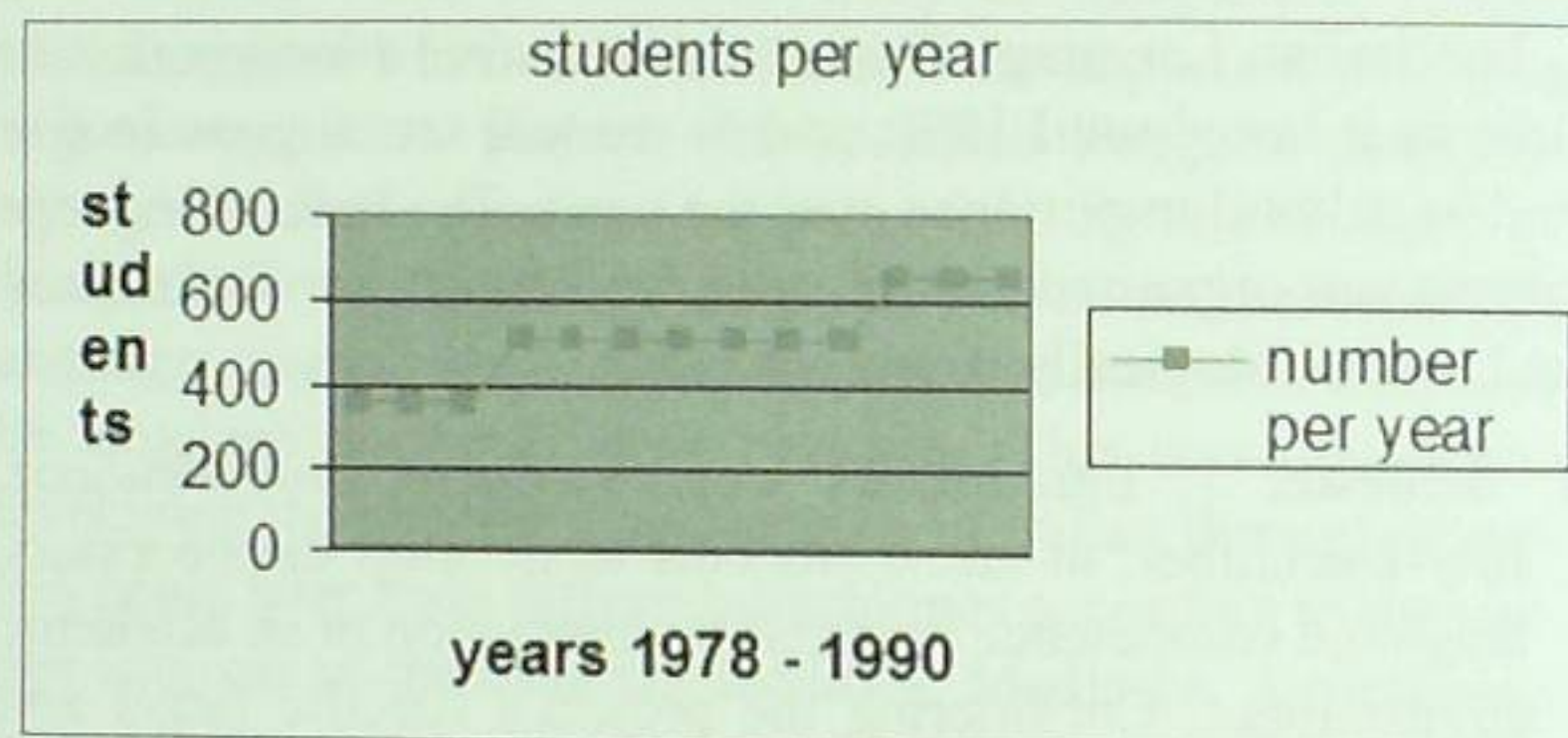
The Italian Language Project evolved over a long period of time as it lasted until 1990, and as we will see, it grew in size and in cultural importance over the years. The Italian language course was organized according to the following well-designed and methodologically sound structure:

- a. Semester 1, Introductory Course (*Corso Propedeutico*), July-December, to allow students to develop the necessary language competence required by interaction in an academic environment. Considering the project's specific target and the cultural environment, receptive skills (listening and reading) were privileged, even though speaking and writing were not completely disregarded. In this semester, particular attention was given to the development of language and meta-language competence through numerous manipulation and transformation exercises based on a morphological and functional repertoire realized *ad hoc*.
- b. Semester 2, Linguistic and Cultural Course or (*Semestre Linguistico-Culturale*), January-June, where the consolidation of language competence was based on numerous and varied interdisciplinary activities aimed at the development of both content knowledge and study skills such as generalization, classification, describing, inferring etc.. The special feature of this course was the contemporary presence in the classroom of both the teacher of the discipline (Physics,

Biology, Chemistry) and the Italian language teacher. This allowed for expanding competence in Italian while knowledge of specific content was being developed.

2. Specific aspects of the Italian Teaching Project: organization, methodology and content

The project was the first example of a 'mass teaching' of Italian. It operated over a time span of thirteen years (1977-1990) and every year involved a large number of students (to a total of approximately 6,500) as the following table shows:



Considering these figures (which include students of both semesters), the organisation and scheduling of the teaching needed a very tight in order to be effective. Taking Somali festivities into consideration, the semester was generally structured over a 20-21 week period, with classes six days per week (from Saturday to Thursday).

Logistics were optimised as far as possible for a project of this size, which continued to receive financing from the Italian authorities including the provision of books (their printing and shipping) and technical equipment (language laboratories, film projectors, etc.).

A. Organization of Semester 1: *Introductory Language Course*

In this semester, emphasis was on the Italian language; therefore learners had to attend classes four or five hours per day (considering the climate, from 8am to noon or 1 pm), for a total of approximately 500 hours of class work, testing and evaluation, and including four hours per week of language laboratory group activities⁴ in the afternoon (two hours twice a week from 4 to 6pm).

Students were divided into groups of a maximum of 20 students (20 groups were formed in the first few years, almost 30 in the late 1980s). Four groups were then put together to form five 'units' in which six teachers (four Italian and two Somali) alternated according to a fixed programme. This was to allow for a more varied input and to share responsibilities among teachers; it also prevented excessively personal ties developing with the students.

B. Organization of Semester 2: *Linguistic and Cultural Course*

This started in 1984 and underwent a three-year experimental phase during which new teaching material was provided. This was based on an analysis of the students' knowledge of the world, a representation of their cognitive skills and taking into consideration any gaps in specific area content. As already stated, Italian linguists and subject specialists worked together in the same student groups so that students learned specific content while observing how Italian was used in the particular discipline. From 1988 to 1990 it ran successfully and regularly, until it was stopped abruptly.

3. Methodology and contents

For both semesters, the eclectic methodologies adopted in the language teaching project were unique for that time. In particular, it is worth underlining that all learning input was authentic in the strictest sense, that is, the materials had not been produced for pedagogic reasons.

Semester I. Although students' groups were linguistically homogeneous, teacher and learners did not share a single language of communication (no Italian teacher knew Somali). We therefore had to start from visual input which showed authentic contexts and uses: clips from silent movies and films or from scientific documentaries from RAI television archives were used as the initial input for each of the six micro units that constituted the *ad hoc* created teaching material. This aspect merits some explanation regarding the criteria adopted in choosing these visual aids: each extract could not require particular knowledge for understanding the visual component and so any possible difficulties in comprehension were only to arise from the language component.

Once the six extracts were selected, they were gradually introduced in order of difficulty: first those short visual texts (less than three minutes long) which were self explanatory; then some longer ones (approximately 10 minutes) whose understanding depended on the comprehension of both a visual and vocal component; finally, the longest ones (up to 20') whose understanding relied mainly on the understanding of the spoken text.

Obviously, each extract was subdivided into segments to allow for pedagogic exploitation. Generally, there were three phases: the presentation of the whole extract to introduce the topic; exploitation of the visual component to introduce related lexis and the main grammatical structures; exploitation of just the audio component, first to develop listening comprehension and then to encourage productive activities⁵.

Another relevant component of this language teaching project was that devoted to the introduction of scientific discourse (*Avviamento al linguaggio scientifico*) from the first stage. This was necessary to overcome difficulties caused by two main factors: the local oral-mnemonic pedagogic and learning tradition, combined with a scarce familiarity with scientific language even in the mother tongue. The teaching material was organized with the aim of fostering certain important cognitive

operations regarding the given texts. Depending on the aim of the individual module, these exercises might include finding and giving definitions, inferring non-explicit meaning and trans-codification (information to be transferred from text to graphics or synthesised in a formula or to relate to corresponding forms or pictures). Themes were selected in fields close to those of the macro-unit and activities were systematically organized and learning strategies were constantly fostered⁶.

As has already been stated, the development of receptive skills was one of the aims of the Introductory Italian Language Course. Therefore, one particular section was devoted to reading skills (*Lecture guidate*). In particular, the different text types and different content required different strategies for comprehension, above all analytical or 'study skills', and also global skills which enabled the reader to identify specific information quickly. For the first group of reading texts, the comprehension of content was assisted by three different types of activities: numerous comprehension questions, work on vocabulary and activities on text structure where particular attention was given to cohesive links and the coherent development of information. For the second group, activities were aimed at developing the understanding of the main idea, disregarding details, redundancies or aiming at a rapid identifying of specific data⁷.

One final aspect of the Somalia Language Project deserves special mention: this was the assessment component where particular emphasis was given to testing both language use or communicative functions, and formal language patterns or usage. These were objectively tested on a regular basis at the end of each macro unit using various techniques: gap-filling exercises, multiple choice questions, dictation etc., while the final test focussed on the level of the receptive capacities reached by students. According to the aims of the course, and also for the assessment of input, texts were selected only if they belonged to the register termed 'low stratum' by Huddleston i.e. the register used in scientific communication between specialist and educated reader. Final tests were regu-

larly validated and the results were analysed after each testing session⁸.

Semester II. The experimental teaching material – again created *ad hoc* for class learning activities by a group of applied linguists and specialists of the various scientific disciplines – was based on authentic scientific texts from the aforementioned disciplines. This time, however, the register of the selected texts was of the ‘specialist to learner’ kind, that is, corresponding to that found in secondary school and university textbooks. A specific structure was given to all the macro-units of the textbook. Each of them, besides expanding the forms and functions of Italian present in the input passages and linked to the specific scientific discourse, had three different components or sections, each with a determined aim: section I, the development of instrumental skills (the underlying philosophy was ‘learning by doing’); section II, the development of logical skills; section III, knowledge organization: strategies and means.

4. Innovative aspects for the time

From this brief description of the Italian Language Teaching Project at the Somali National University, and considering the time when the project was operating, innovations were made in accordance with contemporary advances in the field. From insights later gained in other contexts by various applied linguists, we can identify innovations made in three different fields: methodological, psycho-pedagogical and organizational. We shall try briefly to list and comment on some of them.

- a. The rigorous identification of learners’ needs and descriptions of language and cognitive targets in order to develop teaching material that in a relatively short period of time encouraged learners to gain real use and control of the vehicular language with respect to the organization of scientific discourse. Particular attention was given to this aspect in

designing the learning process in both semesters. Above all, no tools existed at the time for Italian regarding the pioneering repertoire of functions and structures of the scientific discourse upon which the new teaching material was based. Moreover, from the continuous monitoring of the Somali university students’ learning processes, it was confirmed that priority should also be given to the building of links between Italian language and scientific thought⁹.

- b. The focus put on the simultaneous development of both Italian L2 and specific subject competence. Nowadays, with some slight variation, we might call this approach either CALLA (Cognitive Academic Language Learning Activities), whose goals are for students to learn both essential academic content and language and thus become independent learners through their increasing command over a variety of strategies for learning, or CLIL (Content and Language Integrated Learning). As David Marsch stated in 1994, “subjects are taught through a foreign language with dual-focussed aims, namely the learning of content, and the simultaneous learning of a foreign language.” We all know that a content-based instruction lesson is on a specific topic or subject matter and that during the lesson students are focused on learning about something. They learn about the subject using the language they are studying, rather than their native language, as a tool for developing knowledge. In so doing, they develop their linguistic control over the target language. Today, this kind of learning process, based on explicit instruction in using learning strategies for academic tasks, is thought to be a more natural way of developing language ability and one that corresponds more closely to the way we originally learn our first language¹⁰.
- c. The constructivist approach adopted in writing our teaching material. All our teaching material embodies a cognitive philosophy of the learning process, that is, it embodies constructivist concepts as it positions learning in a rich authentic problem solving environment. The fostering of this par-

ticular kind of learning is of great significance in the Somali context, considering the traditional mnemonic learning style of the population. The realization of this innovative aspect is particularly evident in the methodology adopted in writing teaching material, particularly in the development of Italian L2 scientific discourse courses where learners were constantly encouraged to formulate hypotheses on linguistic and scientific data, comparing new information with the knowledge they already possessed. Of the numerous scholars, see Wilson and Cole (1991) and Ernest, P. (1995).

- d. The investment made in teacher training regarding the new methodology. This was offered before each semester started and it was supported by constant, local coordination of the program made possible by the presence in loco of a highly specialized supervisor. This aspect, together with the development of good professional practices established through cooperation with specialists from other departments, gave all the teachers a high level of job satisfaction and contributed to the achievement of many positive results.
- e. The constant monitoring of the students' learning processes gave the program twofold fringe benefits: the satisfaction of the learners, as they became familiarized with testing procedures and the constant feedback through the objective assessment that teachers made of their courses and achievements. As far as the Italian language is concerned, no other program has ever covered such a wide population involved both in an *in itinere* and final assessment programme.
- f. Last but not least, the *in loco* training of Somali teachers together with Italian colleagues created – for the first time in that country – new professional skills. Through shared understanding and the assignation of analogous teaching tasks, this ongoing training helped generate in both Italian and Somali teachers an awareness of alternative cultural perspectives.

NOTES

- ¹ Because of its past presence in Somalia, and because of the financial support given by Italy, Italian was considered to be more appropriate than English and Arabic – even if these languages were already used in the Somali education system – to be the language of instruction at the NUS.
- ² The selection of students was the complete responsibility of the Somali authorities.
- ³ For an complete list of those who have contributed to the Somalia -Teaching Italian Project at NUS, see Tedeschini Lalli and Puglielli, 1981: 12. *Ricerche sull'insegnamento dell'italiano in Somalia*, Ministero degli Affari Esteri – Dipartimento per la Cooperazione allo sviluppo, Rome.
- ⁴ Unfortunately the existing labs didn't allow for individual learning activities.
- ⁵ For further details, see Dal Fabbro, E. (1981), 'Una proposta sull'utilizzazione di materiale audiovisivo autentico per l'insegnamento della L2', in Tedeschini Lalli and Puglielli, 1981.
- ⁶ For further details, see Serra Borneto, C. (1981), 'Problemi relative alla costruzione di materiale linguistico per scopi speciali con particolare riferimento al Corso di Italiano per l'Università Nazionale Somala', in Tedeschini Lalli and Puglielli, 1981.
- ⁷ For further details, see Ciliberti, A. (1981), 'Obiettivi di lettura in un corso di italiano come lingua veicolare', in Tedeschini Lalli and Puglielli, 1981.
- ⁸ For further details, see Ambroso, S. (1981), 'Verifica dell'apprendimento: i test nel Corso di italiano dell'Università Nazionale Somala', in Tedeschini Lalli and Puglielli, 1981.
- ⁹ See Bandiera, M. and Serra Borneto, C. 1994:100.
- ¹⁰ Teaching material for the learning of English reflects our approach: Chamot, O'Malley, and Küpper (1992).

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AT THE SOMALI NATIONAL UNIVERSITY

«... the etymology of *suugaan* means the sap or fluid of certain plants like the *geesariyood*. These plants are evergreen, and are associated with life and the sustaining of life under precarious situations or conditions. You and your colleagues are the metaphoric *suugaan* for Somali studies. You have kept it alive. It has found sustenance under your care and compassion... »

(ALI JIMALE AHMED)