

ACADEMIC NEWS

TRACES, A PROJECT FOR THE DIGITAL STUDY OF CLASSICAL ETHIOPIC (GE' EZ) AT THE UNIVERSITY OF HAMBURG

The University of Hamburg has long been at the centre of innovative research on Ethiopia and the Horn of Africa. In 1997, for example, the project *Encyclopaedia Aethiopica* was launched there. Fifteen years later, in 2014, the fifth and the last volume of the *Encyclopaedia* was presented to the public. Such a project was a unique undertaking in the research on Sub-Saharan Africa, which is often deprived of solid reference works. *Encyclopaedia Aethiopica* was the result of joint work between the editorial team located at the Hiob Ludolf Centre for Ethiopian Studies in Hamburg (HLCES), who took care of editing and coordination work, and more than 400 authors worldwide, who wrote the contributions. A year later, another important project that was hosted at the HLCES, *Ethio-SPaRe: Cultural Heritage of Christian Ethiopia. Salvation, Preservation, Research*, came to an end. Directed by Dr Denis Nosnitsin, Ethio-SPaRe contributed to the study, preservation and digitizing of hundreds of manuscripts located in northern Ethiopian churches and monasteries. Last but not least, the HLCES also served as the headquarters for the Europe-wide COMSt (*Comparative Oriental Manuscript Studies*) network. Earlier on, the forerunner of the HLCES, the "Abteilung Äthiopistik" of Asien-Afrika Institut, had already launched a project (eventually included in the *Union Catalogue of Oriental Manuscripts in Germany*). It was first undertaken by Ernst Hammerschmidt, then led by Siegbert Uhlig and carried on by Veronika Six and its purpose was to catalogue Ethiopian manuscripts from Lake Tana monasteries and from German libraries.

In June 2014, coinciding with the successful completion of the *Encyclopaedia Aethiopica*, the project *TraCES* was presented to the scholarly public. *TraCES*, which shall become one of the main motors of the HLCES for the next four years until 2019 (while a new project, *Die Schriftkultur des christlichen Äthiopiens: Eine multimediale Forschungsumgebung*, 'The Written Culture of Christian Ethiopia: A Multimedia Research Project' will start the next year at the same centre), stands for *From Translation to Creation: Changes in Ethiopic Style and Lexicon from Late Antiquity to the Middle Ages*. The project is a European Research Council Advanced Grant awarded to Alessandro Bausi as part of the European Union 7th Framework Programme IDEAS. *TraCES* aims at building an electronic Corpus and Analysis Tool for Classical Ethiopic (Ge'ez).

Ge'ez was first recorded in a written form in the third century A.D. and later it became the main language of the Ethiopian Orthodox Church as well as the main literary language of Ethiopia and Eritrea until the nineteenth century. Since the sixteenth century Ge'ez has also been intensively studied by non-Ethiopians, both in Europe and in the Horn of Africa. Till the present day several dictionaries, grammars and textbooks have been published, the most important and comprehensive reference work remaining the *Lexicon linguae aethiopicae* by August Dillmann (1865). However, to date the electronic resources on this language are scant. With the exception of some texts available online, there are no other 'intelligent' electronic resources available for this language.

TraCES aims to fill this gap, thus bringing Ge'ez into the digital age. The project comprises a team led by Prof. Alessandro Bausi as the principal investigator. Other members of the team are Dr Andreas Ellwardt (morphology and lexicography), Susanne Hummel and Dr Vitagrazia Pisani (philology and corpus annotation), Wolfgang Dickhut and Daria Elagina (OCR and corpus annotation), Eugenia Sokolinski (coordination and webmaster), and Dr Cristina Vertan (computational linguistics and digital humanities).

TraCES will profit of the important advancements in the digital humanities in the recent years. The project's aim is to develop a digital corpus of the Ge'ez language, which shall be annotated with references to the morphological and semantic levels. The corpus should, on the one hand, allow a diachronic analysis of the Ge'ez language and, on the other hand, it can be used as a resource for further computerized processes.

The *TraCES* project develops in parallel an electronic dictionary of Ethiopic. The programme follows the so-called Lemon Model and is conceived to both support a strong modularizing as well as the linkage between the modules. Computerized work first records all roots of the Ge'ez language and connects them to the actual words ('lexical entry'). Dillmann's *Lexicon linguae aethiopicae* is the ground base lexical tool used by the project, which is complemented by the more recent *Comparative Dictionary of Ge'ez* by Wolf Leslau (1987) and by the words registered in the *TraCES* corpus. Subsequently, the work proceeds by associating every lexical entry with three modules (Vertan, 2015): the Lexical Form Module (that comprises all the graphical variants of the lemmas); the Morphological Module that specifies the morphological features of the lemma; and the Semantic Module that contains the English translation, examples and semantic information. The *TraCES* digital dictionary will thus result in a powerful tool to study the Ge'ez language from both diachronic and synchronic perspectives (Bausi, 2015).

Thus, as much as Dillmann's *Lexicon* contributed to situate Ge'ez at the forefront of nineteenth and twentieth-century philological and linguistic science, *TraCES*'s work is called to upgrade the research on Old Ethiopic to the standards of twenty first-century digital humanities.

ACKNOWLEDGEMENTS

I am thankful to the *TraCES* members and in particular to Eugenia Sokolinski, Prof. Alessandro Bausi, Dr Andreas Ellwardt, Dr Cristina Vertan, and Wolfgang Dickhut for providing me with the core information on which this text is based as well as for their comments to the final draft.

WEB REFERENCES

- COMSt-Comparative Oriental Manuscript Studies*: <http://www1.uni-hamburg.de/COMST/>
Die Schriftkultur des christlichen Äthiopiens: Eine multimediale Forschungsumgebung: <http://www1.uni-hamburg.de/ethiostudies/adw.html>
Encyclopaedia Aethiopica: <http://www1.uni-hamburg.de/ethiostudies/eae.html>

Ethio-SPaRe: Cultural Heritage of Christian Ethiopia. Salvation, Preservation, Research [Ethio-SPaRe]: <http://www1.uni-hamburg.de/ethiostudies/ETHIOSPARE/>

TraCES-From Translation to Creation: Changes in Ethiopic Style and Lexicon from Late Antiquity to the Middle Ages: <https://www.traces.uni-hamburg.de>

ARTICLE REFERENCES

- Bausi, A. (2015). TraCES: From Translation to Creation: Changes in Ethiopic Style and Lexicon from Late Antiquity to the Middle Ages. In Alessandro Bausi, Alessandro Gori & Denis Nosnitsin (Eds.), *Essays in Manuscript Studies: Proceedings of the International Conference Manuscripts and Texts, Languages and Contexts: The Transmission of Knowledge in the Horn of Africa, Hamburg, 17–19 July 2014* (pp. 11-13). Wiesbaden: Harrassowitz (Supplement to Aethiopica, 4).
- Vertan, C. (2015). Towards a digital lexicon of Ethiopic: the TraCES experience. In Alessandro Bausi, Alessandro Gori & Denis Nosnitsin (Eds.), *Essays in Manuscript Studies: Proceedings of the International Conference Manuscripts and Texts, Languages and Contexts: The Transmission of Knowledge in the Horn of Africa, Hamburg, 17–19 July 2014* (pp. 14-15). Wiesbaden: Harrassowitz (Supplement to Aethiopica, 4).

Andreu Martínez d'Alòs-Moner
University of Gondar

THE 25TH STAFF AND STUDENTS ANNUAL RESEARCH CONFERENCE, JUNE 19-20, 2015

The 25th Staff and Students Annual Research Conference of the University of Gondar was celebrated on June 19-20, 2015. The main theme of the conference was “Integrated approach to research, technology transfer, and community services for sustainable socio-economic transformation”. The conference marked the Silver Jubilee of the Annual Staff and Students Annual Research Conference.

The conference opened on Friday 19 at 9 am in the Science Amba Auditorium. Dr. Takele Taddese, Vice-President for Research and Community Service made the opening speech. He was followed by Prof. Mengesha Admasu, President of the University. Prof. Mengesha emphasized the fact that the University of Gondar is one of the first to have been established in the country.

Then at 9:20 am the plenary sessions started. The first speech belonged to professor Afework Kasu from the Ministry of Education and bore the title “Strengthening Research, Technology Transfer and Community Service in Higher Education Institutions during GTP II”. Professor Afework’s talk focused on the booming sector of higher education, which is one of the pillars of the ESDP IV/GTP 1. Accordingly, enrollment rate of students has considerably increased over the last years. This has gone hand in hand with an increase in the budget of the higher institutions. This phenomena, however, faces many

challenges. Firstly, higher institutions suffer from limited funding and lack of skilled staff. Secondly, most of the research work carried out at universities rarely reach the status of scientific publication, with the exception of disciplines such as Medicine and Agriculture where scientific publishing is more common. Last but not least, Ethiopia is not well integrated within research networks. Notwithstanding, the situation also presents opportunities. Several universities are launching ambitious postgraduate programmes and scientific journals have been established in several places. Some desiderata are the improvement of research and community services, enhancing the scale, quality and relevance of technological transfer and spurring research and community engagement.

The next speech, which took off at 9:46, was given by Dr. Tekalegn Mamo from the Ministry of Agriculture and had the title “Global and local food security status and the role of agriculture research in realizing Ethiopia’s agricultural productivity goal”. Dr. Tekalegn emphasized a compelling fact: the world has enough food resources to meet the rising demand from an ever growing population. Yet, governments also face challenges such as the rapid increase in total world population, the unequal distribution of resources and land-related issues such as soil erosion and land degradation. Developing countries are particularly affected by such challenges insofar as they suffer from climate change, acute soil acidity and low use of fertilizers. In these regions it is estimated that 80 % of the necessary production will come from intensification of agriculture. The author recommends to implement a Green Revolution in Ethiopia as it had been successfully applied in northern India by N. Boorlang. This revolution should include value addition packages in farming, impact assessments, soil fertility management and the engagement of sectorial ministries in general.

The next turn, at 10:15, was for Janet Byaruhanga, who spoke on “ASEOWA Support Brief on Ebola”. Dr. Byaruhanga reported that Ebola has been claimed to be the cause for 11,169 deaths. Presently the epidemic is being controlled: Liberia is Ebola free and Sierra Leone and Guinea have reported just a few isolated cases. The Ebola spread rapidly due, in large part, to the lack of funding and human resources. Concerning the later chapter, Ethiopia was, together with Kenya and Nigeria one of the three African countries that provided more volunteers.

After the break, at 11:30, a paper on “Water hyacinth in Lake Tana: Status, Challenges and Focuses” was presented. One of the authors, Tesfaye Shiferaw, called attention to the public of hyacinth, a dangerous weed spreading throughout Ethiopia’s lakes, in particular in Lake Tana. The weed has already occupied large shores of the lake, thus endangering the local habitats and increasing the presence of mosquito colonies. Scientists are currently studying more efficient ways to eradicate this weed from the lake. Following Tesfaye, Samuel Sisay explained how the weed, which has its natural habitat in Latin America, was introduced in the 1970s and 1980s as an ornamental plant in some hotels. The plant rapidly colonized large areas, contributing to the destruction of the biodiversity of Lake Tana and to the depletion of oxygen to its waters. So far the *kebele* that has been more affected by this plague is that of Ach’erra.

Once the plenary sessions were over the turn was for the thematic panels. The panel discussions from the College of Social Sciences and Humanities, School of Education and School of Law were held in the same building and were then divided into two groups. From the College of Social Sciences and Humanities staff members presented papers on topics such as Geography, History and Anthropology. The papers from the discipline of Geography emphasized the importance of remote sensing systems to research into drought-related problems and to contribute to improvement in agricultural output and methods. Within the anthropological discipline, the papers focused on traditional medicine methods and oral literature. In the discipline of History the themes focused on the use of oral traditions as historical sources and on problems related to heritage management and preservation.

In parallel to the academic presentations, several projects that had been awarded with a technology transfer grant were displayed to the public in a big tent mounted for the occasion at the plaza of Science Amba campus. All the different schools and faculties presented innovative technology transfer projects (University of Gondar, 2015a). The School of Technology presented, among others, a solar concentrating collector for 'injera' baking. The College of Natural and Computational Science featured, among others, a project to design and to implement a sensitive security camera for the stores of the University of Gondar. In its turn, the Faculty of Veterinary Medicine displayed a project to improve low quality of crop residue and hay using urea fertilizer. The Faculty of Agriculture presented several experimental projects in the field of agriculture that are being carried out at the Meles Zenawi Campus. The College of Social Science and Humanities featured three projects, one of them on mapping and integrating indigenous knowledge systems in North Gondar Zone. Finally, the College of Business and Economics suitcased three projects, one of which focused on water harvesting technology in Quara *woreda*.

REFERENCES

- University of Gondar. (2015a). *Technology Transfer Booleet: The Silver Jubilee of Annual Staff and Student Research Conference, June 19-20, 2015*.
University of Gondar. (2015b). *25th Staff and Students Annual Research Conference, June 19-20, 2015: Abstract Booklet*.

Andreu Martínez d'Alòs-Moner
University of Gondar