

National Terminology Services of the Department of Arts, Culture, Science and Technology. *Dictionary of Geology / Geologiesoordeboek, English-Afrikaans / Afrikaans-Engels*, 1996. cv + 795 pp. ISBN 1-875061-23-1. Pretoria: Council for Geoscience of South Africa. Price R114,00.

In reviewing this phenomenal dictionary one can easily fall into the trap of losing oneself in the rich variety of terms and their creative equivalents. It would, however, be a disservice to all involved to view this product merely as a bilingual dictionary of specialist geological terminology. In the first instance, this is part of a new generation of dictionaries where the final paper product is based on a rich and much larger underlying lexical (terminological) database. In the second instance, this dictionary is the product of a process that can only be described as a model in both terminographical and in terminological practice. In this review, I will briefly discuss the terminographical practice used in the making of this dictionary, the terminological contribution that this dictionary and the underlying lexical database makes in South Africa, and the way in which this database can, in future, be utilised as a national resource.

Terminographical practice

It is currently accepted that a proper needs analysis is carried out to establish the needs of real language users before any large dictionary project is embarked on. However, in 1974 when this dictionary was officially initiated, the concept of sophisticated needs analyses in dictionary making was still far in the future. That this dictionary was nevertheless the result of a real need is, however, reflected in the involvement of all the role players in geology in South Africa, and the scope and the duration of the project. Each of these aspects will be discussed briefly.

It is a remarkable feat that all the role players who were involved in this dictionary right from its inception stayed with it to the last. The dictionary was initially started between 1963 and 1974 by the Geological Survey, but it was completed in consultation and with the cooperation of the Geological Society of South Africa and all the Geology departments at South African universities. The commitment of these role players is also reflected in the fact that the Geological Survey as an institution undertook the responsibility of this task. True commitment, however, is reflected on the level of the individual subject specialists who prepared for and attended meetings, and spent long hours editing term lists. The extensive list of collaborators and contributors testifies to the genuine involvement of the geological community in South Africa in this project.

The scope of this dictionary is very broad and goes beyond a mere bilingual glossary. It would have been a relatively simple matter to revise and up-

date the existing bilingual term list for geology. It would also have been a simple matter to translate the existing *Glossary of Geology* of the American Institute for Geology which was published in 1972 and therefore available at the time of the first official meeting of this project in 1979. It was, however, decided that a full-scale dictionary project which included all the terminographical phases of extraction, compilation, editing, translation and evaluation, be initiated.

This project was formally started on a full-time basis in 1974 and, with a break of 19 months in 1982/83, was completed in 1996; a period of just over 20 years. Had there not been a real need, there was ample time either to abandon the project, or at least to curtail its scope. As it was, it was carried to completion in spite of the time span and the continuous input required from the subject specialists.

The duration of this project points to a truism in all lexicographical work: *Good dictionaries take time*, and the reason this dictionary took twenty years was that the **terminographical method** was adhered to in all aspects and with a meticulousness that has come to be the hallmark of the lexicographical profession in general. The following brief overview of the method that was followed in the making of this dictionary will show that the duration of this project is mainly a reflection of the acute involvement of subject specialists at all times, which has, however, contributed enormously to the quality of the dictionary and the underlying database.

The extraction of geological terms was carried out in the following way: Although the existing term list was used as a basis, together with the *Glossary of Geology*, numerous new terms were extracted from existing, but also from newly published journals on an ongoing basis. Since the Library of the Geological Survey is the largest collection of geological publications in Africa and has maintained that collection over the years, the terms contained in this dictionary are not only up to date, but cover the whole range of geological publications.

The newly extracted terms (and other relevant information such as the etymology of the term, or known German and Dutch equivalents) were documented, first on a card system, and eventually directly in electronic form. Term lists for 37 subdomains in geology were compiled and sent to the collaborators.

These term lists went through several phases of editing and discussion by subject specialists both in term meetings and individually. Translation equivalents were suggested, discussed and evaluated by native speaker subject specialists. The term lists were also updated on a continuous basis. In fact, one of the main features of this dictionary is the sustained quality input from the subject specialists.

Through all the twenty plus years extensive documentation was maintained on all the relevant research by individuals and all the decisions made by the term committees. This information is now available for reference purposes

on the National Term Bank, and constitutes a national and an international resource.

The bilingual dictionary that was the main purpose of this project and can be said to be its final product, represents a finished and well-edited reference work that any geologist, terminologist or translator should have on his / her bookshelf. A few minor editorial inconsistencies were, however, noted. These inconsistencies refer mainly to the treatment of polysemous items and the indication of collocations and/or domains of occurrence. An example of these inconsistencies will be discussed briefly.

The term *level* has no less than six nominal entries with six different Afrikaans equivalents. Only three of them are clarified by means of a collocation (*vlak (bv in myn)*), a superordinate (*waterpas (instrument)*) and a synonym of the English term (*levelling instrument*). It would be quite unclear to anybody except a fully bilingual geologist which one of the three unclarified Afrikaans equivalents to use for *level* in any given context. Since both *waterpas* and *nivelleerder* are identified as instruments, it would also be quite difficult for an untrained person such as a translator to decide which instrument might be meant in any given context. Other examples abound, and include *drift*, *fracture*, *limit*, *inlet*, etc. These examples also serve to illustrate the importance of indicating the linguistic context in which a term is likely to occur (by means of collocations) or the referential context in which a concept is likely to occur (by means of a domain specification). Since this type of information is more than likely available on the electronic database it is not clear why it has not been included in the dictionary.

Terminological contribution

In terms of its contribution to terminological practice in South Africa, this dictionary and the underlying electronic database can hardly be overemphasized. As far as the translation of the specific geological terms from English to Afrikaans is concerned, many of the translation equivalents reflect the international status of geology and transliterations (such as *heksagonaal*, *longitudinaal* and *erupsie*) are therefore used in abundance. Other translation equivalents are, however, both creative and clarifying. Some interesting examples of translation equivalents include: **adolescent river** as *halfwasrivier*, **bottoming** as *afwaartse uitknyping*, **box fold** as *kofferplooi*, **daughter element** as *volgelement*, **erratic adj.** as *swerf-* (as in *swerfhorison* or *swerfvlak*), **grid method** as *ruitnetmetode*, **sponge-work** as *rysmierdoolhoof*, **stray sand** as *dwaalsand*, **scabland** as *skurweveld*, **squeaking sand** as *fluitsand*, **virgin flow** as *ongehinderde vloei*, **water economy** as *waterhuishouding*, and many more.

The true value of this dictionary for terminological practice in South Africa, however, also lies on two other levels. A major contribution lies in the extensive and rich introductory notes to this dictionary which can be applied in

the training of all terminologists in South Africa. Apart from a preface by the Chief Director of the Geological Survey, and the standard lists of collaborators, reference works and editorial abbreviations, the notes contain an historical overview of the project (which is interesting from a language planning and development point of view) as well as extensive explanatory notes on the linguistic and lexicographical terminology and method, and the editorial layout of the dictionary. The extensive discussion of the geological terms themselves contains a rich mine of information. For example, chronostratigraphic, lithostratigraphic, rock and mineral names have a particular status in geology and are discussed in terms which elucidate their significance for an educated layperson or translator without falling into the trap of becoming too specialised. After all, it is not the geologists themselves that are going to find their reading on these issues here. Interesting equivalents, loanwords, transliterations (especially of some common geological suffixes), and the relationship of the dictionary to the 1991 edition of the *Afrikaanse Woordelys en Spelreëls* are all discussed in detail.

Unfortunately, it is incomprehensible that not all this material is available in the English translation of these notes. Principles of term creation are relevant to all developing languages, and the significance and usefulness of this information does not only apply to Afrikaans, even though the actual terms being discussed are Afrikaans. The omission of this rich data is either an editorial oversight or a narrow view of the role and the general significance of term creation principles in developing all the languages in South Africa. It is also not clear on what principles the information in the *Introduction* and the *Explanatory Notes* was separated. It would have been easier, and more continuous, to keep all the general sociolinguistic, linguistic, terminological and terminographic information together. Nevertheless, the National Terminology Service, and especially Ms Judy de Beer, should be congratulated on this specific record of terminological practice, which is a first in South Africa.

Another major contribution of this dictionary lies in the fact that the bilingual dictionary that was initially to have been the final product, reflects an extensive electronic lexical database that can now serve as a base from which new terminological work and research can be launched. One of the main reasons for the original launch and sustained financial support of this large project, and of the National Term Bank, was the fact that the then government of the day had an active policy of developing Afrikaans. The investment in the electronic National Term Bank, and in the large dictionary projects of the past era can only be justified as a **national resource** if collections such as the geological terms on the Term Bank are transformed into truly national, multilingual collections in which all the languages of South Africa are developed. It is the responsibility of both the Council for Geoscience and the National Terminology Service to contribute to this development. This development can be carried out along the following lines:

- (i) Terminographers should extract the basic terminology in the environmental and earth sciences (which will be used in future primary and secondary school syllabi) for translation into the other official languages in South Africa.
- (ii) Native speaker terminologists should translate these terms into all the official languages in South Africa.
- (iii) Terminologists together with subject specialists should write definitions and explanations for these terms.
- (iv) Terminologists should research the conceptual structure of specialised domains such as the earth sciences, so as to facilitate education and training in these domains at primary, secondary and tertiary level.
- (vi) Terminologists should investigate the general (morphological and other) processes in term creation so as to facilitate the translation of these terms into all languages in South Africa.
- (vii) The Council for Geoscience should actively market this resource (which is unique in Africa and abroad) for further funding and development.

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