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Scandinavian Runic-text Data Base: a Presentation

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The aim of the project is to collect all Scandinavian runic texts in a single computerized corpus; this will mainly be of use to runology but it should also aid several other disciplines. Inscriptions found in the Scandinavian-speaking countries are to be included, and also Scandinavian inscriptions in Great Britain, Ireland, Russia, and on the Continent.

Runic inscriptions have long interested scholars of all historical disciplines, for example, history of the Scandinavian languages, Scandinavian philology, history of religion, and archaeology. It has, however, been difficult to study the material in its entirety because it has been published in many various forms. There are the four great national standard editions: *Norges Indskrifter med de ældre Runer*, *Norges innskrifter med de yngre runer*, *Danmarks runeindskrifter*, and *Sveriges runinskrifter*, together with Wolfgang Krause's and Elmer Antonsen's editions of the inscriptions in the older futhark. For inscriptions from Iceland, the Faroes, Greenland, the British Isles and Russia, one has to resort to various monographs or scattered articles in journals. New finds are reported in publications of different kinds and varying qualities. Many inscriptions have never been published at all, only being registered in archives.

During a runological meeting on Bornholm in June 1989, the idea of a Scandinavian runic-text data base was proposed by Helmer Gustavson, head of the Runic Department of the Central Board of National Antiquities. Everybody was enthusiastic about the idea, and in June in 1990, the Department of Scandinavian Languages at Uppsala University arranged a seminar to discuss how to realize the plan. Runologists from the three Scandinavian countries and England were invited, together with computer specialists and representatives of archaeology, history and theology in Uppsala. The group agreed that the Scandinavian runic data base should be compiled in Uppsala where there already was a Swedish runic-text data base, created by the doctoral students Svante Lagman and Henrik Williams under the supervision of Professor Lennart Elmevik and myself. The Swedish runic-text data base had already proved to be very useful, not only to the two doctoral students, both of whom presented a dissertation on runes that year (Svante Lagman on the dotted runes and Henrik Williams on the *os-rune*), but also to several other scholars in Uppsala and elsewhere.

In spite of the enthusiasm of the runological experts, however, it turned out to be difficult to find ready listeners among authorities to whom we applied for money for the project. They answered that most runic texts were already published and/or that the project did not in itself comprise any research tasks. At the same time, consolingly enough, we were praised for having presented a carefully prepared plan, with a highly commendable purpose, and it was said that the project seemed to promise valuable research achievements. After two unsuccessful applications, Lennart Elmevik and I at last found a private sponsor, Axel and Margaret Ax:son Johnson's Foundation. Work on the project has been going on since January 1st 1993, but at a reduced pace because the sum granted does not allow us to follow the original plan, which is as follows.

The inscriptions are to be divided into three separate categories, defined by means of graphical criteria: inscriptions in the older, 24-type futhark, inscriptions in the Viking Age, 16-type futhark (including the three variants 'normal' runes, short-twig runes and staveless runes), and inscriptions in the Medieval, extended futhark (dotted runes, beside the Viking Age dotted **e**, **g** and **y**, and the runes **æ** and **ø**). The three categories fall into three periods: 1st century – c. 800; c. 800 – c. 1100; c. 1100 – 16th century.

There can be problems in separating Scandinavian inscriptions from West and East Germanic ones when dealing with inscriptions in the older futhark. Compare, for example, the different divisions made by Krause and Antonsen, and see also Düwel (1983, 15f.; Euler (1985). We have decided to include all inscriptions in the older futhark, since the number of those that really are regarded as being not Scandinavian is rather limited. (Perhaps I ought to point out that Anglo-Saxon and Frisian inscriptions are normally not difficult to distinguish because the runes have a somewhat different form from the Scandinavian ones.)

The ideal editor of a runic or any other text ought to have examined the original item personally. Of course, this is impossible in an undertaking with such a wide scope as a corpus of all Scandinavian inscriptions, which will comprise over 5000 entries. Perhaps the greatest problem is how to find the very best source works, from which data can be excerpted and entered in the computer. To that end, runologists in Denmark, Germany, Great Britain, Norway, Russia and Sweden have been asked to provide material to the editorial staff in Uppsala. We are lucky to have been able to attract a highly expert group of people to the project, among them Professor Michael Barnes in London, Professor Klaus Düwel in Göttingen, Professor Jan Ragnar Hagland in Trondheim, Professor James Knirk in Oslo, Professor Elena Melnikova in Moscow, Dr. Rune Palm in Stockholm, Museum Inspector Marie Stoklund in Copenhagen, and Inspector Marit Åhlén in Stockholm.

The Scandinavian runic-text data base will be constructed in much the same way as the present Swedish one. This means that every inscription is to be inserted in three different text files: as transliterated text, normalized text, and translated text.

As regards the transliteration, three different principles have to be applied for the three chronological categories: pre-Viking Age, Viking Age, and Medieval. Transliteration is by no means straightforward, for example there is the question what is a grapheme and what is an allograph, but the main thing is that the transliteration should be consistent throughout the corpus, with one runic grapheme consistently corresponding to one Latin grapheme. Needless to say, the limitations of the computer keyboard forces us to make use of some unconventional signs too.

The next step is to normalize the transliterated texts into an intelligible form of language. Since the primary idea of the project is to facilitate investigations in Old Scandinavian – phonology, morphology, and, not least, vocabulary – the project will normalize all the texts into Old West Scandinavian. This is the ancient language that is best known by researchers in Old Scandinavian language and history. It will thus be possible, for instance, to search for one particular word throughout the whole corpus.

The main problem when normalizing a runic text is how the text is to be interpreted. As is well known, quite a large proportion of the inscriptions are hard to interpret or cannot be interpreted at all, and when you do not know the etymology of a word – this is particularly true of proper names – or, worse, when the overall meaning is not known, it is difficult to give a normalized form that is consistent with the rest of the text. However, there are means of avoiding the difficulties. If a word has been given differing interpretations, we simply write the alternatives (by a slash between the alternatives), and when a word is not interpreted at all, we leave a blank (written as three dots). If we (or the author of our source text) doubt the interpretation, we add a question mark. I am anxious to stress these details in order to ward off possible suspicions as to the reliability of the data base.

It is also very important to point out that every text item (inscription) is provided with a code number indicating the source from which it is excerpted. Thus, there is always the possibility of going back to this source and checking it. As I have already mentioned, the sources are of various kinds. If, for example, an inscription from England has a code indicating that the source consists of unpublished notes by Professor Michael Barnes, you would be welcome to contact Professor Barnes himself.

The first two text files, the one with transliterated text and the one with normalized text, are parallel, which means, that the two files contain exactly the same number of words and that the corresponding words in the two files always hold the same position within the file. A number of search programmes applicable to these text files have been devised by the mathematician Professor Svante Janson in Uppsala.

By using a concordance programme you can create word lists in alphabetical order, or, if you wish, in final alphabetical order. For example, you can ask for all words beginning in **h**- in the normalized text, and the programme will give you these words together with a

parallel list from the transliterated text file with the items identified by inscription codes. In this way it is very easy to see, for example, how often the initial **h**-rune is omitted in words etymologically beginning in *hr-*, as in, for instance, the man's name *Hrólfr*.

A programme called *Kombi* makes it possible to search for words that fulfil certain conditions which you yourself set. For example, you can ask for all instances where the **t**-rune designates the sound value /nd/, as in the runic sequence **statr**, which means *stendr*. Or, to take another example, you can ask for all instances where the **yr** rune designates a vowel. In *Kombi* you can also simply ask for a particular inscription: you give the command by writing its code, and you then get the whole inscription in both transliterated and normalized form.

The third text file, the one with translated text, will contain all the inscriptions translated into English. This file cannot, of course, be parallel to the two others, but when you ask for a particular inscription in *Kombi*, the translated version can appear beside the transliterated and normalized ones.

According to our project plan, there will be a fourth text file, containing various information about the inscriptions: map co-ordinates, registration number in the official archives, type of artifact, name of the rune carver if any, comments on dating, ornamentation, interpretation, etc. This file will be connected to the three others, so that it will be possible to get all this information when you ask for a particular inscription. A mapping programme has been tested on the Upplandic inscriptions, which were already supplied with map co-ordinates, and we hope that in future it will be possible to produce maps automatically which show particular phenomena of your own choice.

As mentioned above, the project has now been under way since January 1993, the editors being Dr. Svante Lagman and Dr. Henrik Williams. Because of the limited amount of money available, work has so far concentrated on Viking Age inscriptions. The data base now contains the Danish, Norwegian and Swedish Viking Age inscriptions in transliterated and normalized form, and, in addition, Danish pre-Viking Age and Medieval inscriptions in transliterated form. Certain data for central Swedish inscriptions have been inserted in the information file: map co-ordinates, names of rune carvers (according to Axelson 1993) and a classification of ornament style (according to the data base *Mälsten* at the Department of Archaeology, Uppsala University).

The text files and the search programmes will be at any scholar's disposal on floppy discs. The programmes will be accompanied by a user's guide. At present the programmes are designed for IBM computers, but in the future, provided enough money is available, they will be adapted to suit Macintosh computers. Paper copies of the text files will always be available. The data base will have to be revised as new finds come to light or new interpretations are made. Information will be announced in the pamphlet *Nytt om runer* when appropriate. The data base could be converted into a book in the future, but this is an undertaking far beyond the aim and scope of the present project.

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