

Berlin-Brandenburgische Akademie der Wissenschaften

# Mitteilungen

aus der Arbeit am

# WÖRTERBUCH DER ÄGYPTISCHEN SPRACHE

## 1

Herausgegeben von

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unter Mitarbeit von

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(Mitarbeiter am Akademienvorhaben Altägyptisches Wörterbuch)

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Die Abkürzungen der ägyptologischen Literatur folgen allgemein den Regeln des *Lexikons der Ägyptologie*. Darauf basiert ein Abkürzungsverzeichnis zur numerischen Codierung aller Daten, das demnächst in der Reihe *Egyptology* des Internationalen Ägyptologen-Verbandes erscheint.

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# FRITZ HINTZE

Im Andenken  
an seine ständige  
Förderung und sachkundige Begleitung  
der Arbeiten für die Weiterführung des  
Wörterbuches  
der  
Ägyptischen  
Sprache



## Editorial

Die ersten zwei vorliegenden *Mitteilungen aus der Arbeit am Wörterbuch der Ägyptischen Sprache* sind der Beginn einer in loser Folge erscheinenden Reihe von Berichten und Resultaten der real seit 1992 wiederaufgenommenen Arbeiten am neuen Wörterbuch-Projekt. Diese und auch die weiteren Veröffentlichungen verstehen sich nicht als eine weitere ägyptologische Zeitschrift: Als Verwalter eines sehr umfangreichen Textarchives ägyptischen Sprachgutes sehen wir es als eine für alle lohnende Aufgabe an, die zum Teil einzigartigen Materialien sowohl für die Zukunft international effektiver nutzbar zu machen, als auch als Basis bei der Fortführung der Sammlung ägyptischer Textzeugnisse anzuwenden.

Die gesamte Arbeit wird durch den Einsatz moderner Computertechnik unterstützt. Dabei erfordert der Aufbau einer lexikalischen Datenbank, die mit einer Textdatenbank und einem Textcorpusverwalter verbunden ist, eine Vielzahl von vorbereitenden Arbeiten, die als solche nicht nur für die Berliner Arbeiten an einem rechnergestützten Wörterbuch geeignete Hilfsmittel sind. Sie sollen für eine Veröffentlichung in den *Mitteilungen* aufbereitet und auf diesem Weg einer möglichst großen Zahl von Fachkollegen zur Nutzung angeboten werden. Der Charakter dieser gedruckten Dokumente wird ganz wesentlich durch deren ursprüngliche Funktion bestimmt - es sind tools für die Computerarbeit, die auf Grund ihrer Struktur und Informationsvielfalt ständiger Veränderung und Erweiterung unterworfen sind. Ihrer Menge nach sind sie nur bedingt in Papierformat umsetzbar. Daher können - über die ausgedruckten Hilfsmittel hinaus - auf Anfrage auch die primären Dateien in computergemäßer Form zur Verfügung gestellt werden.

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The next generation of the Wörterbuch  
Nigel Strudwick

My thoughts on the future of the Wörterbuch are restricted mainly to some ideas of how it should be distributed when its second edition is ready. I would only offer one short piece of general advice to those who are actively compiling the work. I would advise against making the Wörterbuch in whatever final form it takes all things to all men, this will only make it unwieldy and unusable. I have no fundamental objection to the input of information to the computer such as grammatical analysis, but it should not be a prerequisite of the form, if nothing else because scholars cannot agree on the details. I realise that people cannot also agree on reading and meaning, but that can easily be handled. A dictionary is an alphabetical word-list, with references, which are absolutely essential in the case of Ancient Egyptian. I would certainly advocate that even more references be included in the future, since this is a fundamental role of the Wörterbuch. I do not feel that it is essential that the references be included in hieroglyphic form; although interesting and in an ideal world a very good idea, I would argue that it would waste time that the compilers could better spend on getting the basic dictionary functions together. I would say that this was clearly realised by the original compilers of the Wörterbuch.

#### Aspects of publication and dissemination

As one who would not consider himself a philologist, I would prefer to keep the bulk of my remarks to suggestions as to additional forms of publication and dissemination of the finished work, namely those using electronic media. I do not wish to see the demise of the printed book, and a further printed version of the Wörterbuch would be extremely useful. Nonetheless, printing costs are rising, and with the present reprints of the dictionary costing in the region of 900.-- DM, the likely cost a new Wörterbuch is impossible to estimate.

In the course of the Berlin meeting in September 1992, at which this paper was originally presented, I felt most strongly that the question of the final form of the publication was being ignored, or at least not being given enough consideration.

There is indeed a case for considering at the present only the issues of encoding and treatment of texts, and of the form in which the material should exist in the computer database. A strong argument against over-concern about the final form is that, if media additional to the printed book are to be considered for the publication, it is pointless to speculate on what might be possible, given the pace of change, since that publication is a number of years away.

I accept this up to a point. That point is very simple: unless we have some concept of the sort of material we wish to make available to readers in

the new Wörterbuch, data cannot be collected and arranged in the most useful fashion. This is my only real concern in relation to the present project.

I should now like to turn to some individual subjects. Dictionaries are the ultimate reference work, and it is absolutely essential that they can be accessed in the course of other work. This should be kept in mind when considering ways in which the Wörterbuch can be electronically published.

There are a number of possibilities. The most popular one today is to publish the Wörterbuch on CD-ROM, accompanied by small management programs which can allow the material to be accessed. This would mean that the Wörterbuch can effectively be re-published on a regular basis, depending on how much new material is brought in; CDs are now relatively inexpensive to make, and the whole database can be placed onto a CD and disseminated much more quickly than if it were going to a printer. A very recent development is the appearance of CD ROM production drives which can be attached to present office computer equipment, and which allow the user to make his own discs, rather than having to send them away to a mastering factory. In this way, once the initial investment for the drive has been made, the Wörterbuch project will not have to estimate how many discs to be made at one time. CD ROM is more cost-effective, since no-one is going to pay for a new printed version every 2/3 years, but a CD service could be set up for a subscription. The Wörterbuch could also be kept 'in print' this way much more easily, and hopefully might just make this version cheaper than the original, but that of course depends so much on financing and other commercial factors.

Another method which is less technically sophisticated but which allows for more rapid updates of material is the use of the FTP archive. FTP stands for FILE TRANSFER PROTOCOL, and is a means of accessing read-only electronic archives using international academic and commercial networks. If the Wörterbuch project were to be connected to the central computer resources at the Humboldt-Universität, an archive could be kept into which data files relating to certain aspects of the Wörterbuch material could be kept and updated very regularly. It would be incumbent on scholars who use the archive to find the best way of using it; it ought to be possible to keep information here which is not available either in the printed version of the book or in the CD ROM.<sup>1</sup>

### An example

As well as electronic media through which any future Wörterbuch should be disseminated, software has to be provided to make the material in the database

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<sup>1</sup> For an explanation of FTP, see my article 'Electronic communication— possibilities for Egyptology' presented at the 1993 Geneva 'Informatique et Egyptologie' meeting. Until the proceedings of that conference are published, a copy will be available via anonymous FTP at the site [newton.newton.ac.uk](http://newton.newton.ac.uk) in the directory `pub/ancient/egypt` under the name `Strudwick.Geneva.txt`.



accessible to users. With the caveat mentioned above about how quickly software goes out of date, I developed very rapidly for the Berlin meeting a Hypercard stack which shows one way in which the Wörterbuch could be put out. This is in no way intended to be a formal suggestion, but just one way in which the material could be used in a user-friendly manner.

Hypercard is a pioneering program in "Hypermedia" which handles data in many different ways. It is written for the Macintosh and comes with each new machine, but there are comparable programs which run under MS DOS. Hypercard uses as its basic analogy for each file a set of "cards", which in Hypercard terminology is called a "Stack". The program does not use a traditional data structure in the manner of xbase programs; the concept is that it parallels the way in which scholars use index cards. Control buttons can be added to cards, and these can be programmed in Hypercard's own language, which includes various special effects as well as more conventional programming constructions. Graphics can also be added to cards, and it is also possible for the program to display photographs. Externally programmed commands can be added to the stacks to extend the range of capabilities.

The advantage of hypermedia is that one does not have to proceed linearly through the cards. Specific links can be made from one card to another, or the programming language can be used to jump dynamically from one card to another. Thus one can easily go where the reader/user wants to, rather than having to follow pre-set paths. These facilities which make Hypercard and its comparable applications so useful as a way of getting through a disparate mass of material.<sup>2</sup>

Some cards from the sample stack are shown in figures 1-4.

Fig. 1 shows the entry for the enclitic particle *ʒ*

Fig. 2 shows the Belegstellen for *ʒ*

Fig. 3 shows the index of words in Egyptian order in the stack

Fig. 4 shows the index of words in English translation in the stack

The buttons at the bottom of the cards allow the user to navigate to different options. In the word index lists, clicking on a word will take the user to that entry. The emphasis is that there is no fixed approach to the data, but rather that the user can move where he wishes, when he wishes. It is also quite simple to add personal notes to a card, rather like writing in the margins.<sup>3</sup>

The advantage of a hypermedia (or similar) approach as a way of distributing the Wörterbuch is that it can be operated in a manner akin to that in which most Egyptologists think: that is, we browse around in information, jump forward a couple of pages as ideas strike us, and then go back to where

<sup>2</sup> Some further examples of use of hypermedia may be found in my paper 'Data-Management in Research and Teaching', *Informatique et Egyptologie* 7 (1990), 137-46.

<sup>3</sup> A copy of this stack, under the name Woerterbuch.hqx, is available via anonymous FTP at the site newton.newton.ac.uk in the directory pub/ancient/egypt.

we were. A more conventional database approach, although undoubtedly more efficient in certain circumstances, such as searching a database for all examples of a particular combination of circumstances, does not really reflect the way in which we work with a dictionary. It is also possible with a computer to incorporate bookmarks into such a system as I am describing; versions of the Wörterbuch in languages other than German are likewise relatively easy to produce.

I do not feel I can stress this approach too strongly - we must not, if we are going to publish the Wörterbuch in any method other than paper, restrict ourselves to computer approaches which are conventional, and by that I mean the regular database. Hypermedia approaches offer us a wealth of possibilities to begin to emulate the manner in which we approach the information which can be stored in a computer. I believe that the main way in which we are going to be able to convince Egyptologists to make greater uses of computers is for the information on them to be presented in ways in which they do not appear to require a complete change of approach. Once users can be convinced that we do not have to change our ways dramatically, then I am sure that progress will be more rapid.

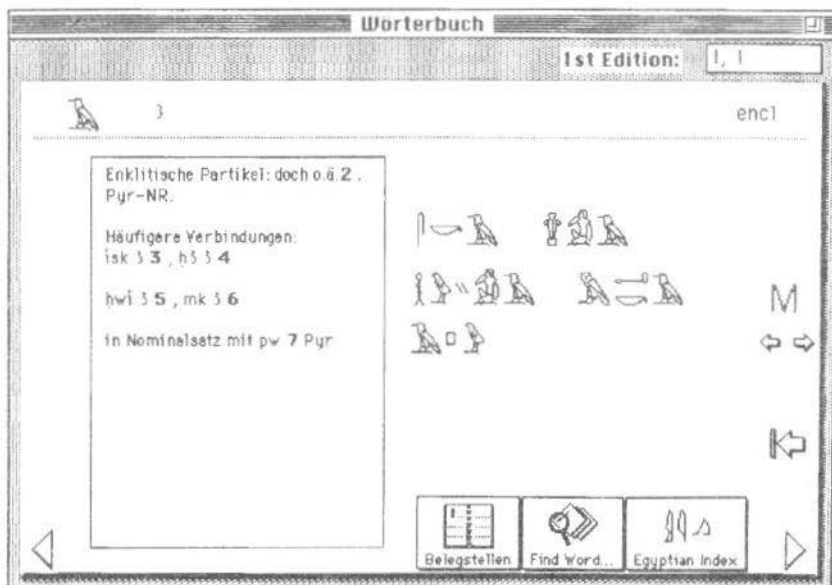


Fig. 1 Card for the enclitic particle 3



Fig. 2 Belegstellen for 3

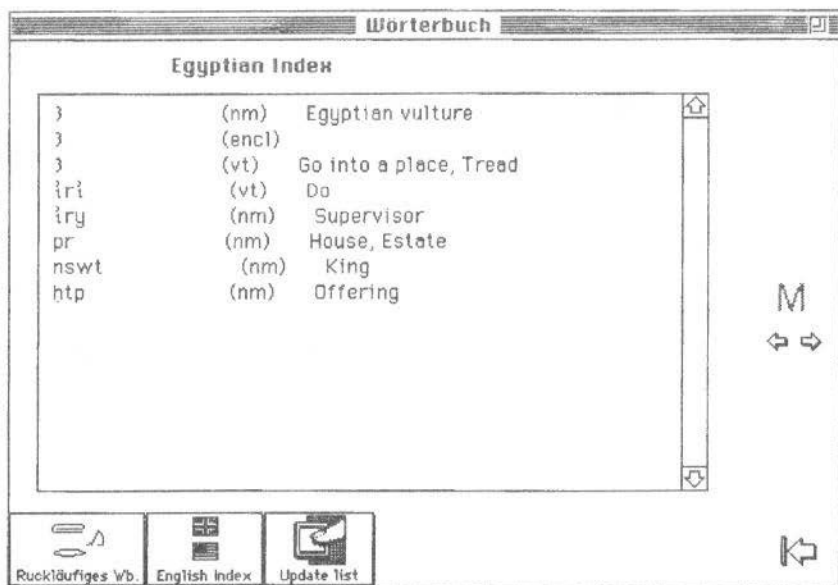


Fig. 3 Index of words in Egyptian order in the stack

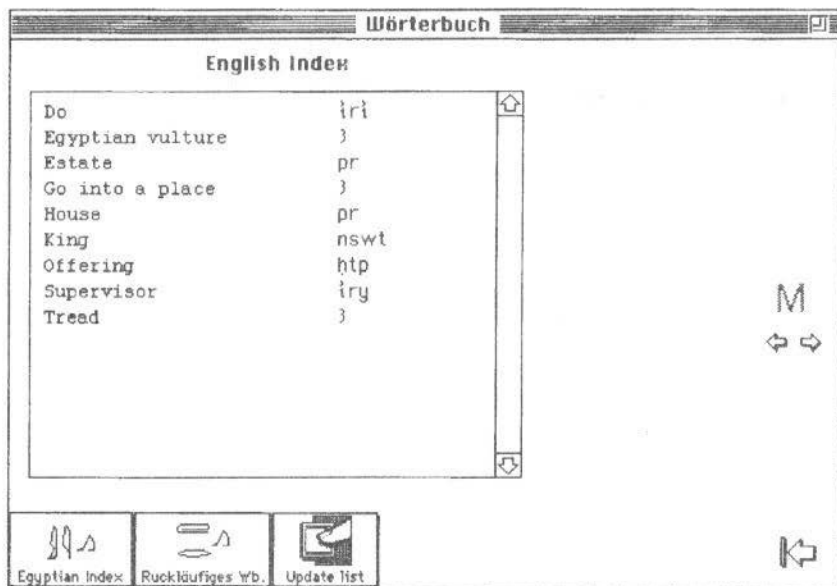


Fig. 4 Index of words in English translation in the stack