

## CHICAGO DEMOTIC DICTIONARY

**Janet H. Johnson with the assistance of Kate Lockhart,  
Jonathan Winnerman, and Ariel Singer**

In July 2014, the beginning of this academic year, we posted online the files for “Months,” “Days of the Month,” and “Numbers,” the last appendices of the Chicago Demotic Dictionary (<https://oi.uchicago.edu/research/publications/demotic-dictionary-oriental-institute-university-chicago>). This means we have completed what we now refer to as “stage 1”: compiling a supplement to the Demotisches Glossar assembled by Wolja Erichsen and published in 1954. All the letter files and all the supporting appendices are now written and posted online as PDF files. They will never, however, be “done” because there are always new texts being published with new words or new usages for old words. At the 12th International Congress of Demotic Studies, held in September 2014, in Würzburg, Germany, Jan Johnson gave a lecture entitled “The CDD [Chicago Demotic Dictionary] Is ‘Done’. Where Do We Go from Here?” in which she talked about our plans for publication and goals for the future.

Most of this year’s work reflects these two aspects of this project. Publication will take two forms: updated PDF files posted online for free download and a printed hard copy publication based on those files. The latter is intended for institutional use while the former is aimed more at individual users. Both formats will provide the same content; the only change is the medium of publication. Further in the future, we will try to transfer all the information contained in these files to an online searchable database which will offer more flexible opportunities for the collection and organization of data. Such a database will allow scholars around the world to carry out simple searches for two or more “connections” between words or a word or example of a word with two or more elements/aspects. For more about the proposed online searchable database, see the CDD report in last year’s *Annual Report*.

Our first task has been to convert the dictionary Word files to a Unicode font<sup>1</sup> in order to bring our files into compliance with current online and digital standards. Since this is the third time we have had to convert the Dictionary files because of developing computer technology, we knew that there would be issues. We had not, however, anticipated the severity of the complications that arose in what should have been a simple conversion. We first needed to identify a Unicode font that has all the necessary characters for writing Egyptian in transliteration; Hebrew and Aramaic in transliteration; Greek and Coptic in their original scripts; the occasional symbol from other scripts, such as Meroitic; as well as various conventional symbols used to express relationships among words, etc. We thought we had found such a font, but once the conversions began, we discovered that the font does not display well on some computers, making it impossible to use. We found a second font which displayed correctly but still didn’t have all the signs and symbols we need. Finally, Tom Urban, the managing editor of the OI Publications Office (see separate report), identified a good Unicode font called Gentium Plus which has most of what we need. There are also no restrictions on making modifications, for example, adding additional characters as well as bold and bold-italic versions of the letters. He is currently modifying this font so that it has every character (including Egyptian hieroglyphs, thanks to a font created for the OI many years ago by Cleo Huggins) that the Publications Office needs to publish its very wide range

of books and which can be posted on the OI website for users to download as our “standard.” We are very appreciative of his support!

We are also very appreciative of the efforts of Sandy Schloen and Miller Prosser, of OCHRE Data Service (see separate report), for the actual conversion of the Word files from our old system to the new Unicode font and DOCX format. Sandy wrote a program for the conversion, the CDD student employees Kate Lockhart, Ariel Singer, and Jonathan Winnerman “stripped” some of the format coding from the letter files, and Miller began applying Sandy’s conversion program to them. Then the students had to proofread every converted file. Difficulties were encountered almost immediately with the conversion of the tens of thousands of images, both scans from photographs and line drawings, illustrating the orthography (“spelling”) of all the words we cite. Because Demotic is a very cursive script (visually not unlike Arabic), these images of the photographs and “hand copies” are an essential part of the Dictionary. For this reason, we have decided that we shall prioritize immediately the recovery of every image in the “old” version of the CDD, which will be manually added to the new file after conversion to the Unicode font. In addition, we shall convert the (Microsoft) Word documents to (Adobe) InDesign, a desktop-publishing program used for years by the Publications Office, which is more stable than Word (meaning that scans don’t “slip” around the page) and which can better handle the higher-resolution scans we are using. This will entail a bit more learning on our part and a bit of additional font work by the Publications Office, but we think the final product will be superior. We anticipate that the remaining conversion of old Word files should proceed with many fewer problems. It also means that all the individual images of all the citations in the CDD will be available for input directly into the online database when we move in that direction. For more on these image-related problems and their resolution, but from the point of view of one of the students actually doing much of the work, see the last section of this report.

It is nice to see the conversion take place and realize we are moving forward, but it is also frustrating how computers, which ideally are tools to simplify such tasks, actually add their own dimension of problems. We are very fortunate to have so many skilled people in the OI to help us with these problems. Both Jan and Brian Muhs, the associate editor/associate director of the CDD, would like to thank Sandy, Miller, Tom, Leslie Schramer (associate editor in the Publication Office), and Paul Ruffin, the Oriental Institute IT person, for all their assistance. We couldn’t have done it without you! Despite all this help, we are very sorry to have had to work without the assistance of François Gaudard this year. After eighteen years of extremely valuable and dedicated service to the CDD, first as research assistant, then as research associate, and ultimately as associate editor, François took the completion of our letter files and appendices as the opportunity to resign and concentrate on his own research (see under *Individual Research*). He comes into the OI regularly and seems to be getting a lot of work done, so we are delighted for him. Since so much of the work on the CDD this year has fallen on the shoulders of our very capable student employees, we thought it might be useful and interesting to get their perspective on “life on an OI project.” And so, the rest of this report emanates from Kate, Jonathan, and Ariel.

*From Kate:* Joining a decades-long project like the Demotic Dictionary at its tail end presents a certain set of challenges; all the heavy lifting has been done, but little details remain to be sorted out — and “the devil is in the details,” as the saying goes.

The bulk of the three years that I have worked as a research assistant for the Dictionary have been spent double-checking and cleaning up the bibliographic information in our

appendices, particularly “Text Information.” Text Information records the thousands of Demotic texts cited in the Dictionary itself: their date and provenance, their inventory numbers, where they have been published, and so on. But the volume of data in the file has been less of a problem than the length of time over which it accumulated and the number of people involved in gathering it. Many entries had not been updated in years, and new publications needed to be added. Other texts had duplicate entries or mismatched cross-references, the sort of thing that easily happens when many different individuals add information to a document over a long period of time.

Working with Text Information also put me in the position of dealing with larger problems that had not been resolved by anyone before me, usually because they involved difficult or thankless tasks. Sometimes those problems boiled down to the tiniest of errors. In my first week on the job, I searched frantically for a facsimile of a Demotic graffito in an early nineteenth-century book on the monuments of Nubia, only to find out that the book had two separate sets of plates with different numbering systems; our entry for the text pointed to the wrong set of plates. Other problems have required more detective work: for example, reconciling the inventory numbers given in Wilhelm Spiegelberg’s unpublished papers with those given in modern publications, or tracking down the publication of a text in Russian, a language that I and most other American Egyptologists do not know. Resolving these bibliographic glitches may not seem terribly exciting, but it is an essential part of providing users with access to the data behind the Dictionary.

*From Jonathan:* Work at the Chicago Demotic Dictionary has changed greatly since I first joined the project in the summer of 2011. This is true not only regarding the different tasks or aspects of the project on which I focus, but also regarding the people alongside whom I work. When I first entered the Dictionary office, I had the pleasure of working with an entirely different group of student employees and, of course, François and Jan. Since then, most of these coworkers have moved on, most noticeably François, whose regular presence and expertise is definitely missed around the office. As the Dictionary project contracts, changes, and expands in new directions, I have had the opportunity to work with a whole new group of student employees, research associates, and technical experts. Yet what I have always admired about the Dictionary is the connection that it maintains with the past. Here I am not just referring to the “ancient past” of Late Period and Greco-Roman Egypt but more so to the history of the project itself and, most noticeably, those who have contributed to it.

When I first entered the office, I had taken two quarters of Demotic and was generally familiar with the history of scholarship in the field, yet I had very little knowledge of the personalities behind this history. From my first day in the office, this began to change. First, I was struck by the presence of multiple portraits which had been taped to the walls. After asking François, he revealed that these pictures represented a selected “genealogy” of some of the most influential Demotic scholars. Notably, these included Wilhelm Spiegelberg, one of (if not the founding member of) the field, and George Hughes, a professor at the University of Chicago who supported Jan when she initiated the project and remained her mentor for the rest of his life.

As my duties at the Dictionary changed, it became clear that the personal legacy of everyone who worked on or contributed to the project was an inseparable part of it. Most of my work over the years has focused on writing and checking the appendices, some of which contain very obscure references. This meant it was not long before I was digging through the copious number of old records in the Dictionary office. Some of these, like the handwritten,

unpublished dictionaries of Spiegelberg and Herbert Thompson, were regularly consulted, well organized, and written in a somewhat accessible manner. Others, however, were never intended for a “professional” audience and contain unique (if hard to decipher) glimpses into these scholars’ more personal lives. The scattered notes and correspondences of Spiegelberg’s *Nachlass* are one such collection. Though difficult to navigate, these files contain a wealth of otherwise unpublished texts and information, many of which take the form of Spiegelberg’s notes or personal writings.

As my work expanded in scope, I began making changes to the letter files as well. It was in this way that I first began working with “the cards,” the original, pre-computer data-storage system used by the Dictionary. Essentially a giant card catalog, these notes were unlike the personal materials mentioned above in that they were created specifically for the Dictionary project and did not mention authorship. Yet, even here it is possible to recognize the personalities of past contributors, for example, through a few choice words, phrases, or interpretations.

Despite being surrounded by these and similar materials on a daily basis, the item that best represents for me the uniquely personal dimension of the Dictionary was found not during work on any letter file or appendix but during the course of reorganizing the office as we prepare to transition to an online database. While cleaning out one cabinet, my co-worker, Ariel Singer, and I were surprised to discover a box containing a Demotic ostrakon wrapped in an old newspaper. The Demotic, written in an uncommonly legible hand on a rather well-preserved “sherd,” can be paraphrased as follows:

The words which we write by hand on  
an ostrakon in order to give it as divine praise  
to a wise man, a good scribe and a good teacher,  
George Robert Hughes.  
May his name be excellent for eternity!

After a casual investigation, I discovered that the author of this touching tribute was most likely Robert Ritner, former Dictionary employee and current professor of Egyptology (as well as my advisor and the chair of my dissertation committee). Of all the old files and objects, this stands out to me as the strongest mark of the legacy of those who once worked on the Dictionary.

As the project undergoes one of the most dramatic changes since its inception, the shift from the PDF format to an online, searchable database, I strongly believe that this personal connection will not be lost. On the one hand, most of the materials mentioned above will eventually be scanned and included as metadata for each entry. In other words, users will finally get to see the older backbone of data and research lurking behind the neatly displayed final product. On the other hand, staff members can make changes to the Dictionary in real time. This not only allows users to directly share in the results of our work, but it also allows staff members to answer queries immediately or see contributions in action. In this way, the format of the Dictionary might change, but its general approach and personal connections will remain intact.

*The most recent addition to our team, Ariel, contributes:* I became a part of the CDD just as the last stage of compilation had been completed and the new effort to convert the Dictionary files to Unicode had begun. Our process starts after the files have been run through the conversion program in order to transform them from their original fonts (some of which

were even designed by Jan!) into the New Athena Unicode font. The editing involves reading the file with the proverbial fine-toothed comb. There are some obvious problems (such as hieroglyphic signs turning into small empty boxes), but many issues are harder to spot and require a near-obsessive attention to detail. The editing moved along surely at first; however it soon became clear that the New Athena font would not work properly in all platforms and would have to be changed. We tried a number of different options, each with intractable flaws. We finally decided on an “OI” version of the Unicode font Gentium Plus, which has been modified to contain all of our (and all the OI Publications Office’s) special characters and still allows room to expand.

The resolution of the “great font debacle” was a relief; however, we have now run into a serious issue with our images of the Demotic texts, as hinted at above. Jan realized that somewhere in the conversion process all of the image files had been degraded to a resolution that left many unreadable. This was the first portent that Microsoft Office might not be up to the job. It was decided that the problem should be tabled until the editing had been completed and we had investigated a method for swapping out all of the images for their higher-resolution counterparts. That approach worked until the day that I opened up the first of the M files and realized to my dismay that previously well-ordered images had been scattered haphazardly throughout the document by some mysterious technological force. This required us to begin a precipitous shift to the much more stable platform of Adobe InDesign. We are only in the nascent stages of this switch; however we have begun one of the most important components, the extraction and naming of over 40,000 image files.

The first step was figuring out how to move the high-resolution images out from our old documents with their legibility intact — this turned out to be rather more complicated than anticipated. After many trials (and much time Googling the problem), we ended up with a folder of over 1,600 images for first M file, all without useful names. The next step was to design a naming system that would be flexible, unique, and contain all necessary information about the images so that they could be found and used with relative ease in the future. The solution is effective titles, which contain a plethora of data but are unfortunately long and unattractive. Thanks to the help of summer Publications Office interns Le’Priya White and Jalissa A. Barnslater-Hauck, this endeavor is progressing and, when finished, will ensure that the images published are of the best possible quality, that they are archived in a sustainable fashion and that, hopefully, they will be easy to adapt to an online interface.

Once all of the images have been extracted and named, the next step of our plan is to replace each old image file with the new one, while concurrently shifting the new Unicode files into InDesign. This will undoubtedly hold new and unexpected challenges yet also provide us with further opportunities to build on and fine-tune the monumental work of the CDD. For me personally, it has been a real pleasure to work with the staff of the CDD and the Publications Office. I have been amazed at the openness to new ideas that I have found working here and the dedication to the Dictionary project as a whole.

### **Note**

<sup>1</sup> According to Wikipedia ([https://en.wikipedia.org/wiki/Unicode\\_font](https://en.wikipedia.org/wiki/Unicode_font)), “A Unicode font (also known as UCS font and Unicode typeface) is a computer font that contains a wide range of characters, letters, digits, glyphs, symbols, ideograms, logograms, etc., which are collectively mapped into the standard Universal Character Set, derived from many different languages and scripts from around the world.”