Graduate students in German studies have always been relying on quality reference materials to conduct their research. For many graduate programs, a course in research methodology is the first course that graduate students take. Yet, unlimited access to reference works has often been limited by high price or the hours of the libraries that have invested in copies. Reference works are by their very nature to be accessed only at the library. One recognizable result from the electronic revolution of the past decade is the impact on reference publications. The proliferation of electronic encyclopedias, often included free with the purchase of a computer, is in undeniable sharp contrast to the past costs of the same information. The universal appeal of electronic reference works is not lost in the world of German studies. Firstly, and particularly important to graduate students, the reduction in costs makes individual purchases of substantial works a tangible reality. Secondly, the speed of research is greatly improved with electronic reference works. Electronic dictionaries can search for phrases and not merely words. Cross-referencing is easily identifiable and results can be cut and pasted into a word processing program.

While the appeal and demand for these products is not likely to be doubted, the quality and source of these new reference materials is often rightly called into question. The first step in research is to identify the source of information, taking for granted that the source is reliable. However, as these new versions of standard electronic tools make their way into the mainstream of research in German studies, they ought to be analyzed like any source. This “meta-review” intends not only to identify some of the most valuable electronic research tools for German studies, but also seeks to question the inherent validity of such works in order to justify their current and future use.

For many, electronic reference is becoming equated with the Internet. There are a number of online multi-lingual dictionaries, search engines, and it seems that every author has a dedicated web site. While the
Internet has proven itself to be a good source for information in general, does not hold true for most academic subjects, particularly when dealing with literature, history, or culture. The nature of the Internet poses problems for academic research that relies on proven quality and a dedicated citation location. The nature of self-publication on the Internet is highlighted when compared to the nature of publication in an academic journal. There is rarely an editorial process for a web site, no guarantee of permanence, and generally few citations. Examples abound of copious sites with questionable quality and little or no professional credentials. Kevin Solway's Otto Weininger web site, for instance, despite being the most comprehensive on the Internet, is a biased site upon closer examination. Mr. Solway does not contest this point: "If Otto Weininger continues to inspire genius through what he has left us then I will consider half my work already done. His book Sex and Character is one of the few masterpieces of modern times."

Here, subjectivity of the site is shown through the selection of quotes and the emphasis placed on Weininger's "genius." If one considers the initial effort involved in producing and maintaining a web site of this magnitude, one must also ponder the motivation behind this effort. While many of these sites can provide a quick reference for dates, publications, and quotes, there still exists the implicit danger that a web site is merely a "fan" site, dedicated to the alleged "genius" of a revered author. In the pursuit of academic research materials, it is the very nature of the Internet that should cause immediate suspicion among undergraduates, graduate students, and instructors alike.

Currently, the only electronic publication focusing on literary research in Germanistik on the Internet is Reclam's Literaturecherche und Internet. While providing a decent introduction to using the Internet for literary studies, this CD-ROM highlights a general trend among electronic publications: the return to traditional resources. This CD focuses almost exclusively on material available from the electronic versions of university library catalogs, focusing less on the reality of most Internet searches. The CD even highlights its focus on catalogs by stating that most of the reliable and recommended information to be taken from the Internet is derived from libraries. Once again, reference materials are inherently connected to traditional sources. It is exactly this point that is of the utmost importance. The electronic revolution does not need to lessen the importance and usefulness of traditional sources; it can merely modify aspects of these works. The highest quality electronic reference works build on this principle. They take traditional methods for publication of reference materials and modify the access to this information. The best products do not change the content or the source of the content, but alter the method of access to the content that was previously valued as high quality. In exploring these materials, three categorizations are used to identify current and future reference works in German studies: Language, Literature, and Culture.

Language

Language related CD-ROMs are almost exclusively electronic versions of older print materials. Companies with brand-name recognition such as Langenscheidt, Duden, Meyer, and Brockhaus have transferred many of their traditional works into electronic format. Many of the traditional language reference works are available in the PC-Bibliothek series. PC-Bibliothek is a shared user-interface for accessing reference materials. An appealing aspect about the shared user-interface is that multiple volumes of Duden or Langenscheidt products can be searched simultaneously. This could be of particular use in a language lab where one computer is dedicated as a German reference station. Multiple discs could be loaded onto the hard-drive, thus sparing the user the endless swapping of CDs. Of the many CDs produced in the PC-Bibliothek series, the one most likely to be used by a wide variety of students is the combination Duden Universalwörterbuch / Oxford German-English Dictionary, priced around €55. Langenscheidt offers a wide variety of specialized dictionaries within the PC-Bibliothek series available in their new media catalog at: <http://www.langenscheidt.de/deutsch/katalog/home_neuemedien.html>

Literature

CD-ROMs for German literature can be separated into primary and secondary literature sources. The oldest source for electronic texts in German is the well-known Projekt Gutenberg web site. This site accepts scans and edited texts from people all over the world and offers them to all users without charging a fee. The inclusion of an author on this site is partially determined by the willingness of a person to do the work of rendering a text into electronic form. While every major author in the German language is under copyright protection is included, there are also some mi-
nor authors that would not normally be a part of this collection but—thanks to the efforts of their "fans"—now may find a greater audience.

The major commercial producer of primary literature in electronic form is the *Digitale Bibliothek* series. In contrast to the popular Internet site Projekt Gutenberg, the *Digitale Bibliothek* series reproduces the actual pages from standard academic editions of the works. This allows quoting from the standard edition, a necessity in research. The process has been simplified by the user-interface of the program. When a user copies a section of text, the reference information is automatically included when pasted. In addition to the ease of quoting from the text, the *Digitale Bibliothek* includes a powerful search engine and extended note-taking abilities. Users can mark texts, annotate, and export their notes for portability. While the *Projekt Gutenberg* web site is useful for quick reference and for searching unique quotations, the *Digitale Bibliothek* interface allows for more extended search functions. The *Digitale Bibliothek* includes over fifty volumes, which can be accessed at their web site at <http://www.digitale-bibliothek.de/>.

Both the *Projekt Gutenberg* and *Digitale Bibliothek* offerings are partially limited to copyright-free materials. In *Projekt Gutenberg's* case, they exclusively publish materials without copyright protection. The *Digitale Bibliothek*, in contrast, publishes primary literature from non-copyrighted sources, but offers more recent versions of secondary literature within the same framework.

Despite some earlier fears about electronic books killing the print publishing industry, it appears that the old-fashioned method of making books using paper products will remain dominant for a while. Single title electronic books can be understood, and best used, as reference tools rather than as a readable copy of a work. In contrast to the electronic-library concept of *Digitale Bibliothek* and *Projekt Gutenberg*, other commercial ventures publish individual works on CD-ROM or the Internet. Generally, they are more recent (than 1932), and the copyright holder receives a share of the profits. Reclam offers a series of CD-ROMs that are similar to the annotated versions of their most popular volumes. Reclam CD-ROMs also include multimedia annotations to distinguish them from the print versions. Their CD-ROM for *Die Verrätere Ehre der Katharina Blum*, for example, includes a reading by Heinrich Böll, text annotations and references to the film version by Volker Schlöndorff.

Secondary literature resources for example, are mostly electronic replicas of the print version with a dramatic price reduction. However, the print version from which the text is derived tends to be the second-most recent volume. The publishing companies still reserve the most recent versions of their literature encyclopedias for the print market. Despite not offering the latest versions, these sources are excellent for general reference for most works of German literature. Two of the best encyclopedias for German literature are Killy's *Literaturlexikon* and Kindlers *neues Literaturlexikon*. Killy's is published within the *Digitale Bibliothek* user interface and therefore has the same full-text searching capabilities as others in that series. There are a number of other reference works published in the *Digitale Bibliothek* series including the *Symbollexikon* and *Lexikon der Sprache*. Similar in the searching capabilities, *Systema* has published a series entitled *Elexikon*, including the *Lexikon der deutschen Literatur*.

The full-text searching offered in the *Digitale Bibliothek* series appears limited compared to the searching capabilities offered in the *Kindl* CD-ROM. *Kindler* provides the users with the ability to conduct searches based on criteria in individual categories such as author, publisher, year, country of origin, etc. The integrated search capabilities in *Kindler* are reflected in the price of the product, which is one of the few electronic reference tools over $100.

**Culture**

There are a number of electronic encyclopedias that have cultural entries. *Microsoft*, *Brodkian*, and *Bertelsmann* all publish extensive multi-media encyclopedias, but their extremely broad focus often tends to water down the length and quality of the articles. There are specific "cultural" encyclopedias that are being published in Germany. So far, the best representative of the cultural encyclopedia is the *Retrospect 2001*, by *Digital Publishing*. *Retrospect 2001*, in cooperation with *Spiegel* magazine, provides in-depth articles and multi-media for virtually every topic in German history and culture for the twentieth century. Unlike some texts, the information on the CD-ROM continues up to the present day. Users can also download new articles as they become available. The short, well-written articles provide quick reference for the researcher and can also be useful for the instructor seeking authentic cultural materials for use in class.

In contrast to the all-encompassing *Retrospect 2001*, there are a number of individually themed CD-ROMs for cultural reference. *Erinnern für Gegenwart und Zukunft* and *Anne Frank, Ein Haus mit einer Geschichte*, for
instance, both provide specific multi-media references for Holocaust studies. *Erinnerungen* features video clips and articles dealing with the personal experience of two individuals. The CD-ROM consists of materials from Steven Spielberg's *Survivors of the Shoah Visual History* project. It is likely that there will be more CD-ROMs published from the extensive collection of multimedia from this project. *Anne Frank* presents a virtual tour of the Anne Frank house in Amsterdam and includes information about the family, their living situation and their biographies. The commercial market for culturally related CD-ROMs is too small to make it economically feasible for larger companies to invest in software development. Both of these CDs were developed by subject experts and it is to be expected that future culturally-related CD projects will continue to be developed by experts in the respective field.

Suggestions for Use and Implementation

Just as with all media purchases, the user should have the right to preview the product before purchase. With many of the products that share a user-interface, the preview can be conducted with a review of one product within the user-interface framework. If the university is to purchase these products, access to the works is of the utmost importance. Unlike traditional publications that merely need to be placed on a shelf, electronic works generally need to be installed on a computer for use. This presents a new set of problems for accessibility. The university that purchases the software should have a clear plan for installation and usage. Many of these products require a basic installation that still requires the CD-ROM for use. If this is the case, then the basic installation may be installed on several machines, and the user need only check out the disk and insert it into an available computer. There are of course many solutions to problems of accessibility and the given technological environment of a university will affect the way in which software is employed. The important factors in implementing software are considering how, when, and by whom the software will be used.

There is little doubt that electronic publications will have more of a presence in future research in the Humanities. There has, however, been relatively little attention paid to these resources as credible sources for reference and research. Technology is often seen as either an easy solution to a problem, or a poor substitute for traditional print media. The reality of electronic publication lies, of course, somewhere in the middle. In German studies, and in the Humanities as a whole, it is crucial that the impact and influence of technology is continuously assessed. Traditionally educated scholars must also become familiar with newer technologies so they may have the authority to properly evaluate them concerning their strengths and weaknesses. Particularly in the area of reference and research, many see electronic publications as providing the quick and easy answer. By analyzing a cross-section of electronic publications, the same old story is present: message over media. In reference and research, the form of information should not affect the content. Electronic publications need to be analyzed for their content first, before the advantages of the electronic form can be explored. Despite these self-evident statements, many reviews and evaluations of new media value the technology of the media over the content. As educators and scholars make choices about future library or departmental purchases, they should use their traditional skills to analyze for content and properly consider how the media will be used. In doing this, the few true advantages of electronic media will become apparent, while their apparent disadvantages will re-emphasize the power of (and need for) traditional print media.

Notes

2. See the *Projekt Gutenberg* web site for their interpretation of copyright law and electronic texts. Generally, the author needs to be dead for seventy years before texts can be freely distributed electronically.

Works Cited


