

The making of 'Designing universal knowledge'

Gerlinde Schuller interviewed by Greg J. Smith
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A month ago I posted an enthusiastic review of Designing universal knowledge, a book written and designed by Gerlinde Schuller. What fascinates me so much about this writing project is the rigor with which it catalogues the structures, technologies and institutions that package and sanction knowledge. Gerlinde heads up the Information Design Studio, an Amsterdam-based organization 'specializing in the development and design of complex information systems' that are used for visual explanation and journalism, as navigation aids and as tools for consulting. In addition to her own studio, Gerlinde has worked at Cartlidge Levene (London), Irma Boom Office (Amsterdam) and taught at the Willem de Kooning Academy in Rotterdam. Gerlinde was kind enough to engage in the following discussion which delves into several of the prominent themes featured in her book.

Greg J. Smith: On working through Designing universal knowledge it is clear that there are several topics that are quite prominent. One of these is the encyclopedia. In your biography within the text you stated that you consulted some 500 hundred encyclopedias during your research. Could you elaborate on your statement that encyclopedias are 'national time capsules' and speak to how the encyclopedia format relates to the organization of your book?

Gerlinde Schuller: The encyclopedia is the oldest format used for the systematic, complex collection of knowledge. Encyclopedias claim to be objective, but they are frequently characterized nationally, since each country seeks to highlight its most significant political events, scientific achievements and inventions. Due to language barriers, encyclopedias are usually tailored to one nation or one language area. Even in the case of Wikipedia, national tones cannot be avoided in the individual language page variants.

The fact that my book makes use of an encyclopedic A-Z ordering principle is only one aspect of its design and structure. My aim was to undertake both a theoretical and design-oriented examination of the theme of knowledge collections, meaning to search in two directions – for content and codes. For the design, I therefore developed a book system that combines codes from encyclopedias, hypertext, databases, and automatic desktop publishing processes. The exclusive use of system fonts also resulted from the approach to fathom the theme in terms of design. Hence, the design comments on the book's theme and adds a further level to it. That is in fact only possible if you write and design the book at the same time.

So the writing informs the design and vice versa. Since you've identified the importance of this kind of synergy, could you list and describe some exemplary books or print work that has influenced the design of Designing universal knowledge?

The book design was not inspired by the area of print but by the Internet and digital archive and DTP systems. My objective was to find an adequate, non-exchangeable book form for the addressed theme, and today, the theme of knowledge collection predominantly takes place digitally. I could also well imagine Designing universal knowledge as a networked E-book. The setback, however, would be to draw a natural line in regard to its scope.

In the area of print, I am interested in general works, the content and form of which follow certain storytelling concepts that mutually enrich each other. Off hand, the book 'Exquisite pain' by the artist Sophie Calle comes to my mind, in which she describes the story of a personal relationship in a combined diary, countdown and reportage format. I also found the newspaper action of the activists' group The Yes Men in November 2008 exciting. They distributed a fake edition of The New York Times dated July 4, 2009, in which they declared the end of the war in Iraq. It was accompanied by a pretty good imitation of The New York Times website. The group had appropriated a familiar system and convincingly filled it with their own contents.

Like the encyclopedia, Google is a constant point of reference in your text. Whether mapping the 'commercial knowledge tree' of Google-owned services, their policies in China or questioning the search engine habits of your interview subjects, the corporation is omnipresent. Given your question 'what knowledge entails power?' in the preface of the book, exactly how powerful of an entity do you consider Google to be?

Similarly to how it is in the book, Google cannot be circumvented in reality either, if one is dependent on researching information. The firm is the largest global player in the area of digital knowledge collection. It not only owns the most frequently used research tool, the Google search engine, it now also has a quasi-monopoly on geographical data – Google Maps, digital books – Google Book Search, videos – YouTube, and soon also individual health data – Google Health and movement grids – G1 mobile phone with GPS BreadCrumbz function. These offers are currently free of charge, something which furthers and accelerates the collection of data. But who guarantees us that, in the future, Google won't process and resell personal data of the users that it collects via the use of these offers through data mining, the way companies like ChoicePoint are already doing now.

It doesn't bother me at all that certain information is collected by firms for commercial purposes, that's nothing new. What does disturb me, however, is the high concentration of personal information in a single firm. Competition for information as a resource is in full swing. Everyone should be aware that, in the information age, data belong to the most valuable goods. So you should watch out whom you entrust with your personal data and demand to know what exactly happens with them.

Of course, many people don't watch whom they trust their data with and we see phishing schemes cascading across Facebook and spambots hijacking twitter accounts – all because some users installed questionable third party applications or were too trusting with their login information. Since identity theft isn't exactly a new phenomenon, why do you think people so willingly hand over their sensitive data to corporate entities? Is this just a case of people being too apathetic to read the terms of service associated with various web applications and online communities?

It is unclear what can be done with the data. No company reveals the disadvantages of collecting sensitive data or their future strategies in the small print of their commercial terms and conditions. Large-scale identity theft is relatively new, since it has only been possible in recent decades to collect data digitally, globally and at high speed. Moreover, computer technology has become so complicated that it is impossible for a layperson to understand how certain systems function, what they enable and what they don't.

I was personally surprised by a piece of information imparted to me by the Dutch hacker and activist Rob Gonggrijp in an interview for my book. He told me that on each piece of paper printed on an office's printer there was an almost invisible code of yellow dots. This code – similar to the IP number of computers – links the owner of the printer to the printed piece of paper. Because printers are today mainly purchased via credit card, the personal address data of the buyer is thus available in the company's computer systems. This link of a printed-out sheet of paper to the printer, and hence to the buyer, is now being used by the police to apprehend perpetrators.

This system reminds Rob Gonggrijp of Stasi methods. The Stasi used to try to find a type sample of every typewriter in the GDR to surveil the population. Today's printer code system not only resembles these methods, it is also pursued globally, since HP, Epson, Xerox and other printers are available throughout the world. Moreover, these companies do not remove this printer-specific codification system when selling their printers to states such as China. Non-democratic governments are therefore given a tool to help them control their own population. That's a good example of an automatic information system applied regionally, nationally and globally. It functions in an optimal way, yet it is rarely perceived by the public – although it is not secret. The theme of data abuse didn't seem to interest people for a long time, though. In recent times, the debate is being brought up in the media and is therefore increasingly attracting public attention.

Let's return to Google for one last question about data and control. Does PageRank have the same political or organizational implications as the Dewey Decimal System or ISO standards?

The PageRank algorithm was developed at the end of the 1990s by Sergey Brin and Larry Page and used for the first time in the Google search engine. It has meanwhile become the most common method to evaluate and weigh websites – but only because money can be earned through this. In addition, website operators can buy a higher ranking in the list of search results. This often leads to financial capacities instead of high-quality content determining the sequence of the search results. What motivated the Dewey Decimal System and the International Organization for Standardization were objectivity, simplification and a smooth, international exchange. PageRank is a commercially oriented ordering principle. It is not objective and in many cases not particularly practical. However, it ensures that the search engine remains free of charge for the users.

During the interview with Richard S. Wurman, we talked about better ways to find information and why search engines do not organize the search results according to the LATCH principle – location, alphabet, time, category, and hierarchy. Why, for instance, can't search results be organized according to the date of the entry, that is, according to topicality? There are many possibilities to enhance the functional aspects of search engines.

Given the expansive research you conducted, it is safe to assume that some material did not end up in the finished text. Was there any material that 'didn't make the cut' – if so, please list and discuss some of these topics and your decision making process that led to your not including them in the final version.

The network diagram on the back inside cover shows the way in which I elaborated the theme. This network of concepts was three times as large at the beginning. The concepts had to address an aspect of the main themes, 'universal knowledge' and 'complex knowledge collection', but also be interesting in regard to information design. Mainly very general keywords were kicked out, such as hierarchy, register, matrix, search, and others – basic knowledge that can be assumed. The concepts between which the most interesting links existed and that offered me an exciting design-oriented perspective were maintained – a highly personal selection criterion.

In the end, the book is the documentation of a personal research project and not an encyclopedia attempting to be objective and complete. That becomes clear very quickly when

taking a look at the A-Z index of a mere 177 keywords. The network of keywords also lets one derive the selection criteria regarding the essayists and persons with whom I conducted interviews. I tried to find a matching interview partner or essayist for each of the thematic clusters. The other keywords were selected afterwards based on the discussed themes in the interviews and essays.

Designing universal knowledge is not a theoretical-philosophical book. It's a design book on the topic of knowledge collections and how they are designed. I found it important that the book was made by 'information designers' – eleven of the fourteen contributors work in design disciplines.