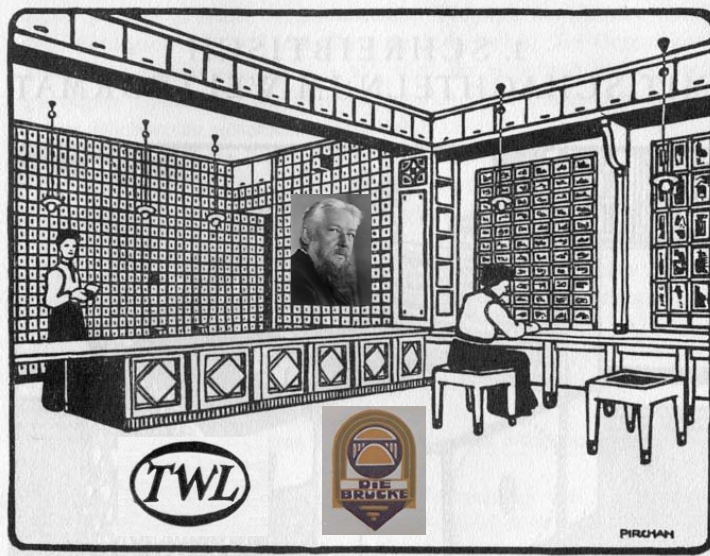


# Hidden roots of mediating information

- aspects of  
the German  
information  
movement

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# Overview: Mediating information through



- **Collecting** the world
- **Advertizing** through mobilizing images and knowledge
- **Organizing** scholarly work
- **Educating** (engineers)

## A card game!

In spring 2004 the presentation of a special exhibition in the Jewish Museum was accompanied by the display of cards of a card game ("happy families", "Quartett") in the exhibition rooms. The cards visualized and mobilized interesting information on the exhibition's topic. The visitor was subtly urged on collecting and organizing the cards to get a complete game and so on visiting all the parts of the exhibition. The cards were used as means to advertise the different areas of the exhibition as well as to transfer knowledge and to educate the visitors.

Which reference does exist from this experience to the topic of this paper? What has the formation of a geographical society in Switzerland in 1884 to do with mediating information, what the opening of a company in 1905 which aimed at improving contemporary advertising, what the fact that a Nobel laureate of chemistry spent most of his money from the prize to found an agency to improve scholarly work and last but not least what the foundation of an educational center through an engineering society in 1922?

This paper will hopefully show connections. It shows that collecting, organizing, advertizing and educating as hidden roots of mediating information were essential parts of the activities of early "information institutions".

# Collecting the world



**Middle-Swiss  
Geographical-Commercial  
Society, founded in 1884  
in Aarau, Switzerland**

**Journal „Fernschau“  
(Remote view, tele show)**

**Creating an Ethnological  
Trade Museum**

**Karl Bühler as custodian**

Collecting as cultural and scholarly activity gained some attention in cultural studies and the history of science in recent time. Objects of collections can promote the mediation between the sciences and the world of everyday life. The cycle of collecting – as collecting, ordering, and creating – was even viewed as a foundation for every scholarly work and research.

In 1884 the Middle Swiss Geographical-Commercial Society (MGCS) was founded in Aarau to create an "Ethnological Trade Museum".

Beginning with the year 1886 the society published a journal or yearbook with the meaningful title "Fernschau ("Tele Show" or "Remote View").

In the museum of the MGCS a “young man”, a merchant, named Karl Bühler worked as secretary and custodian.



**Enhancement of geography and its education**

**Collecting photographs, ...**

**Standardizing formats and metadata**

**Using index cards**

**Developing educational media**

**Cooperation of Swiss museums**

The aims of this society were the enhancement of the scholarly study of geography as well as the promotion of trade and export. Viewed from today it made early attempts in the advancement of globalization. The museum contained a library and further collections e.g. of photographs and maps. The topic of its collection combined the subjects ethnology, geography and economy.

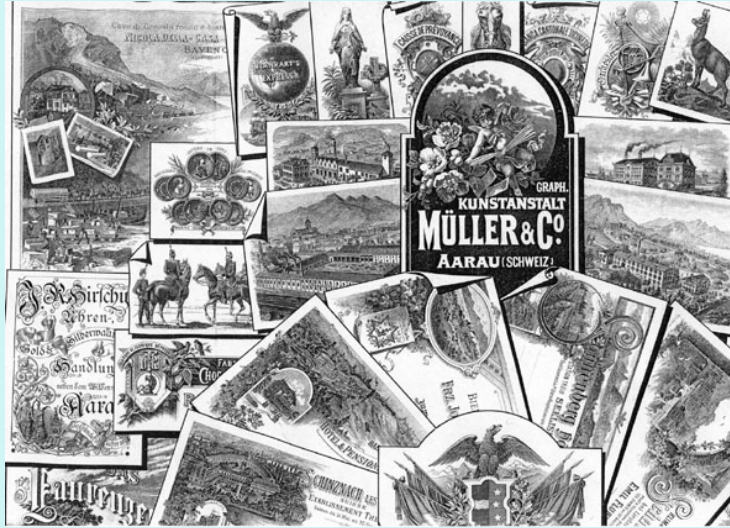
The photographic part of the museum was one of the earliest examples of a photo museum. In the journal Bührer described the treatment of the photos which was proposed also for other photo museums. All photographs were superimposed on carton of a major standard format and carefully described and annotated with "metadata": the geographical location, the title of the displayed object, the year of the exposure and the running catalog number.

The president of the Society Brunnhofer emphasized the importance of geographical instruction for the anticipated 'world state' and saw visual perception as crucial for instruction in geography. The society developed a "Wanderausstellungsschrank", a cupboard as a travelling exhibition.

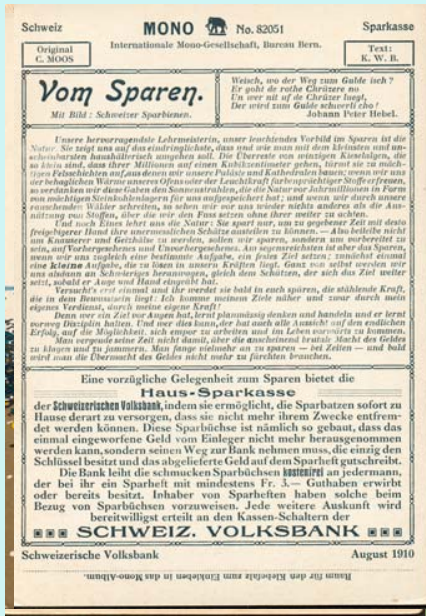
A further goal of the MGCS was to establish a cooperation of the Swiss museums, because Switzerland has no national museum in this time.

Bührer's idea of collecting was comprehensive, the Trade Museum should have been a "world exhibition in small". Bührer used index cards of a special format not only in the library and museum but also in all branches of the business management of the society. "Every sheet is used in full consequence only for one note, which will be classified at once up right through application of a title." "This card system is especially recommended to scholars for collecting and ordering their excerpts." The society was liquidated in 1905, the same year Bührer founded a new company.

# Advertisizements in the „Fernschau“



# Advertizing through mobilizing images and knowledge



## Internationale Monogesellschaft:

- 1905 founded by Karl Bühler in Winterthur, Switzerland
- Raising the artistic level of advertizing through issue of "Mono" cards in standardized format
- Advertizing as an „adult education program“
- Tourist bureaus as inquiry offices

The "Internationale Monogesellschaft" founded as a stock corporation in 1905 by Karl Wilhelm Bühler showed a close connection to advertizing. The aim of this enterprise was to raise the artistic level of contemporary advertising. One way to accomplish this was the publication of “Monos,” little cards or leaflets in a standardized format (advertising picture-cards). The "Mono-System" was planned so that the individual monos would complement each other and, collectively, form a well designed, comprehensive encyclopedia.

The Monogesellschaft was also an enterprise to support tourist bureaus. They should develop into inquiry offices through introducing the mono-system that means a standardized format for their publications.

Saager wrote in 1912 what can be viewed as the spirit of the Monogesellschaft: "The totality of advertizing printed matter will be the basis for the public library of the future, which mediated pleasure and academic instruction in large scale and in fact free of charge... Advertizing appears as upholder of culture, as an adult education program endowed with gigantic funds."



**Foundation of the „Bridge, the International Institute for the Organization of Intellectual Work“ in 1911 through Ostwald, Bühler and Adolf Saager**

**The “World Brain” - Creating a comprehensive, illustrated world encyclopedia and an inquiry office and mediation agency for organizations and individuals**



Wilhelm Ostwald, being aware of the information problem and looking for alternatives to the scientific journal in scholarly communication, was one of the predecessors of many later efforts to improve the communication of scholarly information. Ostwald's activities in the organization of scholarly work led to the foundation of the Bridge ("Brücke"), the "Institute for the Organization of Intellectual Work", in 1911 by Wilhelm Ostwald, Karl Bühler and Adolf Saager.

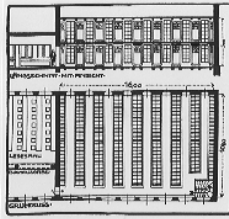
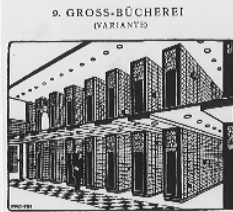
The Bridge aimed to organize intellectual work through the introduction of standardized means of communication. It sought to create a "comprehensive, illustrated world encyclopedia on sheets of standardized formats". (The Bridge was supposed to be the information office of the information offices, a "bridge" between the "islands" where all other institutions - associations, societies, libraries, museums, companies, and individuals - "were working for culture and civilization.") The Bridge should be an "inquiry office (Auskunftsstelle)" for scholars and a "message exchange or mediation agency (Vermittlungsstelle)" for organizations and individuals

The image of the "Bridge" is echoed by an essay of one of the first sociologists of modernity Georg Simmel who saw the visible connection between two locations as one of the greatest human merits which found in the building of a bridge their culmination. Ostwald used the metaphor of the "bridge" also as an image for "science" which he saw as a bridge which had to be maintained constantly in good condition and never had been completed. "The continuous further development of science is comparable to the continuous doing of tests of endurance through which the defective points were detected and repaired again and again." A metaphor with similar use is Neurath's picture of an boat.



## Organizing intellectual work through

- means of communication as the uniformity of image, language, and sign
- means of publication
  - Preservation of the mobility of thought (monographic principle)
  - Standardizing printing formats
  - order of publications through decimal system

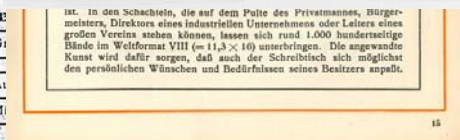


AUSSAESSUNGEN DER GROSSBÜCHEREI (Varianten)

Länge	10,00 m
Breite	10,00 m
Höhe d. Bücherständer zusammen	5,00 m
AUSSENRAUM DER BÜCHEREI	400,00 m <sup>2</sup>
Fläche der Gänge	6,48 m <sup>2</sup> (1/4 der Fläche)
Angestrichene Deckfläche	11,20 m <sup>2</sup>
Angestrichene Wandfläche	112,00 m <sup>2</sup>

FASSUNGSVERMÖGEN

pro Quadratmeter Platz 0,5-6, D 20-4.000 Bände  
Kabinett mit einem Stuhl 1,00 m<sup>2</sup>  
10 0,5/2,00 1,00/2,00 1,50/2,00 2,00/2,00 2,50/2,00 3,00/2,00 3,50/2,00 4,00/2,00 4,50/2,00 5,00/2,00 5,50/2,00 6,00/2,00 6,50/2,00 7,00/2,00 7,50/2,00 8,00/2,00 8,50/2,00 9,00/2,00 9,50/2,00 10,00/2,00



According Bührer and Saager the collection of the intellectual work of the past occurred in museums and libraries or institutions like the Institut International de Bibliographie. For the Bridge it was also necessary to organize contemporary intellectual work e.g. through address indices of all institutions and intellectual workers.

They differentiated two means for the organization of intellectual work:

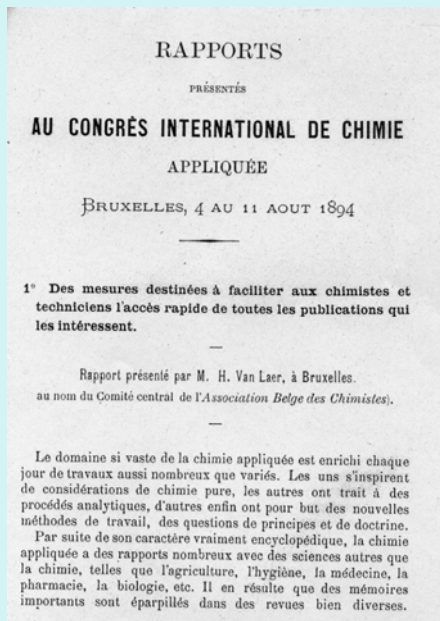
- means of communication like the uniformity of means of impression (image, (international auxiliary) language, and sign)
- means of publication like the “preservation of the mobility of the thought (Erhaltung der Beweglichkeit des Gedankens)” what from concluded the monographic principle as well as the uniformity of the formats of printing and those of the order of publications through the decimal system. All leaflets of the Bridge and also some books of other publishers contained meta-data, a bibliographical description with notations of the Decimal Classification on the back-cover or inside the book.

A further Bridge leaflet with the title “Lack of space and world format” describing how a large number of volumes could be shelved in relatively small rooms if the formats were standardized contained pictures of libraries and offices viewed (which looks very similar to those by Le Corbusier. (1925). The decorative art of today. Cambridge, Mass.:MIT Press, 1987. Here pp. 74-75.)

Also his activities for an auxiliary language were part of Ostwald’s efforts of organizing scholarly work. This language was for him a “general instrument of

# Ostwald - „The World Brain“

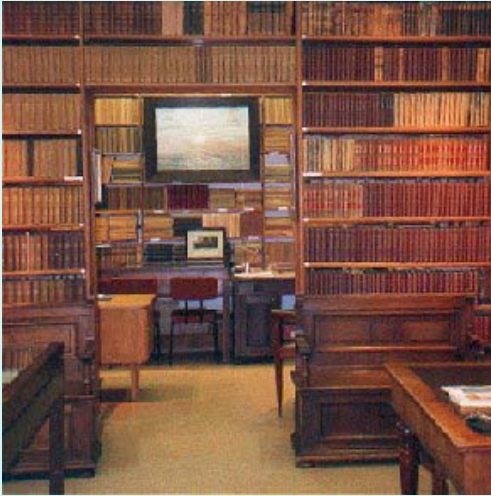
## Memorial on the Foundation of an International Institute of Chemistry in 1912



(1932)

With the idea of an International Institute of Chemistry Ostwald applied the principles of the Bridge to his special subject. He had forerunners, e.g. the chemist H. van Laer, who proposed a “bureau international de la littérature chimique” in Brussels in 1894. Ideas about the further centralization of scholarly work in general had been around already at the turn of the century and might have had influence on Ostwald. In Ostwald’s private library a book by the Hungarian teacher and internationalist Ferenc Kemeny (1860-1944) can be found in which Kemeny asked for a “general inventory” which is necessary because of the overproduction in scholarly work. (Kemeny was the founder of comparative pedagogics in Hungary and a founding member of the International Olympic Committee. He had the idea of a “congrès circulant et permanent” on the foundation of a scholarly periodical combined with an international abstract and news journal.) Kemeny cited the German-Swiss philosopher Ludwig Stein who proposed already in 1897 an “Universalakademie (universal academy)”. Stein who had contact to Ostwald until the end of their lives wrote: “Also in science today everything calls for centralization, for definitely organized collecting points which harmonize the business of science.”

# Ostwald on media and communication



## Thinking machines as tools of „intellectual work“:

- **Theory of communication media ("Verkehrsmittel")**
- **Auxiliary language**
- **„Art of discovery“ part of intellectual inventory of every one!**
- **Advertizing as „communication act“**

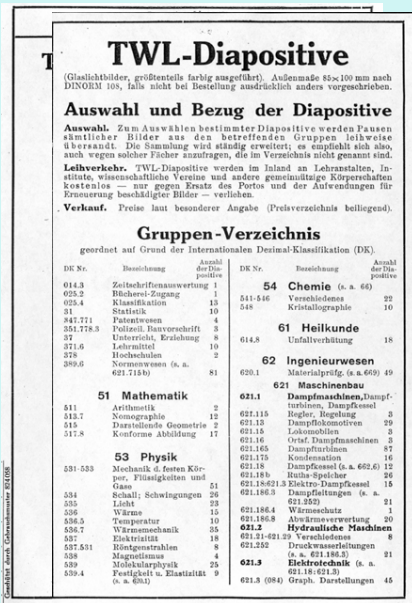
Ostwald formulated a rudimentary theory of media for communication ("Verkehrsmittel") that would help memory and intellectual work through organization. In his view a book can be seen as a "transformator for the creation of intellectual qualities", an "intellectual machine" or "thinking machine". Also a notebook or a card index was in this sense a "machine" for him. Similar metaphors of the book as a "machine" to transform "thought-energy" were used by Paul Otlet.

Ostwald even gave a talk at the International Advertising Convention in 1929. For Ostwald advertizing was a "communication act" ("Verkehrsvorgang") between the advertiser and the woood recipient. "... the object of all advertising is the treatment of the masses... It is very closely related to the theory of intercourse ("Lehre vom Verkehr")." In his opinion advertising had been developed to a neutral news agency.

Ostwald also was engaged in educational discussions throughout his life. He visited the Reichschulkonferenz in 1920. For him "by a free arrangement of instruction as regards time and content vastly much more is accomplished than by the usual schematizing. .... Only by this kind of instruction is it possible also to develop social acting and thinking in children."

Ostwald was also aware that teaching research skills was necessary e.g. to enable effective use of libraries . For Ostwald also education for research could be organized and "the art of discovery" was able to become "a part of intellectual inventory of every one".

In 1918 a paper by Ostwald with the title "A lack in the education of the engineer" called attention for the lack of ... we would say today ... a key skill: "the



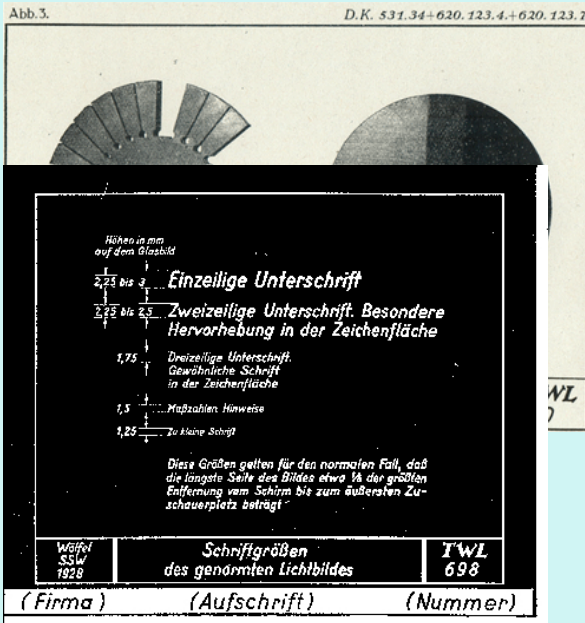
„Head Office for Technical and Scientific Teaching Materials (TWL)“, founded in 1922 by Oskar Lasche, headed by Georg von Hanffstengel



From 1922 bis 1927 German contact institution to the Institut Internationale de Bibliographie in Brussels

The "Technisch-Wissenschaftliche Lehrmittelzentrale" (TWL, Head Office for Technical and Scientific Teaching Materials), proposed by the engineer Oskar Lasche (1868-1927), director and member of the board of the AEG Turbinenfabrik (turbine factory of the Allgemeine Elektrizitätsgesellschaft), and headed by the engineer Georg von Hanffstengel, was founded in January 1922 by the "German Federation of Technical-Scientific Societies (Deutscher Verband technisch-wissenschaftlicher Vereine)". One reason for the activities to found the TWL was the necessity in engineering to mediate new skills and to improve methods for education and training in Germany after the lost World War .

The TWL was the German contact institution for the "Institut Internationale de Bibliographie" in Brussels in the twenties until 1928. Its main task was to facilitate and create exemplary visual teaching aids for engineering education especially by means of photographs or slides through centralization, rationalization, and organization.



**Central collection of slides**

**Standardizing metadata and formats of slides**

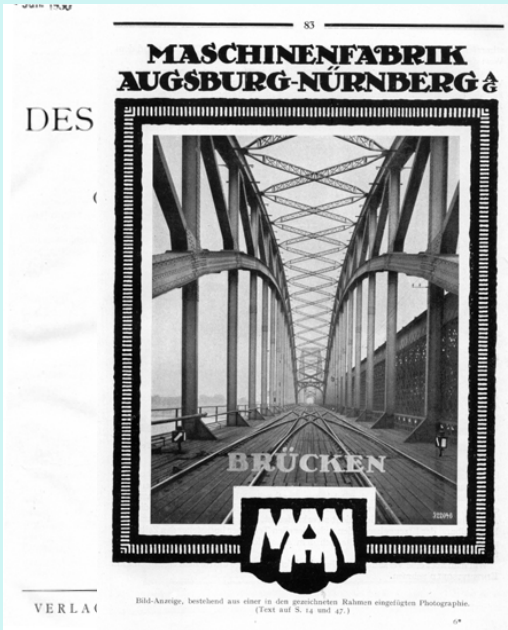
**Publishing German translations of the DC**

**Educating engineers through „Guidelines for lectures“**

Lasche saw two different challenges: to reproduce what is known with highest efficiency and pedagogical fortune and “to permanently keep the productive engineer up-to-date about the most actual achievements with the aim to stimulate his research activity.” The planned central office should have disseminated its material through a comprehensive special catalog which could be viewed “like a living textbook” “All important results of construction and research in the area of engineering and its borderlands should be fixed in standardized form with graph and photography.” Later in the TWL named itself “Archive of Technical progress” and in 1934 it took as a subtitle “with central archive of German technology”.

The TWL issued the first German translations of the Decimal Classification as little leaflets, beginning with the section 62 (Engineering Sciences).

Ostwald’s awareness of the necessity of activities in teaching research methods was reflected by TWL’s Oskar Lasche and Hanffstengel who published papers on the improvement of lectures and talks as well as on the use of photos when giving a lecture. Together with the “German Federation of Technical-Scientific Societies” “guidelines for lectures” were published. The TWL cooperated with other engineering institutions in the area of education, e.g. with the “German Committee for the Technical School System (DATSCH) (and finally merged in 1932 with it).



**Standardizing paper formats**

**Including valuable information to be kept permanently**

**Scholarly papers and advertizing**

**Book on advertizing of mechanical engineering**

In a book about “The technical slide” Hanffstengel proposed - as he called it - a “living catalog”, which was a collection of drawings and photographs on standardized cards to present offers of sale to the customer by a sales representative.

In 1922 Hanffstengel proposed to use standardized paper formats for advertising and to include in the advertizing such valuable information that the advertizements could also be used as teaching aids which could be kept permanently and can be found again any time because they were arranged systematically. In some respects he also saw abstracts of publications as teaching aids as well as mediation to the full text or simply as publicity for the fulltext.

(Hanffstengel described three tasks of advertising: attracting attention, memorizing the object, and facilitating the decision to buy something. In his view “advertising ...has hardly discovered means to unburden memory”.) Publications for advertising should be offered in a form in which they could be continuously stored and immediately retrieved at all times. His ideas grounded on a mixture of advertising and instruction which also took place in excellent articles in scholarly journals.



**“documentation’, a sort of clearing house of information mediating between the producer and the consumer of published material” (Predeek, 1937)**

**Combination of „documentation” with a library**

**Service provided by engineers**

**Answering inquiries for information**

**Supplying companies with abstracts of current literature**

In 1933 Albert Predeek founded at the Technical University Library in Berlin an institution to serve the needs of the industry, the “Informationsstelle für technisches Schrifttum” (Information Center for Technical Literature”). For Predeek it was necessary to combine documentation with a library because otherwise documentation is “like a castle in the air”. The service was done by trained academic engineers which belonged to the staff of the library. Inquiries by industrial companies were treated as well as it “also supplies industry with abstracts of current literature in certain fields, translation of articles,... and is equipped with very efficient automatic photostating machinery”.

In the case of Predeek the mediation of information appears in a sense in which it has been used in the following decades until today. (Already in 1909 Ostwald predicted the arrival of the information specialist as intermediary as a consequence of the growing division of academic work.)

(See Herren for a further German information institution named German Central Information Office (Deutsche Kongress-Zentrale, DKZ), established in 1934, which collected extensive personal data of foreign and German scholars using card indexes. These data were used for mediating propaganda on German science as well as to create networks for the purpose of spying. Even material of Otlet's archives were incorporated in the DKZ, when German occupied Belgium in 1940.)

# Similarities of these early „information institutions“

**Importance of standardization and metadata when  
collecting and organizing information objects**

**Educational view**

**Advertizing as important part of thinking or  
activities**

**Connection to information literacy**

**"It is not enough to found libraries. It is  
necessary ... to instruct those eager for  
knowledge in the best methods of utilizing  
their treasures." (Ostwald, 1911)**

The examples of the TWL as well as of the "Internationale Monogesellschaft" show that there was early on a common ground for information and documentation and advertizing. The proximity of information systems to advertizing is illustrated today through the fact that many retrieval systems, e.g. systems to locate journal articles, allow the customer to search for products with the aim that the customer buy for example the full text articles or the books.

Similar to notions of Otto Neurath the examples mentioned above also show an interrelation between advertising or rather visualization and education. Even the mobilization of images can be found here.

The growing disintermediation with the importance of the end user in information seeking today leads to growing activities in the mediation of information literacy and information skills through librarians, a topic, which was observed also at some of the institutions mentioned in this paper.

The actual discussion in information literacy also includes aspects of visualization and viewing the user of information systems as a consumer. For example Christine Pawley wrote: "Information literacy is a matter of making enlightened and informed consumer choices."

(In her paper Pawley showed how to overcome the packaging and fragmentation of information through recontextualization and situating users at the center of information processes, thus hybridizing the identity of consumer-as-producer and producer-as-consumer in echoing Walter Benjamin.

**Thank you!**

Website Thomas Hapke

[www.tu-harburg.de/b/hapke/](http://www.tu-harburg.de/b/hapke/)

or

<http://www.tub.tu-harburg.de/index.php?id=192>

Also echoing Benjamin the text plays itself with its topic in the sense that you find an organized collection of historical institutions, individuals, and facts to remember us of some hidden roots of our contemporary activities as information specialists and librarians and to mediate contemporary issues with their heritage. This paper is a "mediation" from my filing system or slip box and an offer and an advertizement to incorporate its contents in those of the audience.