

# ANALOGOUS SPACES

Architecture and the space of information, intellect and action

Saturday 17 MAY

**SPACES OF**

**ACTION**

**AND**

**DECISION**

**MAKING**



# SPACES OF ACTION AND DECISION MAKING

## Introduction

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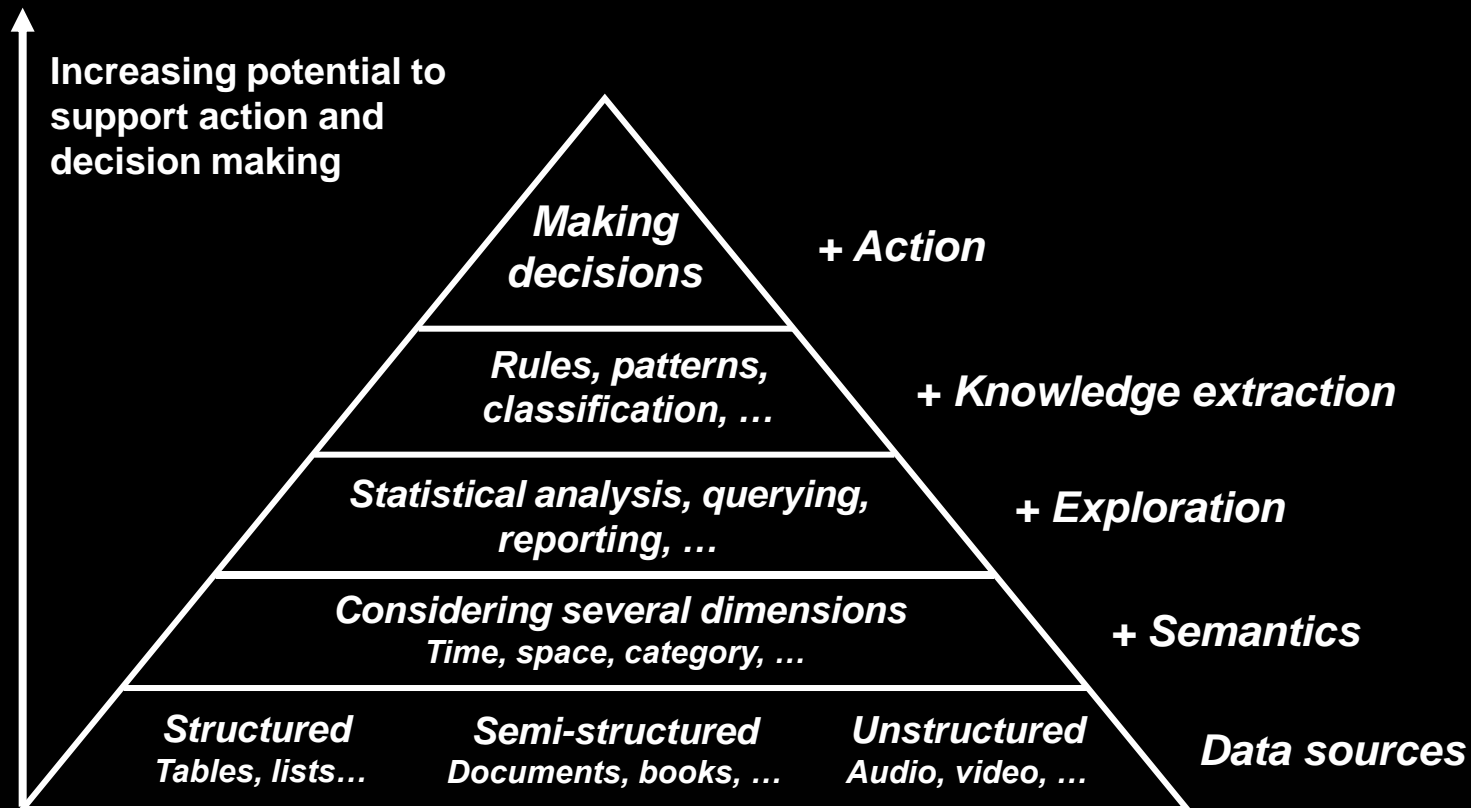
# Overview

- **Towards adequate action and decision making**
- **What offers technology us today?**
- **Potential problems and challenges**
- **Solutions**
- **Some links with Paul Otlet's work**
- **Social network systems**
- **Conclusions**



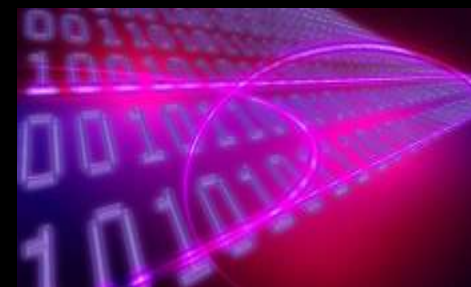
# Towards adequate action and decision making

## The data, information and knowledge pyramid

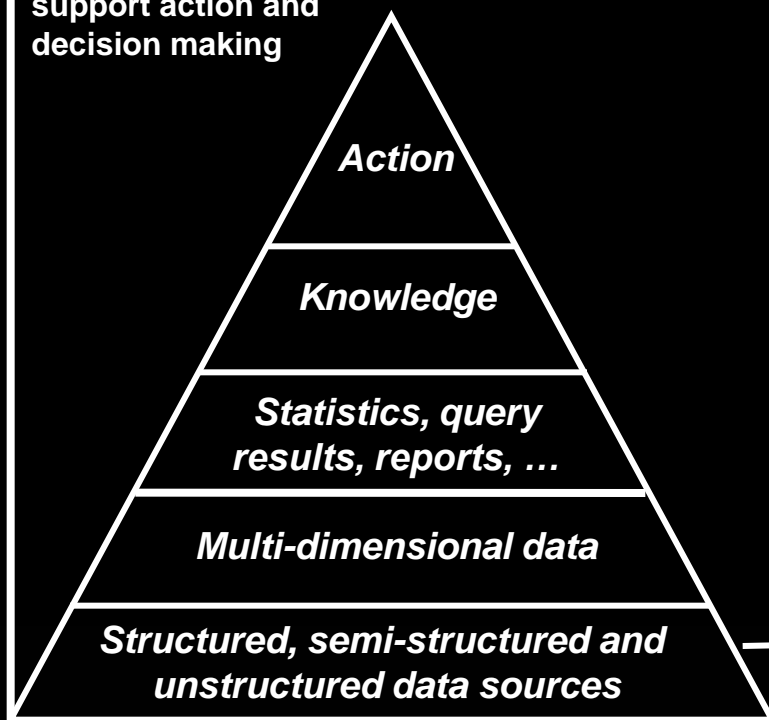


# What offers technology us today?

## Information management facilities



Increasing potential to support action and decision making



PubID	Publisher	PubAddress
03-4472822	Random House	123 4th Street, New York
04-7733903	Wiley and Sons	45 Lincoln Blvd, Chicago
03-4859223	O'Reilly Press	77 Boston Ave, Cambridge
03-3920886	City Lights Books	99 Market, San Francisco

AuthorID	AuthorName	AuthorBDay
345-28-2938	Haile Selassie	14-Aug-92
392-48-9965	Joe Blow	14-Mar-15
454-22-4012	Sally Hemmings	12-Sep-70
663-59-1254	Hannah Arendt	12-Mar-06

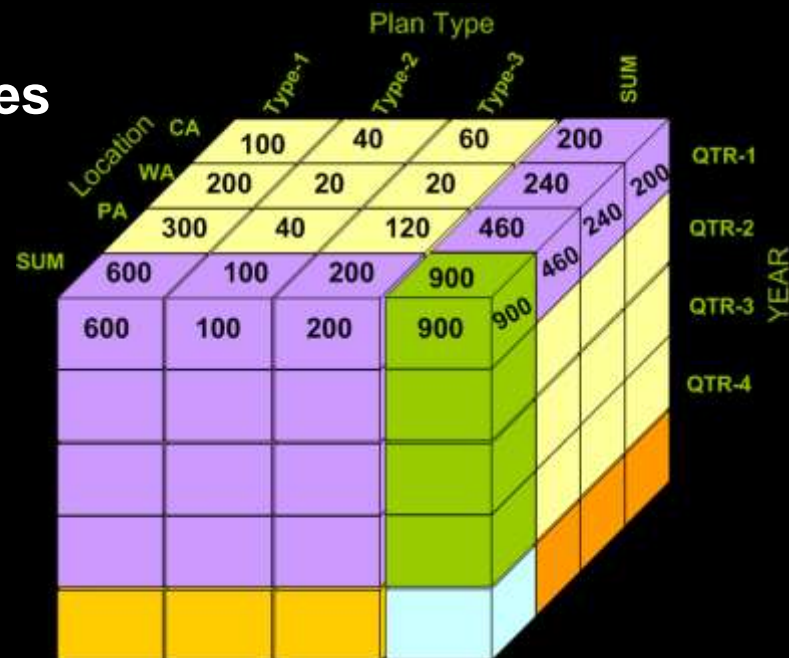
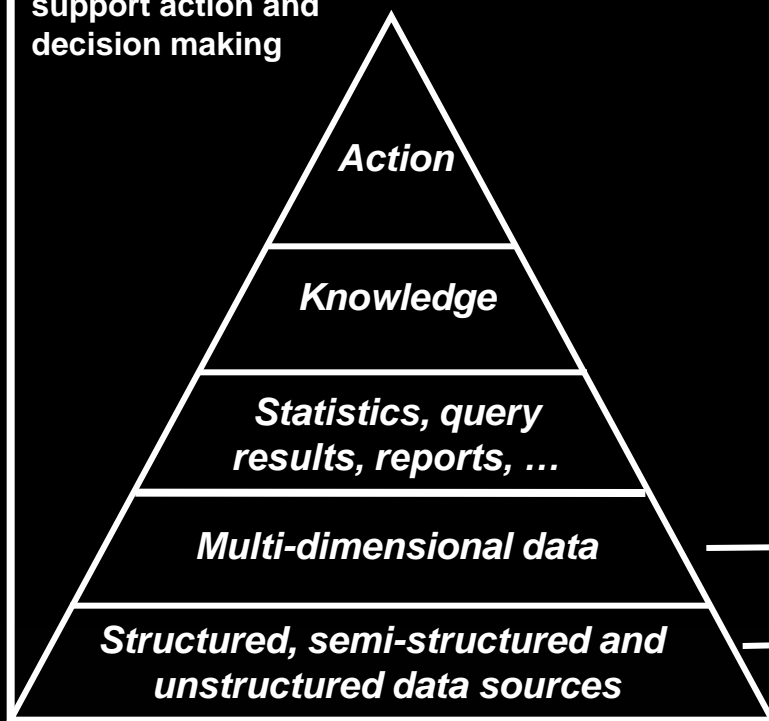
ISBN	AuthorID	PubID	Date	Title
1-34532-482-1	345-28-2938	03-4472822	1990	Cold Fusion for Dummies
1-38482-995-1	392-48-9965	04-7733903	1985	Macrame and Straw Tying
2-35921-499-4	454-22-4012	03-4859223	1852	Fluid Dynamics of Aquaducts
1-38278-293-4	663-59-1254	03-3920886	1967	Beads, Baskets & Revolution

**Database systems**

# What offers technology us today?

## Information management facilities

Increasing potential to support action and decision making

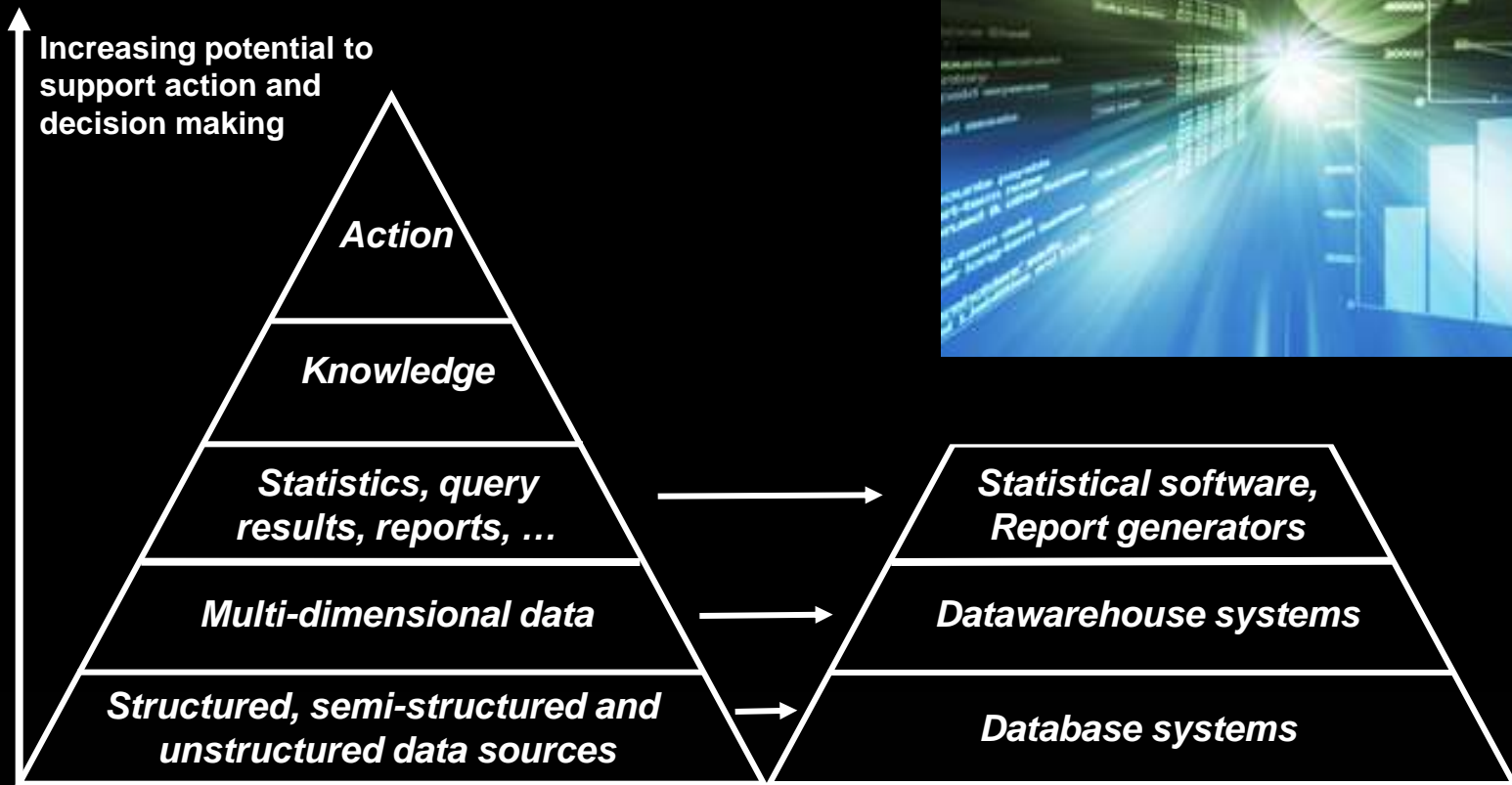


**Datawarehouse systems**

**Database systems**

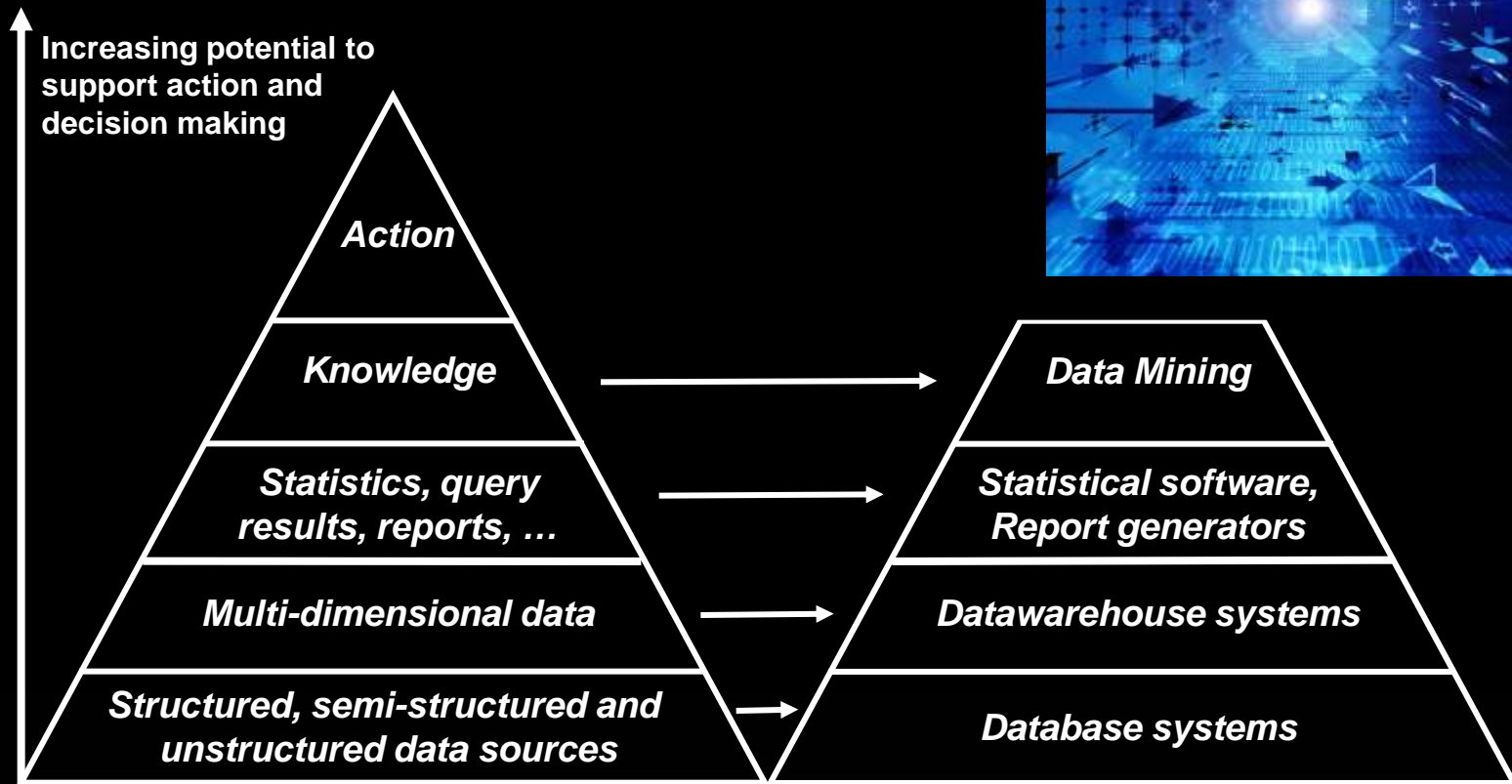
# What offers technology us today?

## Information management facilities



# What offers technology us today?

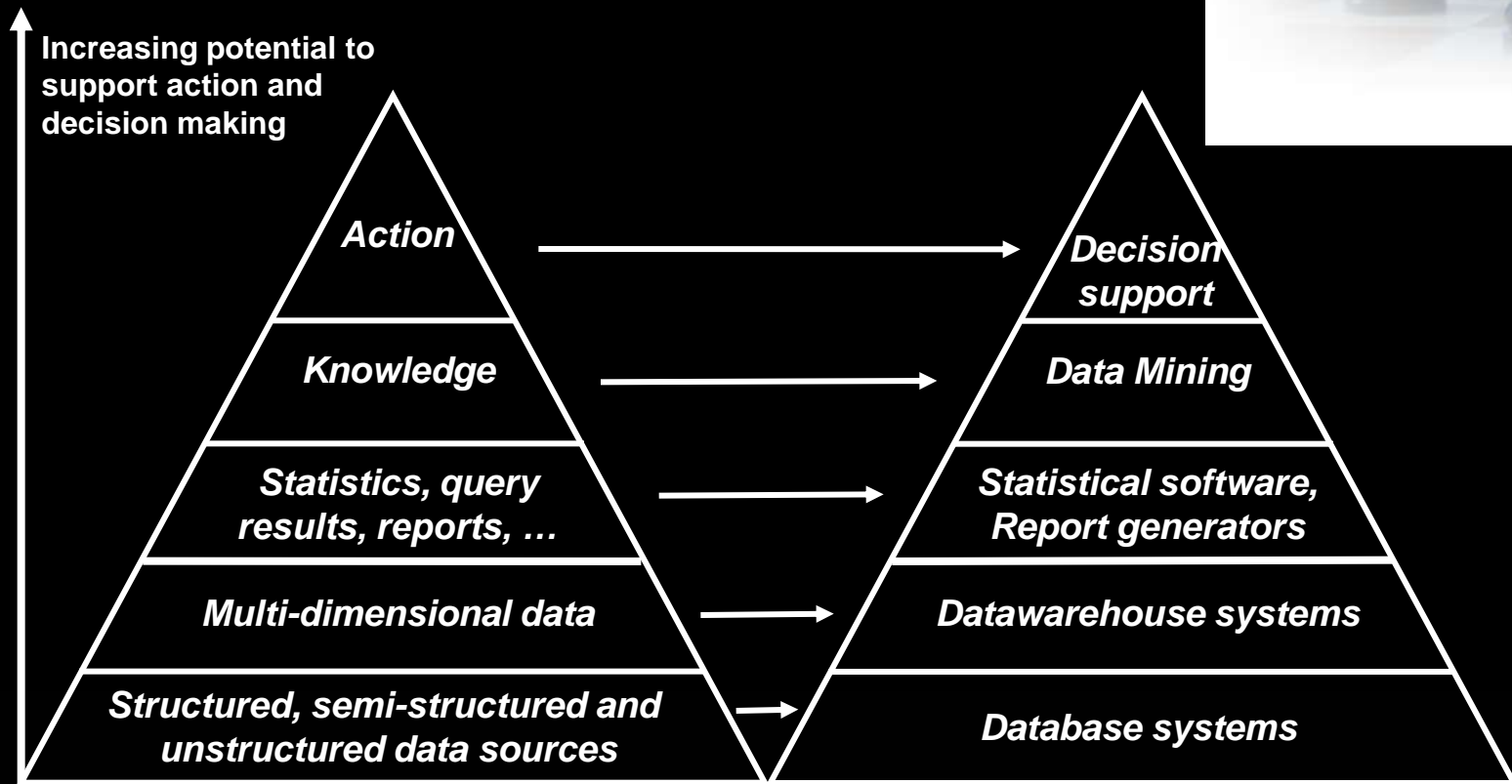
## Information management facilities



# What offers technology us today?



## Information management facilities



# Potential problems and challenges

- Keeping data up-to-date
- Making data easily accessible
- Dealing with multi media
- Visualisation
- Integrating data
- Dealing with imperfections
  - imprecision
  - uncertainty
  - incomplete / missing data
  - inconsistency



→ Keep data and information accurate and correct

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# Solutions

- **Keeping data up-to-date**
  - ✓ Information systems
- **Making data easily accessible**
  - ✓ WWW
  - ✓ Hypertext
  - ✓ Semantic web
  - ✓ Advanced querying techniques, ...
- **Dealing with multi media**
  - ✓ Digitization
  - ✓ Meta data
  - ✓ Content-based querying, ...



# Solutions

- **Visualization**
  - ✓ **User interfaces**
  - ✓ **Navigation**
- **Integrating data**
  - ✓ **Distributed information systems**
  - ✓ **Mobile databases, ...**
- **Dealing with imperfections**
  - ✓ **Flexible querying**
  - ✓ **Natural language processing, ...**



# Some links with Paul Otlet's work

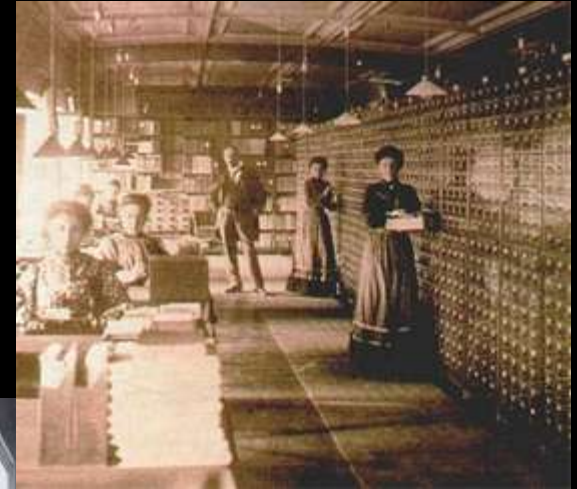
From a mechanical database to innovative electronic information systems



# Some links with Paul Otlet's work



**Current  
information  
systems**



**versus**



**Mundaneum**



# Some links with Paul Otlet's work

**data integration**

**multimedia**

**versus**

**WWW**

**DOCUMENTATION et TELE-COMMUNICATION**

**A LES INSTRUMENTS DE TELE-COMMUNICATION**

1 TELEPHONE	2 RADIO	3 PHONO. DISQUE	4 CÂBLE	5 TELEVISION

**COMBINAISONS DE LES INSTRUMENTS**

	1	2	3	4	5
1	X	.	.	.	.
2	.	X	.	.	.
3	.	.	X	.	.
4	.	.	.	X	.
5	.	.	.	.	X

**B USAGE COMBINÉ DES INSTRUMENTS**

**COURS ET CONFÉRENCES AUDIBLES**  
POUR UN CERTAIN NOMBRE D'AUDITEURS ASSIS  
AU TELEPHONE, LA LIENNE RESTAURÉ D'UN CO-  
NACTEUR AU BUREAU GÉNÉRAL.

UNIVERSALIS ENCYCLOPEDIA  
PALAIS MONDIAL - BRUXELLES



# Social network systems

## Definition (D. Boyd & N. Ellison 2007)

**A social network system (SNS) allows people to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system**



# Social network systems

## Some observations

- Today more and more SNS appear
- SNS become more and more specialized
- SNS have a very high economic potential
- The question still remains whether SNS could be used to enhance current information systems
  - To share information
  - To make information better accessible
  - To clarify the data semantics
  - To guarantee the quality of information
  - To provide user feedback, ...



# Conclusions

- **Supporting action and decision making requires correct and adequate information**
- **Current information systems**
  - Support information requirements to a large extent
  - Still face some problems and challenges
  - Have a lot of ideas and concepts in common with Otlet's work
- **In recent years we observe a growing interest in social network systems**
  - These systems have the potential to further enhance current information systems



# Conclusions

- **Open question:  
What can we learn from Paul Otlet's work?**
  - **To structure, organize and model information**
  - **To integrate information originating from heterogeneous sources**
  - **To visualize information**
  - **To access information**
  - **To navigate between different information sources**

⇒ **Towards a digital Mundaneum**

