

The Habitat of Information

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Standard Views on Information

- ◆ Resource or Commodity
 - ◆ Economics
- ◆ Intelligence and Problem-Solving Facility
 - ◆ Administrative Sciences
- ◆ Data-Processing and Storage Technology
 - ◆ Computer Science, Engineering
- ◆ Communicative medium
 - ◆ Media and Sociology

The Subject of the Talk

- ♦ The **ubiquitous** character of **technological information** and its **institutional** implications
 - ♦ There is something **important** and **distinctive** in the fact that a wide range of personal engagements and communications, organizational and market operations and institutional processes are mediated (structured and conducted) by information produced, organized and disseminated by computing machines of all kinds and breeds

Definitions

- ◆ By **technological information**, I mean:
 - ◆ Descriptions of facts and relationships stored, processed and mediated by computing machines
 - ◆ Instructions encoded and activated by software
 - ◆ Communications mediated and realized through computer-based symbols and tokens
- ◆ Information as a **Resource, Facility and Communicative Context**

Definitions

- ♦ **by institutions** I predominantly have in mind:
 - ♦ The prevailing differentiation of political and economic power/functional responsibility into state, markets/corporations and professions
 - ♦ The distinction between the public sphere and private (domestic) life as it has been established over the post-war years

The Argument

- ◆ The ubiquitousness of information and the technological developments by which it is sustained are critically involved in the construction of **global and connected information environment** that
 - ◆ Furnishes the supporting milieu (habitat) of new ways of pursuing private and public interests, business ventures and state projects which
 - ◆ Disturb or challenge the prevailing institutional equilibrium

Some Basic Trends

- ◆ The **Ubiquitous** character of technological information
 - ◆ Organizations and organizational operations
 - ◆ **Administrative** backbone and **Strategic** context
 - ◆ Large information infrastructures (corporate, inter-organizational or public) and the Internet
 - ◆ **A New Everyday**
 - ◆ Handheld, connectible devices and daily living

IDC Report Information C

- ◆ <http://www.emc.com/leadership/universe/expanding-digital-universe>

An IDC White Paper - spe

The Diverse and Expanding Digital Universe

An Updated Forecast of World
Information Growth Through 2015

March 2008

John F.

 **IDC**
Analyze the Future

So What?

- ◆ What are we to make of this situation?
 - ◆ Trivialization versus Hype
- ◆ Beyond the hype: The emerging **networked information environment**
 - ◆ An environment (often global) increasingly carried on the shoulders of technological processes and marked by the pervasiveness of **information processing, virtual communications** and a **culture** increasingly impregnated by information-based products and artefacts (text, image, sound)

The Information Habitat and Social Media

- ♦ **Community building and Social Networking**
 - ♦ Facebook, Twitter, Flickr, YouTube but also Weblogs, Community Games etc
- ♦ **Collaboration and collective action**
 - ♦ Alternative models for producing highly sophisticated products and services
 - ♦ Wikipedia, Open-Source (free) software production
- ♦ **Alternative modes of sociality and production** that challenge the established institutional order of markets, corporations, professions and the state

On Social Production

- ◆ **Commons-based, peer-to-peer networks**
(Yochai Benkler 2006)
 - ◆ Beyond Markets and Corporations
 - ◆ The persistence of these ventures hang on the **freedom of information** and the **end-to-end architecture** of the internet that empowers users and confers user-generated content such a crucial importance
 - ◆ Freedom of information and copyright
 - ◆ A new utopia?
 - ◆ Professional ethic and **mass amateurization**

Beyond Social Media

- ◆ The ubiquitousness of Information as a problem
 - ◆ Cognitive complexity and the bounded rationality of human agents
 - ◆ How to navigate in the growing tide of information
 - ◆ How to order and control information
 - ◆ How to store, remember and recall?
 - ◆ Some technological solutions
 - ◆ Search engines, case management and version control systems, database technologies, tracing and archiving technologies

Data Ordering and Editing

- ◆ **Data ordering** and **data editing** as key problems of contemporary societies
 - ◆ People, governments, organizations
- ◆ Agrowing **ensemble of activities, technologies and systems** in groups and organizations seeks to address, take advantage and profit from the condition of information affluence
 - ◆ Equally to the ecological habitat, the information habitat supports those ventures and arrangements that best address the problems of data ordering and data editing
 - ◆ The ingenuity of Google

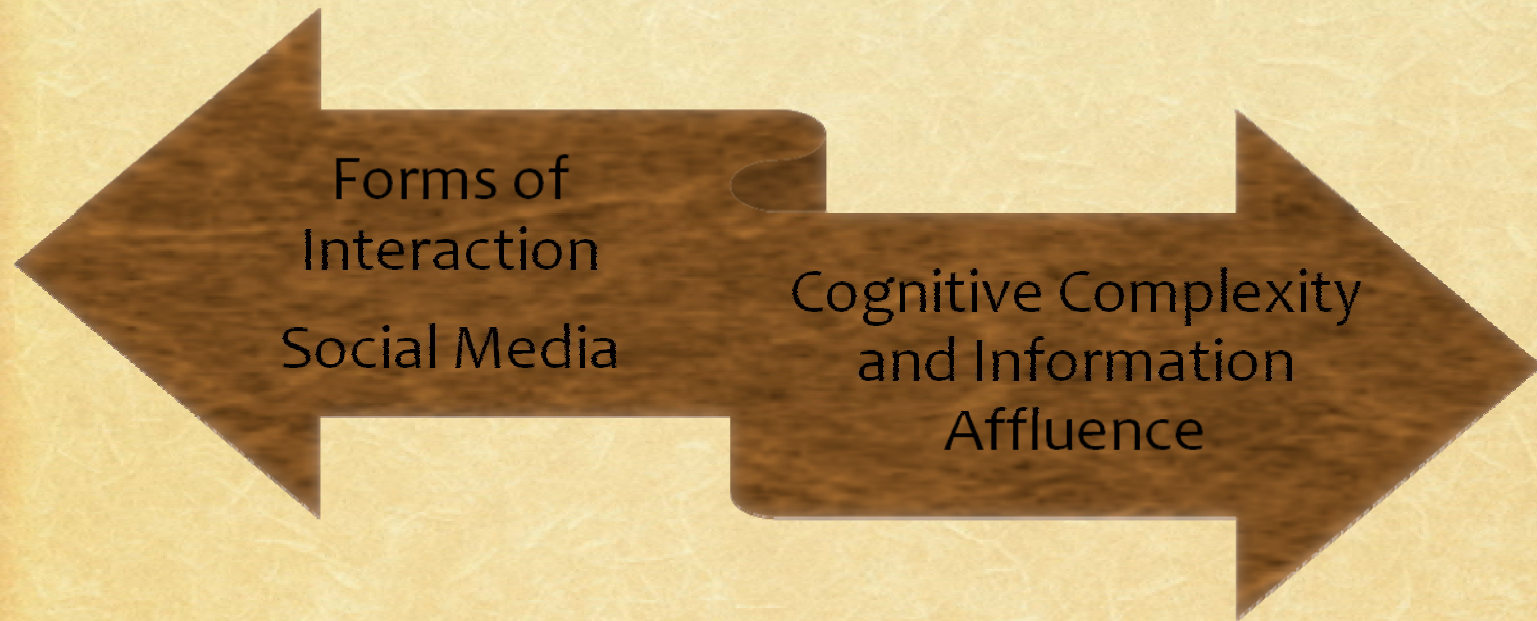
More on the Information Habitat

- ◆ Problems as opportunities
- ◆ Media convergence and the interoperable character of information
 - ◆ Combining, mixing and recycling information
 - ◆ Cognitive depth
 - ◆ Bringing together information sources that have been separate
 - ◆ Data mining and database analytics

The Double Bind of Information Ordering

- ◆ Information ordering and editing produce new information
 - ◆ The more you order, organize and edit information to obtain control over it the more information you are bound to produce
 - ◆ Self-amplification processes and the counter-intuitive nature of the problem-solution dynamics
 - ◆ Resolving a problem in one area can create or establish the conditions for creating problems in other areas
 - ◆ The cognitive nature of information and the context of interoperability

The two dimensions of the Information Habitat



Conclusions

- ◆ New forms of interaction, communication and work
 - ◆ The fusion of production and consumption
 - ◆ Mass amateurization and de-professionalization (how much, to what degree?)
 - ◆ Redrawing the boundaries of markets, states and corporations
- ◆ Data ordering and editing as key problems and ubiquitous operations
 - ◆ Google as the emblem of the age
 - ◆ The self-propelling processes of the information habitat

The Prospects

- ◆ The Information Habitat and the future of the Internet
 - ◆ Freedom of information,
 - ◆ End-to-end information architectures