# DIGITAL THINKING - A MEDIA THEORETICAL APPROACH TOWARDS DIGITAL FORMS OF KNOWLEDGE ORGANIZATION

**DAVID KERGEL**

International University of Applied Sciences
E-mail: david.kergel@iu.org

**Abstract –**

**1. INTRODUCTION: FROM TAXONOMIC THINKING TO DIGITAL THINKING**

Thinking refers to conscious cognitive processes that can occur independently of sensory stimuli. The most characteristic forms are judgment, reasoning, concept formation, problem-solving, and practical reasoning. However, other mental processes, such as considering an idea, memory, or imagination, are often involved. These processes can occur internally independently of the sense organs, unlike perception. However, in the broadest sense, every mental event can be understood as a form of thinking, including perception and unconscious cognitive processes.

Often thinking uses taxonomic categories. A taxonomy (ancient Greek τάξιςτάxis 'order' and νόμοςnómos 'law') is a uniform procedure or model (classification scheme) by which objects are classified according to specific criteria, that is, placed in categories or classes (also called taxa). Natural science disciplines use the term taxonomy for a usually hierarchical classification (classes, subclasses, etc.).Taxonomy organizes hierarchical knowledge: Hierarchies and dependencies are formally rationalized utilizing taxonomic tableaus - metonymically, this is represented in organizational charts. Taxonomies are based on hierarchical assignments. These hierarchical assignments are made precarious by digital media.

**2. THE DIGITAL MEDIA STRUCTURE AS SOCIAL REVOLUTION**

The medial structure is defined as how interaction potentials are made possible by a phenomenon. The medial structure of television, for example, tends to enable "monologizing" interaction due to its unidirectional nature (communication goes in only one direction). The sender communicates content to multiple receivers. In contrast, the medial structure of digital media such as Web 2.0 tools are poly directional and polyphonic in definition: Multiple actors can interact and dialogically engage with each other.

In the course of the constitution of the digital age, a dialogic modification of the media structure can be observed: With the establishment of Web 2.0 since the beginning of the 2000s, digitally supported dialogic communication possibilities have also become increasingly established. The participatory media structures of Web 2.0 tools enable are a so-called "participatory network". Such a participatory network requires dialogic communication so that the participatory media potential can be appropriately actualized: Without dialogue, the collaborative process of knowledge production is as inconceivable. One needs collaboration partners to produce appropriate content via collaborative (writing) tools such as Google Drive. Web 2.0 tools such as social bookmarking tools with collaborative annotation functions (e.g.Diigolet) require dialogical exchange. From this perspective, dialogic-democratic implications are inherent in the media structure of Web 2.0 tools. Media educator Downes also draws attention to this when he defines the establishment of Web 2.0 as a "social revolution": "For all this technology, what is important to recognize is that the emergence of the Web 2.0 is not a technological revolution, it is a social revolution." (Downes 2005, para. 2) The poly directional and polyphonic structure of Web 2.0 enables the democratization of communication on a media level. In summary, it can be stated that the digital age, a media structure is being established that is dialogically oriented through poly directional and polyphonic interaction potentials.

**3. THE HYPERTEXT AS REPRESENTATION OF ASSOCIATIVE DIGITAL THINKING**

In the digital age, a media structure is being established that is dialogically oriented through poly directional and polyphonic interaction potentials. The dialogue is decentralized. Consistently thought out further, the dialogue becomes a polylog. There is no dialogical centre. Instead, various interlocutors can become involved and expand the dialogue into a polylogue - a dialogue between many interlocutors simultaneously. This decentralized nature of the polylog corresponds to the associative structure of the Internet. This associative structure is represented in the Hypertext.

Hypertext can be understood as a net-like structure that links information/objects using cross-references (hyperlinks).(hypertext nodes): Hypertext enables non-linear "jumps" between references. These jumps can be executed quickly via a computer. The dialogical and hypertextual structure provide communicative structures for a new way of thinking and content representation: Such a digital Content representation is thereby characterized by a multimodal interweaving of writing, image, video, and sound. The non-linear and multimodal structure of Hypertext becomes the media representative of non-linear, associative digital thinking.

**REFERENCES**

[1] Downes, S. (2005). E-Learning 2.0. e-learn-magazine,
URL: www.elearn-mag.org/subpage.cfm?section=articles&article=29-1. Last accessed: 01.06.2022.

**Keywords -** Web 2.0, Digital Media, Knowledge Organization, Taxonomy