

The Many Dimensions of Information

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While information has been studied and investigated for decades--centuries actually--the information field is currently expanding, solidifying, and diversifying. This causes the field to reflect upon its boundaries, jurisdiction, and identity. This paper discusses and lays out today's landscape of Information Science.

In a search for identity information researchers have often asked, "What is information?" It has been assumed that *information* is the essential building block for the field of Information Science and that a clear understanding of the essential nature of information is required to define the field's jurisdiction, activities, and research and educational agendas. However, information has many dimensions and a single conception or definition of information will not serve the entire field – it might in fact limit and confine the field's diversity.

The problem with information is that it is not a single concept, a single thing, a single process, etc. The concept of information changes from sub-discipline to sub-discipline, from context to context, and as such the idea of information as the central unit for Information Science is fragile. What is uniting the field is not--as some could be led to believe--a unified concept of information, but a common desire to resolve a set of problems in the world. This desire calls for studying various dimensions of humans' interactions with information as mediated by information technology. I will here outline five dimensions at which information is studied within the broad scope of Information Science.

Dimension 1: Information in the environment. Information is everything. Everything is information. Information is events, chairs, books, and thought. Information is signs. Information exists in the environment outside human activities and as such enables people to act and cooperate.

Dimension 2: Information in domains. The domain is the landscape in which information is situated and used. The domain consists of people, organizations, intentions, goals, etc.; that is concrete and abstract notions. Information is the artifact produced by the domain, it is what is exchanged through communication, and what is used in the domain.

Dimension 3: Information in organizations. Information flows in all kinds of organizations; formal and informal and it flows via formal channels and informal channels. Information is used, sold, managed, hidden, organized, and retrieved. People in organizations control information, they act as gatekeepers and managers; they share information and use information to collaborate.

Dimension 4: Information in activities. When humans interact with each other and with artifacts, they interact with information. Information is basis for all decision-making and enjoyment; people use information in their work and their everyday activities.

Dimension 5: Information in cognition. Thinking is information. Knowledge is information. Information is the building blocks for cognition. When people think, they use information. Information causes and enables people to modify their knowledge.

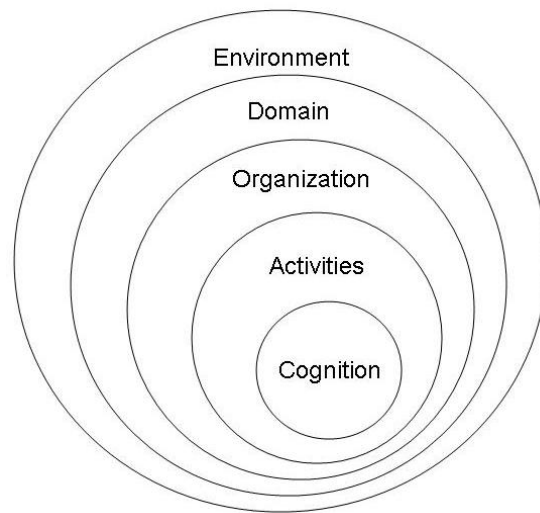


Figure 1. The Dimensions of Information

As indicated in figure 1 the dimensions of information are nested within each other. Outer dimensions provide contexts and constraints for inner dimensions; for instance to study and understand information at the activities level, the organizational level (and domain and environment levels) provides the context and constraints for the activities.

These many dimensions of information signify the broadness of the information field and the interdependence of the many dimensions of information reveals the need for multi-perspective research to capture and understand the complexity of information.