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I would like to thank the ASIS&T community for honoring me with the Award of Merit. None of the work that is recognized in this award could have been done by me alone. I have benefitted throughout my life from gifted students, colleagues, friends and family. Many of you are here today, including my wife Suzanne, and this award is a testament to the strength you have all brought to our collective action.

When I came to this field 28 years ago, arriving as an interloper from mathematics education, I was welcomed and encouraged to forge bridges rather than burn them. I think this is a fundamental characteristic of information science and the people drawn to it. For me, the first few years of transition were filled with parsing the tokens of primary concepts (who is that guy MARC and why does everyone talk about him?) and discovering synergies among what and how I knew and what I was learning. Perhaps the most important insight that served as a critical bridge for me in those early years of my transition was that information seeking is a learning function.

It seems to me that the people who come to information science are connectors. We share values such as intellectual freedom and diversity, universal access, self-directed learning, organization, collaboration, trust and stewardship. It is these shared values that define our field more than our methods, problems or products.

I believe that the information science discipline and our community are inherently connective. Connectivity is a double-edged sword – powerful but dangerous to use. “Pure” disciplines stand alone and grow through elaborations and challenges to their core principles or canon. Interdisciplinary or what Marcia Bates calls meta disciplines cross boundaries and grow through synthesis and coordination. But they often struggle to establish...
potency. In the few minutes I have today, I want to reflect on connectivity in our field and in the work that information professionals do.

I suggest that information science is in search of a theory of relationships. People find precise and universal relations quite beautiful; for example, the relation between the diameter and the circumference of a circle is a constant. It is quite extraordinary to think that whether the circle is the head of a pin or the sun, this relation is always pi. A binary relation is most generally defined as a proper subset of the Cartesian product of the set. Any arbitrary mapping of element pairs is, of course, a relation. The way this relation is formed is what is interesting, and we give special names to some of these mappings, such as *isomorphism*.

Our interests as information scientists tend toward n-ary relations among abstract or subjective elements. Lawrence Heilprin once told me that the fundamental problem of information science is compression, as illustrated in the creation of abstracts for longer works. He wrote about different types of relations that preserve distinct properties (for example, the homeomorphic relation between a coffee cup and donut make them topologically equivalent). There are an infinite number of relations possible between the donut and the coffee cup depending on the kind of mapping we choose such as weight, color, functionality, likeliness to be used as a weapon, appeal to ants and so on ad infinitum. Information science is about identifying and leveraging mappings that are interesting or useful, and information professionals earn their pay by excelling at creating these mappings.

We are concerned with selection of mapping functions: We select meaningful relations such as catalogs that link metadata to information objects, or books to library communities, or digital artifacts to preservation functions. Our work at UNC with Open Video for example, aims to identify and evaluate mapping videos onto useful video surrogates such as storyboards, fast-forwards or snippets that facilitate gisting. Information scientists work to map utterances or character strings we call *queries* to information objects we call *documents*. We create bibliometric databases that relate information objects, authors, institutions or fields. We develop taxonomies and ontologies that relate concepts, search engines that relate web objects and social media that relate people. We ponder recommendation systems that relate people to products or to other people and investigate text corpora to identify subtle properties such as sentiment, bias or intention. Much of my work in human-computer interaction and interactive information retrieval aims to find mappings among information seekers’ mental models for an information problem, different representations of information resources and control mechanisms for changing those representations we call the *mappings interfaces*.

Lately, I am interested in the relations between our physical and digital lives. Under what conditions are they distinct or blurred? What are the mutual dependencies? How might we manage critical characteristics such as ephemeralness and persistence? Where is the “I” in cyberspace? My students and colleagues tease me when I make up words so I will not give the lecture on *proflection of self* today :-(
Any one of these examples of information work could occupy a lifetime of research and practice, and I am certain that there will be countless new mappings identified that keep us engaged and employed. For example, imagine how the relation of “friend” as expressed in social media will be elaborated, leveraged and riffed in the years ahead. What I would like to see is some attention to the nature of relations in general rather than only identifying specific new relations. Rebecca Green attacked this problem in her dissertation on syntagmatic relations 25 years ago as did Randy Trigg in his dissertation of that period that characterized hypertext link types, and I would like to see more work like this that attends to the nature of classes of relations.

Consider three kinds of physical connectors as metaphors for thinking about kinds of relation mappings. A physical linchpin strongly relates an engine and load in a highly constrained coupling that resembles a constant binary relation. What are these constraints? What are the necessary and sufficient properties of the engine and load that determine them? In contrast, a bridge relates spatial extents; it may be one-way or two-way; there are load constraints, and there may be control mechanisms such as inspections or tolls. We know that a bridge meant to span a physical space can also serve to span cultures. In this regard, we might consider that relations propagate. How is this relation different from the linchpin? Finally, a cellular membrane selectively relates nutrients and wastes between cells and the ambient media. There are both simple and highly complex transport mechanisms that regulate these exchanges and sustain cell life. A theory of relations will explain what linking properties are common across each of these kinds of connectors. It is these linking properties that define relations and relations that in turn enable human interaction with information and with other people. Relations allow us to get from “I” to “we.”

In closing I want to return to the intellectual and social relationships that I experience in our field and in ASIS&T. It is telling that so many of our conference themes, including this year’s “bridging the gulf” theme, speak to making connections. Ours is a field and a society devoted to making and studying connections. As individuals, we select the relations we want to develop into meaningful relationships, and I am thankful that I chose ASIS&T and that ASIS&T nourished me. Thank you for your partnership and for this wonderful award.