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Lois F. Lunin
Kathi Martin
Samantha K. Hastings

University of South Carolina - Columbia, hastings@sc.edu

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Design: Information Technologies and Creative Practices

Lois F. Lunin
435 East 70th Street, Apartment 30D, New York, NY, 10021–5350

Kathi Martin
Graduate Fashion Design Program, Antoinette Westphal College of Media Arts & Design, Drexel University, 33rd & Markets Streets, Philadelphia, PA 19104

Samantha K. Hastings
School of Library and Information Science, University of South Carolina, Davis College, 1501 Greene Street, Columbia, SC 29208

Introduction and Overview

This issue of the Perspectives is dedicated to Lois Lunin in honor of her many years as editor of the prestigious series. Lois is a visionary and a leader in the field of information science. Lois also is an artist. Her work in these parallel proficiencies prompted the dialogue among the contributors to this issue that design is integral to information science.

Lois has been a gem to work with, always supportive of me. She has been super at doing Perspectives, with her finger on the pulse of information science and technology, always coming up with great ideas and people to do the special topics. Her Perspectives were always popular with the readership and often provided the practitioners with reasons to look at the Journal. She was one reason I could do the job for twenty-four years. Don Kraft, JASIST Editor, 1985–2008

Lois is one of the first ASIS&T institutions I met, so I quibble with Don Kraft to note that Lois has many more than the normal number of fingers, on innumerable pulses. She has the imagination and creativity to see connections where mere mortals do not. Lois started editing Perspectives in 1981, after previously having started, developed and edited ASIS&T’s Bulletin for 5 1/2 years. She has always had the chutzpah to approach and cajole articles and ideas from absolutely anyone, from a Herbert Simon to students. Few can successfully resist her natural energy, charm and enthusiasm, or her helpful, giving nature. Without members like Lois, ASIS&T would be less robust and vibrant, less challenging, and, yes, less fun. Dick Hill, ASIS&T Executive Director

Lois is a fellow of the American Association for the Advancement of Science, the former Institute of Information Scientists (United Kingdom), and the New York Academy of Medicine. She has served on the faculty of The Johns Hopkins School of Medicine and the School of Hygiene and Public Health, where she directed the NIH-supported Information Center for Hearing, Speech and Disorders of Human Communications; and the Cornell University Medical College. Editor of JASIST Perspectives since 1982, she has authored over 150 publications and has been invited to gift her papers to the National Library’s archives of medical informatics.

Her creative work has been featured in juried international exhibitions and publications. Her piece, “Cyphers,” shown on page two, can be viewed as a metaphor of the complexities of information design. She regards each of the multiple knots as an element like code, paying particular attention to the specific features of each knot while maintaining a balance of all the elements within the entire composition.

With love and deep respect, we thank you, Lois Lunin. We hope you enjoy this collection of unique views.

The Concept of Information Technologies and Creative Practices

“A designer is an emerging synthesis of artist, inventor, mechanic, objective economist and evolutionary strategist.”

R. Buckminster Fuller . . . and information scientist.

Information technology (IT) has evolved from being used not just to enhance productivity or allow more efficient distribution but to open up new creative possibilities—information technologies and creative practices (Mitchell, Inoye, & Blumenthal, 2003). Design and information science are problem-solving disciplines. This special issue of Perspectives on Design investigates the commonalities between the processes of design and information science. Contributors have explored how these integrated systems organize the many threads of varied design processes with the common

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The purpose of the greater good for people, their communities, societies, and governments—local and global. From these investigations, we are able to map the coordinates of diverse disciplines with an underlying theme of information science, technology, and communication.

The editors have divided the essays into three categories: information design, new ways of working with and conceptualizing information; information methodology, novel approaches to information structure; tangible communication design, practical application of convergent technologies; and education, innovative strategies in the classroom.

**Information Design**

The importance of information visualization as a means of transforming data into visual, understandable form is now embraced across university campuses and research institutes world-wide. Peter Hall, design critic and senior lecturer in design at the University of Texas at Austin, describes *Disorderly Reasoning in Information Design* as the value of design thinking in information visualization and how design can frame the critical act of translating between scientific, technical, and aesthetic interests. “Disorderly reasoning” can be used by designers, as mediators between art and science, to define the problem of how, why, and which information should be visualized.

Richard Rinehart, a new media artist and Digital Media Director & Adjunct Curator at the University of California, Berkeley’s Art Museum/Pacific Film Archive, explores information design as a form of contemporary artistic practice and how artistic and philosophical concepts such as the “performative utterance” operate at the edges of metadata and large-scale technology projects such as the semantic Web in his essay *Artists and Subversive Metadata*. With illustrations ranging from Marcel Duchamp’s 1917 work “Fountain” to the more contemporary work of artists such as Joseph Beuys and Michael Asher, he postulates that artists are involved in the act of revealing or creating what would be called in the world of information design “metadata” in that they are making the hidden/implicit context of something visible/explicit.

Jürgen Faust, Dean of Media and Communication MIMHK Munich, Germany, CAO IED, Group, Milan, and an international Professor of Digital Media draws upon the rich discussion and discourse of a conference focused on *Positive Design* involving managers, designers, and IT specialists focused on overcoming the problem-based focus and decision paradigms to enhance all phases of the design processes and develop sustainable solutions for real issues in a changing world.

**Information Methodology**

In most discussions about information and knowledge management, natural language is described as too fuzzy, ambiguous, and changing to serve as a basis for the development of large-scale tools and systems. Instead, artificial formal languages are developed and used to represent, hopefully in an unambiguous and precise way, the information or knowledge to be managed. Yves Marcoux, faculty, and Élias Rizkallah, researcher, at the University of Montréal, use *Intertextual Semantics* to adopt an almost exactly opposite point of view where natural language is the foundation on which information management tools and systems should be developed and the usefulness of artificial formalisms in deriving natural language examined.

In 1996, with funding from the Henry Luce Foundation, Jack Lenor Larsen, internationally known textile designer, author, and collector, and an advisory committee composed of distinguished museum and design professionals developed *Objects Classified by Mediums* in response to the concern that existing systems do not provide the tools for comparing information on objects. *Objects Classified by Mediums* seeks to organize areas of study in fiber, clay, metal, wood, and so on, to allow curators and scholars to compare information on similar methods used, build a conceptual framework for the greater understanding of whole categories of objects rather than as isolated works, and provide a finding tool for cross-cultural and cross-disciplinary investigation.

**Tangible Communication Design**

Communicative clothing is emerging as the next generation of intelligent clothing, with communication being achieved between clothing and the wearer or between clothing and the external environment or people. In both cases,
“communicative” clothing refers to any clothing or textile accessory that receives or emits information from the structure that composes it; however, large-volume production and application in everyday use is still a dream for manufacturers. Sanjay Gupta, Senior Professor of Fashion & Textiles and Dean of Academics at the National Institute of Fashion Technology, New Delhi, India, identifies one of the main roadblocks to successful adoption of these technologies among fashion designers and retailers as the lack of access to ready materials such as control interfaces, sensors, data-processing devices, output devices, energy sources and connectors with which to experiment and develop commercially successful products, and sees the need for a “new” discipline which presents the existing designers with new influencing variables that currently lie outside the scope of their experience.

Incredible innovations are being made in the world of textiles due to collaborations across disciplines that allow incorporation of technology and textiles. Matilda McQuaid, Deputy Curatorial Director, Cooper-Hewitt, National Design Museum, uses research she had done to curate the Cooper-Hewitt National Design Museum’s 2005 exhibit “Extreme Textiles: Designing for High Performance” to further explore developments in textile engineering in aerospace, the military, athletics, and architecture that benefit from technology transfer, or moving a technology developed for one organization or environment into another in her essay From Craft to Production: Technology Transfer in Extreme Textiles.

Education

Successful professionals in technical disciplines require abilities beyond technical competence—to interpret complex and ambiguous situations, interact with experts from other specialties and disciplines, and constructively evaluate their own work and the work of others. Jaime Snyder, Robert Heckman, and Michael J. Scialdone, School of Information Studies, Syracuse University, argue that experiences and interactions with the arts can play an important role in the education of information professionals, and that such interactions provide a useful and necessary complement to the more familiar rational, scientific model that currently informs technical professional education. In their essay, Information Studios: Integrating Arts-Based Learning Into the Education of Information Professionals, they discuss principles inherent in an arts-based approach to learning and introduce a conceptual model of the work cycle that identifies and draws on the parallels between the ways artists and technical professionals do their work.

Over the last few decades, digital technologies have driven deep and profound changes in our relationships with our institutions, communications, and cultures. The field of design has a great deal to offer children at this time. Susan Marcus, principal, FoundryMedia and cofounder of the Learning About Learning Educational Foundation, Austin, Texas, believes the thinking processes and multimodal approaches can, in part, provide the foundation for the skills that children will need for the necessary innovations of the future. In New Basics for New Literacies, she provides further recommendations for creativity as the next essential literacy for our children, including a pattern language of the external world: The Sensory Alphabet.

Creativity and inspiration are essential elements of the fashion-design process. Many historic costume collections were founded specifically to educate and inspire designers and students. While traditional research took a hands-on approach to using these collections, students and designers increasingly rely on the Internet and other digital resources for inspiration. Consequently, to remain relevant, costume collections need to adapt to this new way of conducting research. Clare Sauro, curator of the Drexel Historic Costume Collection, identifies several projects, such as the Digital Dress Project, the Drexel Digital Museum Project, and the recently launched searchable catalogue of The Costume Institute of The Metropolitan Museum of Art, that have advanced this process to illustrate Digitized Historic Costume Collections: Inspiring the Future While Preserving the Past.

We end the edition with Lois Lunin’s additional topics and sources for consideration, Design: The Vision and the Plans.

References