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Texture and Materiality: Creating a New Material Resource Center at RISD

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Abstract

The new Material Resource Center at Rhode Island School of Design is a growing collection of material samples with broad appeal across an art and design campus comprised of twenty-four departments and disciplines. The creation of this teaching and learning resource challenges traditional concepts, roles, and functions as library, collection, lab, and center merge into one space with a cross-campus mission. The newly learned areas of digital collection creation and management (metadata schema, digital asset management) are also challenged with the return to and assertion of the physical object. For the studio faculty member, innovative materials require a rethinking of traditional application and process, though the concepts of sustainability and life-cycle/story-telling are a comfortable fit. Simply: the MRC stands to benefit from key lessons learned from the analog and digital worlds, from the structured to the organic, from the descriptive to the creative, from the traditional to the innovative. This will naturally require faculty to become more inventive with their curriculum and for librarians and visual resources curators to become comfortable and fluent in these new, recombined, and expansive modes of access, presentation, and use. This paper will trace the evolution of the RISD MRC as it confronts these issues.

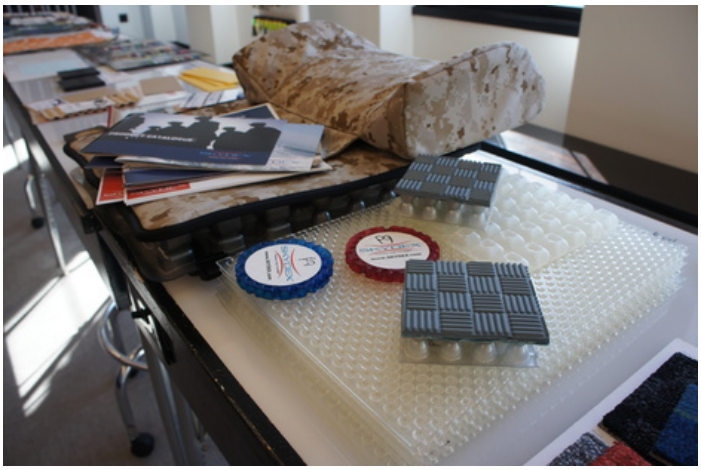
Author Bio & Acknowledgements

Mark Pompelia is Visual and Material Resources Librarian in the Fleet Library at Rhode Island School of Design. This paper was first presented in the Visual Resources Curators Affiliate Group Session, "Rich Texture: New Resources for Teaching and Learning in an Image-Centric World" at the SECAC Southeastern College Art Conference in Savannah, Georgia, on November 10, 2011.

Introduction

The new Material Resource Center (MRC) in the Fleet Library at Rhode Island School of Design is a growing collection of over five thousand material samples with broad appeal across an art and design campus comprised of twenty-two departments and disciplines. The creation of this teaching and learning resource challenges traditional concepts, roles, and functions as library, collection, lab, and center merge into one space with a cross-campus mission. The learned areas in visual resources of digital collection creation and management (metadata schema and digital asset management) are also challenged with the return to—and assertion of—the original/physical object. For the studio faculty member, innovative materials require a rethinking of traditional application and process, though the concepts of sustainability and life-cycle/narrative are a comfortable fit. Simply: the MRC stands to benefit from key lessons learned from the analog and digital worlds, from the structured to the organic, from the descriptive to the creative, from the traditional to the innovative. This will naturally require faculty to become more inventive with their curriculum and for librarians and visual resources curators to become comfortable and fluent in these new, recombined, and expansive modes of access, presentation, and use. This presentation will trace the evolution of the RISD MRC as it confronts these issues.

Redefinition



Translucent concrete. Woven metals. Corrugated wood. Fiber-optic tile. 100% recycled glass countertops. Electro-conductive nanotube ink. These are just a few of the samples in the Material Resource Center, but by simply listing these items, one can gauge the full range of issues and concerns in building a materials-based collection, describing it, and providing access to it. Standard materials, such as woods, metals, glass, even concrete, are being rapidly transformed into new versions of their traditional selves as well as being adapted for entirely new uses. Other scenarios involve non-traditional materials being adapted for traditional uses. For example, a professor from the Department of Textiles at RISD became aware of super-thin steel fabric used to mold automobile windshields and now incorporates that into her designs because of its strength and flexibility. Still others involve completely innovative materials such as memory polymers that can be transformed then shocked back into their original form. And still others face obsolescence. Process is as much a part of material description as the item itself. And just to make all of

this even more interesting, those nanotubes are 96% pure carbon and toxic to humans.

Acceleration

In his 2006 book, *Transmaterial*, Blaine E. Brownell writes, "We live in a time of unprecedented material innovations that are affecting our lives. The accelerated pace of these innovations and the breadth of their applications have enhanced our awareness about new products and the ways in which they are transforming our physical environment. In fact, there are so many new and unusual materials in the marketplace that a cottage industry of boutique services has emerged to assess and endorse them. While it is difficult to project real numbers, it has become a widely held belief that more new products have been developed in the last twenty years than in the prior history of materials science."[i] Brownell notes the approach of thematic arrangements to categories of materials that, for example, cross substances but might be similarly used.[ii]

Audit

It is in that context, that while a long-gestating concept at RISD, the MRC began in earnest in 2009 with the assumption of the materials from the Department of Interior Architecture into the Fleet Library. Two INTAR graduate students had recently performed a campus-wide audit and authored a report that found materials being housed in nearly every department on campus, thus signaling the potential benefit and need for them to come together in a central location that could support a growing cross-campus collection with space, staffing, and expertise. I quote from that report: "The library will allow artist and student, professor and practitioner to explore technologies both new and old. The library will continue RISD's unique tradition of the idea made tangible. As the Materials Library grows it will become a direct reflection of materials conversations from all studios. It will echo contemporary needs, doubts, and questions about materials usage and will ultimately serve as an open forum for the RISD community to investigate and discuss this fundamental aspect of art and design."[iii]

Innovation

The INTAR collection formed a solid base for the MRC, if a slightly mundane one. While covering some bases, such as woods, veneers, fabrics, upholstery, and paint-color chips, it failed to present materials that could be called innovative by any stretch of that term and had not yet begun to collect or critically address the issue of sustainability and product life-cycle. During the 2010-11 academic year, in order to spark interest in the MRC at the same time that participation began to percolate with some individual faculty, the MRC specifically began to collect innovative and sustainable materials by reviewing noted blogs and websites such as Core77 and Inhabitat and books such as the *Transmaterial* and *Materials Matter* series. The representation of innovative materials in the MRC holdings received a tremendous boost with the acquisition of a one hundred-item gift from Inventables, Inc., a Chicago-based company that changed their business model away from its "petting zoo" Innovation Center to an a-la-carte website with prices ranging from five to fifty dollars per sample. The MRC more recently augmented its innovative materials with a subscription to Material Connexion's Active Matter service, a quarterly shipment of fifteen materials or finished products that become part of the MRC permanent collection. Between the Inventables donation and the Active Matter shipments, these two infusions of contemporary materials raise the MRC's profile and provide a "wow" factor noticed not just by a growing number of RISD faculty and students but highlighted in a recent collection profile on the Core77 blog[iv], publicity that has resulted in more faculty, alumni, and administration awareness of the MRC's activities.

Categories

With the redefinition of the role of materials and the acceleration of the pace in which new materials appear, the categorization and description of materials is inherently challenging. Unlike simple item description, such as a book, or cultural image description, which describes the content as well as the image item itself, description of materials must adhere to a hierarchical taxonomy, itself not settled business, as well as vocabularies related to processes, characteristics, current and potential purposes and uses, etc. Furthermore, in a new era of green-washing, materials description will also need to include full commercial information and critical and anecdotal analysis.

Materials collections that have been in existence for longer than a decade (pre-green revolution) or those based in an engineering or architectural environment, such as the Materials Lab in the School of Architecture at the University of Texas at Austin, primarily use the categories in the MasterFormat as established by the Construction Specification Institute. Originally set up with sixteen divisions (concrete, masonry, metals, thermal and moisture protection, finishes, mechanical, electrical, etc.), it was later expanded to fifty divisions to reflect the growing complexity of the construction industry, as well as information pertaining to building lifecycle and maintenance information. CSI then created the GreenFormat to organize the properties of sustainable products.

With the sense that CSI could not accommodate a new generation of transformational materials, particularly those focused more on design and less on material science and building construction, a small number of authors and agencies have created and offered new category sets that bear many similarities. Chief among them are additional physical categories for sustainable and innovative materials as well as categories for performance attributes.

Material Connexion, founded in 1997 by George M. Beylerian, is a global materials consultancy and one of the largest physical libraries of advanced, innovative, and sustainable materials and processes in the world[v]. All of the materials in its collection are categorized based on their chemical composition: polymers, naturals, metals, glass, process, ceramics, cement, carbon, naturals, and natural derivatives. In addition to the Active Matter service referenced above, Material Connexion offers a fully installed materials library as well as a database of over 6,500 juried materials. Because of the scope of Material Connexion, its

database serves as an unavoidable example, if only as a reference, for how local materials databases can be constructed.

The *Transmaterial* series offers the material categories of concrete, mineral, metal, wood, plastic + rubber, glass, paint + paper, fabric, light, and digital; and parallels those with the performance attributes of ultraperforming, multidimensional, repurposed, recombinant, intelligent, transformational, and interfacial.

MatériO, an independent information center on materials and innovative products created in 2001 with four European offices, published in its 2009 *Materiology* the following categories: the major families of materials (concrete, wood, composites, leather and skin, light, metal, paper and cardboard, stone, plastics, textiles, and glass + ceramics) and the major techniques for processing or conversion (assembly methods, cutting, stamping, or injection).

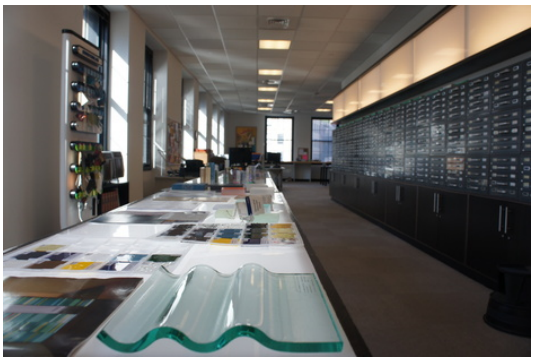
The Mtrl database ("Material about materials") by noted author Chris Lefteri uses the categories: additives and ingredients, ceramics and glasses, coatings and finishes, composites, elastomers and rubbers, metals, natural materials, plastics, and devices. Each of those has material form subsets such as additives, fiber, film, finish, foam, mesh, powder, resin, textile, tile, etc., as well as material personality subsets.

The Gerald D. Hines College of Architecture at the University of Houston has a young materials collection and database utilizing a categorization system based on the five material families of ceramics, metals, naturals, polymers, and hybrids that break down into sub-categories such as, under ceramics: concrete, glass, clay, and stone.

The RISD MRC has explored several possibilities regarding its data infrastructure. An attempt was initially made to set up an online collection within the Madison Digital Image Database. Data for that collection was based on a preliminary set of fields that was ultimately not adopted. A classroom project in fall 2010 resulted in a dataset derived with Interior Architecture class and the MRC. While it proved effective for the students, it remained too narrowly focused for the library to use in the long term. More recently, the RISD MRC is collaborating with Harvard University's Graduate School of Design to decide upon a metadata set and seek funding to build a shared open database. This is fortuitous as the RISD and GSD collections would be highly compatible (similar yet different in beneficial ways, such as critical approaches to materials) and, given their physical locations just one hour apart from each other, encourage real sharing and collaboration. The shared database will benefit from other discipline-specific metadata standards, such as the VRA Core, and will have highly specific

and proscriptive rules for the cataloging of materials (itself a lesson from VRA Core and the CCO project), though both institutions know that the online environment can be no substitute for the haptic, exploratory experience of the actual materials themselves in an environment that practices teaching through making.

Renovation



The RISD MRC is presently situated in makeshift space, half in a secured hallway and half inside the room lined by that hallway, which happens to be the site of the 200,000+ slide collection housed by the Fleet Library. Like the Harvard GSD, the material collection will replace a phased-out/reduced slide collection. With the MRC's growth rate at thirty-five percent this past year and circulation rates where the total of the previous year is now matched on a monthly basis, funds are being sought to considerably renovate the space into a proper collection for materials where professors from the Division of Architecture + Design as well as the Division of Liberal Arts can hold classes, make assignments, conduct critical presentations, engage in seminar-style discussion, etc., and where demonstrations by material scientists as well as local industry representatives can take place. At RISD, the MRC will be centrally housed as one of the library's non-text collections for the entire campus, relatively unique among materials collections nationwide as most tend to be administered within schools of architecture or engineering. With the development of the shared database and the renovation of the collection space[vi], the RISD Material Resource Center will be well-poised to develop into a collection that will be of dynamic interest and use by the entire RISD campus and community.

[i] Blaine Brownell, *Transmaterial: A Catalog of Materials That Redefine Our Physical Environment* (New York: Princeton Architectural Press, 2006), 6.
[ii] Brownell, *Transmaterial*, 7.

[iii] Flavia Gnecco and Stephen Szermer, *Material Library: Summer 2009 Findings* (2009), 4.
[iv] Dave Seliger, “Introducing the RISD Materials Library,” *core77 Blog*, August 2, 2011, http://www.core77.com/blog/materials/introducing_the_risd_materials_library_20018.asp.
[v] Fast Company, "Matter". Fastcompany.com. 2007-12-19. Retrieved 2011-09-19. http://www.fastcompany.com/magazine/119/matter.html.
[vi] Renovation funds have since been secured from the Rhode Island-based Champlin Foundation, with matching funds from Rhode Island School of Design, for the project to take place in summer 2012.