JOURNAL OF INTERIOR DESIGN



Theory Research Education Practice

LETTER

A Hearty Economy and Healthy Ecology

Can Co-exist 6 Jane Nichols

PERSPECTIVE

What's Wrong Caroline Hill, M.S. with Pretty? 11 Carl Matthews, M.S.

ARTICLES

Interior Design in K-12 Curricula:

Asking the Experts 15 Stephanie A. Clemons, Ph.D.

Automated Creativity: Digital Morphology and

The Design Process 41 Kathleen Gibson, M.A.

A Case for Typology of Design: The Interior

Archetype Project 48 Jan Jennings, M.S.

Motive, Mind, and Media:
Digital Sketching in the
Creative Culture of Design 69

Jason Meneely, M.S. Sheila Danko, M.I.D.

AWARDS

91

A Case for a Typology of Design: The Interior Archetype Project

Jan Jennings, M.S., Cornell University

ABSTRACT

The "Interior Archetypes Research and Teaching Project", initiated in 1997 at Cornell University, creates a typology of contemporary interior design practices that is derived from reiterative historical designs that span time and style and cross cultural boundaries. An argument for the significance of a typology of historic and contemporary interior design practices is based on ten years of experiments resulting from the project. Approximately one hundred archetypes have been developed by the principal investigator, graduate students, and associated educators. The article establishes the premises for this research model and defines the methodological, theoretical, and pedagogical implications of the study for both undergraduate and graduate learning experiences. The Interior Archetypes Project names contemporary design practices that have not been named, thereby providing designers with an interior-specific, history-specific, and contemporary design-specific vocabulary. The project also offers an innovative approach to further design criticism and design sustainability. The Interior Archetypes Project will disseminate a new knowledge base for the creative dimension of design—that is, the productions of its practitioners. The key method of delivery for the Interior Archetypes Project is its web site.

The "Interior Archetypes Research and Teaching Project," initiated in 1997, creates a typology of contemporary design practices that is derived from reiterative historical designs that span time and style and cross cultural boundaries. This article argues for the significance of a typology of historic and contemporary interior design practices based on ten years of experiments resulting from the Interior Archetypes Project. The article establishes the premises for this research model and defines the methodological, theoretical and pedagogical implications of the study for both undergraduate and graduate learning experiences as well as for use by practicing professionals and scholars.

By definition, typology is concerned with those aspects of human production that can be grouped because of some inherent characteristics that make them similar. Classification systems lie at the heart of many disciplines. Within architecture, the two most common classifications have been by use (churches, prisons, banks, airports) and by morphology (buildings with long hall-shaped interiors, centrally planned buildings, buildings with courtyards, buildings with interconnecting compartments).

Architectural historian Adrian Forty states that since antiquity classifications have been inherent to the classical system of architecture, and also that a typological classification of buildings by purpose has been in constant use since the eighteenth century. In Cours d'Architecture, the mid-eighteenth-century French architectural writer and teacher J.F. Blondel compiled sixty-four building varieties he called "genres," rather than types. Another French teacher and writer, J. N. L. Durand, is credited for setting out the first morphological classification in his Precis (1802-1805). However, when Nikolaus Pevsner published A History of Building Types in 1976, he stated that no typological architectural history had been previously written. Pevsner describes buildings by functions, such as theatres, libraries, prisons and railway stations. The chapter devoted to shops, stores, and department stores begins in eighteenth-century Europe and concludes in 1964 with a shopping center. Although exterior photographs outnumber interior ones and plan and section drawings lack consistency, the book remains a helpful overview of benchmarks in the evolution of specific types.

Archetypes also bring into sharper focus the critical distinctions that reflect the time and place of their making.

An interior archetype represents an ideal example of a historical and culturally determined practice of design from which similar models are derived, emulated, or reiterated. An archetype, like culture, is constantly present but is also susceptible to change. It is both conservative and dynamic. Therefore, archetypes also bring into sharper focus the critical distinctions that reflect the time and place of their making.

An archetype differs from "patterns" as defined by Christopher Alexander in his text A Pattern Language: Towns, Buildings, Construction. This 1,166-page tome differs from the Interior Archetypes Project in intention, method, and result. Alexander and a coterie of researchers delineated 253 patterns ranging in scale from geographical region to ornament. Pattern 199 ("Sunny Counter") posits that "dark gloomy kitchens are depressing. The kitchen needs the sun more than the other rooms, not less." Alexander believes that, if one understands the language of the patterns and follows their precepts, their use will result in a complete design for an individual building. Each pattern is substantiated by observational studies in a particular time and place, as well as by other social science methodologies, rather than by the analysis of designs that span a sustained period of time. Alexander declares that his purpose in presenting the patterns is to maximize social interaction. Some patterns are geographically biased in that they do not accommodate severe climatic conditions or the security concerns of urban dwellers. For example, in Pattern 236 ("Windows Which Open Wide"), casement or French windows are recommended over any other types, because "they will allow one to open windows wide to the street" and "onto the flowers you want to smell, paths where you might want to walk, and natural breezes."

Architectural precedents also differ significantly from archetypes in approach and use. An architectural precedent is derived from an analysis of a single well-know built form, such as Andrea Palladio's La Rotunda (Vicenza, Italy, 1566-1571) or Alvar Aalto's Vouksenniska Church (Imatra, Finland, 1956-1958). For an architecture student, analysis includes form studies and organi-

zational concepts such as section and elevation, as well as structure, massing, and parti. Plans are examined as "plan to section," "unit to whole," hierarchy, and geometry. The analysis is not all-inclusive in that it is limited to characteristics that can be diagrammed, such as, for example, the analysis of "circulation to use" in a figure-ground study. Precedents provide useful models for understanding and designing architectural form one case at a time, but they omit many of the characteristics important in designing space and interiors, such as furnishings, materials, qualities of natural light, and room concepts. Precedents have no interest in design traits as a series of reiterations.

One of the best morphological studies to provide a vocabulary for architecture students is Francis Ching's Architecture: Form, Space and Order. Ching's book offers a wide array of solutions to architectural problems that have developed over the course of human history. Unlike Pevsner's text, Ching's book has proved useful to interior design professors who have adapted it for interiors. Sections about spatial organization and circulation are especially cogent, but the book lacks specificity about many interior elements and uses, such as stairs, lobbies, room design, wall organization, and interior materials.

In Archetypes in Architecture, Thomas Thiis-Evensen, a phenomenologist who followed in the footsteps of architectural theorist Christian Norberg-Schultz, explores three architectural elements—the floor, the wall, and the roof—and three existential expressions of architecture—motion, weight, and substance. The emphasis is primarily formal, with few inroads to the interior. Typologies by these three authors do not translate easily to the designed interior. A new set of interior-specific archetypes is needed.

A TYPOLOGY OF INTERIOR DESIGN PRACTICES

A typology fosters an understanding of theories of design and provides a basis for understanding meaning by providing tangible and/or visual examples of abstract concepts. Norberg-Schulz wrote that "architectural

Identifying a cluster of design traits as a typology increases students' understanding of connections and relationships in design.

history shows that development of types is essential to the architectural system." In the same vein, Aldo Rossi, theorist, teacher and Pritzker Architecture Prize Laureate, stated that "ultimately... type is the very idea of architecture, which is closest to its essence."

Typology has several pedagogical attributes, the first of which is to provide students with a way to interpret pictorial information. Design historian Stephen Temple asserts that "students do not know how to glean information from pictorial images, greatly reducing their desire and ability to make analytic judgments without content." Due to this limitation, Temple recognizes the challenge students face "to comprehend the complexities of historical information, especially in a manner relevant to the creative context of design and critical inquiry."

Identifying a cluster of design traits as a typology increases students' understanding of connections and relationships in design. In this way, typology encourages analysis—a means to reveal the complexity of combinations or clusters. In some cases, a space can only be characterized by a cluster of archetypes acting in concert with one another (a condition social scientists would call "loosely organized settings"). This phenomenon speaks to the design of increasingly more complex and complicated spaces. In these instances, students gain a critical understanding of the relationships among those typologies with which designers are creating holistic spaces.

A typology is a flexible system that can accommodate the curricular values of various academic programs and the expertise of a range of scholars. It accommodates the high style and the vernacular, cross-cultural design systems, and aesthetic treatments. A typology is simply another way to understand the history of interiors—that is, the history of interior spaces and their contents. Typological classification helps to describe and criticize built work.

Typology possesses the capacity to encompass a "broad range of sources," such as architecture, art, film, cultur-

al history, and "fields that are not fixed." Studying the history of interiors typologically is appropriate for specific knowledge about particular areas of design, such as healthcare or preservation, which rely on the implementation of predictable outcomes. Likewise, typology is appropriate because of what Anna Marshall-Baker defines as the field's "fundamental... interdisciplinarity," and also because the history of interior design borrows from many disciplines.

The use of a typological language is already established in interior trade publications. Certain issues of Interior Design are thematically organized around the practice of retail, hospitality, or health care design. Architectural Record includes a Building Type study in every issue, in which each building use is characterized by program, solution, and brief commentary.

Professional interior designers in large architectural offices also recognize interior types by function and use as a significant aspect of practice. The cultures of some firms lend themselves to typological thinking. For example, Gensler's studios are internally referred to as "practice area" studios which include workplace, retail, hospitality, and airports. Some offices, like Denver, specialize in workplace design, while Gensler's San Francisco office has three studios dedicated to retail. Gensler also has representatives from each office that comprise a global task force for specific practice areas. Often these representatives travel from office to office to help start up a project in their area of specialization.

THEORETICAL APPROACH AND A CASE FOR CONTEMPORARY DESIGN

The Interior Archetypes Project depends on typology as a method, and the project's theoretical framework is derived from George Kubler's The Shape of Time. Kubler proposes that design traits be seen as a continuum or a series of replications (see Figure 1). Kubler believes that every important design can be regarded both as an historical event and as a hard-won solution to some problem. To him, every need evokes a problem. The recurring juncture of each need with successive solutions

The Shape of Time

1 history

Without change, there is no history; without regularity there is no time. Time and history are related as rule and variation: time is the regular setting for the vagaries of history.

2 problem

Every important work can be regarded both as a historical event and as a hard-won solution to some problem.

Every need evokes a problem.

3 sequence

The juncture of each need with successive solutions leads to the conception of sequence. . . .

The boundaries of a sequence are marked out by the linked solutions describing early and late stages of effort upon a problem. In the long run, the sequence may serve as a scaffolding . . .

4 discard or retain

The decision to discard something is far from being a simple decision. . . . It is a reversal of values.

Though the thing was once necessary, discarded it becomes litter or scrap. What once was valuable now is worthless; the desirable now offends; the beautiful now is seen as ugly.

Figure 1. The theoretical construct of The Shape of Time as interpreted in the Interior Archetypes Project allows interior design students to leave their programs with a formalized knowledge of current professional practices that are deeply rooted in history.

leads to the conception of sequence. The boundaries of a sequence are marked out by the linked solutions describing early and late stages of effort expended upon a problem. In the long run, the sequence may serve as scaffolding for new design.

Kubler's approach suggests the possibility that: 1) contemporary interior design has historical scaffolding; 2) design traits can be identified from design practice; and 3) a sequence of design reiterations by architects and designers can be traced through time. This way of thinking about sequence leads to an understanding of

the early and late stages of design effort expended upon a problem. Some sequences of historical or theoretical solutions may come and go over time, but many become so powerful that they represent continuity.

Kubler's view of continuum addresses Beecher's suggestions that "time can be modeled in many shapes including the cyclical, the polarized, and the discontinuous ... that new approaches to the history of interiors should model systems that accept the past as dynamic; conceive of objects as events, not things ... and that this can be accomplished by presenting as encompassing a view as

The Interior Archetypes Project establishes a new and significant contribution to the theory-base of the interior design field and profession.

possible when interpreting design; by presenting history as unfinished and speculative so that students can learn to judge what has been fulfilled, or not, in the past ..."

The theoretical construct of The Shape of Time as interpreted in the Interior Archetypes Project allows interior design students to leave their programs with a formalized knowledge of current professional practices that are deeply rooted in history. Rather than allowing students to browse professional trade magazines for "ideas," faculty can structure how students examine such sources. Students can be taught to analyze and criticize published work. This approach to analyzing contemporary design also emphasizes the importance of looking for connections and commonalities among featured spatial designs rather than viewing them as series of isolated expressions. The Interior Archetypes Project solves the need to teach both contemporary and historical design for their component elements, purposes, and morphologies.

PREMISES OF THE ARCHETYPES STUDY

Contemporary interior design practice has generated the need for the creation of an interior-specific vocabulary that defines the character of contemporary spaces for which a historically-specific or stylistically vague vocabulary is not appropriate. Therefore, the Interior Archetypes Project establishes a new and significant contribution to the theory-base of the interior design field and profession.

The research model for the development of interior archetypes depends on three premises that have been synthesized from a range of published literature.

Premise 1. Contemporary design should become a focused area of study. The archetypes study formalizes a methodological and theoretical approach to studying contemporary design in an historical context.

In 1996, at Cornell University, the first symposium created to engage historians of interior design convened to generate a philosophical dialogue about the linkages between history and the design studio. The symposium,

entitled "Object-Context-Design: The State of Teaching Interior Design History," called for an examination of those scholarly and pedagogical intersections between studio and history. The symposium and subsequent articles presented in a special themed issue of the Journal of Interior Design (JID) made it clear that historians were rethinking how history should be taught in relation to design. The speakers and authors argued for approaches that could accommodate critical thinking, multiculturalism, vernacular histories, popular culture, and thematic issues.

In Picturing a Nation, David Lubin makes a case to "be mindful to the past and its differences from the present, but also... to recognize that it is not only impossible but undesirable to see the past completely on its own terms, detached from present-day needs and discourses." He asks, "Why study the past if not to better understand, criticize and recognize the present?"

Art historian Robert Maxwell interprets the relationship between contemporary and historic design—the dialectic of new and old—as "a complex one, for within the new there is something of the old, which precisely renders the new recognizable; and within the old the new is already pregnant." Without the context that history provides, contemporary design can be perceived as shallow or trendy. History and design are not separate or different dimensions, but instead closely related features of one idea.

Although history courses are imbedded in interior design curricula, these courses rarely link history with contemporary professional work. Pevsner recognized that any book of Western architecture from the beginning of time to the eighteenth century would be almost entirely made up of churches, castles and palaces. Moreover, history courses that omit those very building types with which many designers work—museums, retail stores, hotels and restaurants, offices, and healthcare facilities—fail to prepare student designers.

The pedagogies associated with teaching history in

The archetypes provide students with an alternative language in situations where stylistic references would be inappropriate, such as when describing their own projects or making references to contemporary design.

lecture courses and design in studio courses are rarely linked in terms of design. A telephone survey conducted after the 1996 Symposium solicited a broad profile about the state of historical instruction. The survey, directed to those who teach history in four-year interior design programs accredited by the Council for Interior Design Accreditation (CIDA, then FIDER), garnered a response from 83% of the 106 programs that were contacted. The survey determined that 66% of interior design programs required three to five courses in interior design history, plus additional courses in art or architectural history or both. Yet design historians who attended the symposium readily admitted that students were not inculcating history into their design studio work.

Premise 2. Archetypes name contemporary design practices that have not been named, thereby providing designers with an interior-specific, history-specific, and contemporary design-specific vocabulary.

Interior archetypes provide a new language for interior design study and practice. Professor Mary Anne Beecher, in her article tracing the historiography of the related fields of study that generate the body of knowledge from which the history of interior design is drawn, recommends a new framework for teaching history as a critical method allowing for more flexible textual resources. Beecher states that "the linear construction of history often promoted by interior design texts limits students' abilities to understand the connection between the creative processes used in design activity and those used to study the past." Design historian Beverly Brandt also argues for a thematic organization dependent on a linear and progressive format that stresses global awareness, regional sensitivity, multiculturalism, and critical thinking.

Archetypes encourage students to become more articulate about vocabulary and to make references about the relationships between historic and contemporary design. Students learn to use the words with precision, because they are less about description and identification and more about generating an analysis of how a

design operates or performs. The archetypes provide students with an alternative language in situations where stylistic references would be inappropriate, such as when describing their own projects or making references to contemporary design. Theoretically, typology has a relationship to style as a way to organize information. Typology, however, is more broadly applicable to contemporary design, popular culture, vernacular and multiculturalism, because it is less reliant on formal relationships, the articulation of particular motifs, or aesthetics in general.

Premise 3. Archetypes can and should be used as a foundation for new scholarship and contemporary design criticism. They offer a new way to further environmental design sustainability because they directly address the issue and implication of longevity.

Archetypes represent embedded and sustained design practices. An archetype's time continuum is measured by how long a practice has existed in the culture of design. An archetype's longevity may directly represent the level of its acceptance or desirability. For example, an archetypical practice with a history that does not predate 1980 may not be as intractable as one that has been in the culture for a hundred years or more.

For the most part, the design industry has seen sustainable practice increase as better technologies and better processed materials have been developed. However, sustainability also has a cultural dimension. In many cases, sustainability requires changes in cultural design values and practices. Few studies have analyzed archetypical designs that may or may not support sustainable interior design. However, the idea for such a study as part of the Interior Archetypes Project posits that archetypical practices are especially appropriate to examine in relationship to sustainable principles.

RESEARCH PROTOCOL AND GRADUATE STUDENT RESEARCHERS

Using typology as method and Kubler's ideas as theory, the research protocol produces archetypological de-

For the most part, each graduate student chooses a category around which to identify a set of archetypes based on his or her interest in an area of specialization.

sign practices that are examined across time. Approximately one hundred archetypes have been developed by the principal investigator and associated educators, as well as by graduate students. The project has sustained nine master's level research theses, while several more are underway. Each graduate thesis produces about twenty new archetypes. For the most part, each graduate student chooses a category around which to identify a set of archetypes based on his or her interest in an area of specialization. Graduate student researchers have approached typology by design elements (lighting, materials), by interior uses (museum, retail, hotel), and by morphologies (rites of passage, wall dwelling). The building typologies are somewhat less difficult to develop, in that a researcher only examines primary and secondary sources for that one type, rather than sorting across all types of interior projects, for, say, materialsbased archetypes.

Some archetypes appear in more than one category. For example, the White Cube, defined in 1999 by Brian O'Doherty in Inside the White Cube: The Ideology of the Gallery Space, became a common architectural practice, crossing almost all building typologies, including the art museums where it originated. As a result, each White Cube located in retail store and boutique hotel archetypes was then developed to illustrate examples specific to each type. In the end, examples of the use of the White Cube multiply not only through time but also across type.

Researchers undertake the following methods of discovering knowledge: 1) analysis of primary and secondary sources that results in the collection of traits; 2) identification of composites of traits that typify through time a dominant characteristic that has been used repeatedly by designers as interior architecture and design; 3) isolation and definition of these traits by naming them and illustrating examples chronologically; 4) presentation of a proposal (draft stage) of specific archetypes; 5) implementation of observational field studies in a range of locations to test and compare typologies derived from print-based photographs with those evident in built

projects; 6) revision of the archetypes based on observational evidence; 7) presentation of the archetypes in an elastic web-based format.

For each scholar or graduate student participating in the project, the development of archetypes begins with a survey of primary source materials such as Interior Design magazine. For the Material Archetypes study, Elizabeth O'Brien examined all issues of Interior Design published since 1945 and all the issues of Architectural Record and Interiors published within the last thirty years. Researchers studying specific interior-types such as museums, boutique hotels, or retail stores may require the analysis of additional primary sources. For example, in addition to Interior Design, the Retail Archetypes study included content surveys of Architectural Record and Interiors, as well as typology focused trade magazines, such as Visual Merchandizing and Store Design. These trade magazines represent a concise body of literature about professional contemporary high-style design. Interior Design, for example, published since 1932, is an ideal source (with over 1,000 issues) for examining the longevity of typological professional design practices. Although American trade journals publish international projects, secondary literature is often international and non-western in scope. Definitions and descriptions of many archetypes such as Memory Path, Showcase Stair, or Monochromatic Room cross cultural boundaries. Still other archetypes, such as Rites of Passage, emerge from vernacular practices.

The survey of primary sources is then compared with published scholarship, with largely photographic trade books from the same period that offer few critical or interpretive treatments, and with secondary sources. For example, secondary sources for the Retail Archetypes study included the thematic book series Stores of the Year, a compendium of published articles from a given year.

Researchers accumulate a large body of images representing designed interior spaces from this survey of visual resources. Each then sets out to identify, classify, and

Naming the typologies is one of the most important tasks. Naming also evokes very lively interactive discussions.

characterize recurrent interior design practices over time by tracing the content of design journals back through history. Initial collected image groupings undergo numerous transformations throughout this phase of the process. As a researcher moves back in history, the images collected either reinforce earlier hypotheses about typological expressions or lead to the shifting, combining, and discarding of others. One can work from the current issues backward in time or from the oldest issue forward; both methods have worked successfully. In this stage, researchers see how a principal concept or trait develops into something no longer pure as the archetype is replicated and interpreted. Concurrent with visual sorting, additional primary and secondary materials are also examined to increase the ideological understanding of an archetype.

Throughout this stage, a graduate student relies heavily on his or her thesis committee. In the early stages of the Materials Archetypes study, Elizabeth O'Brien found an abundance of images to sort, and she struggled to narrow the focus of individual categories, in part because the topic of interior finish materials is so broad. Her committee encouraged her to think solely about the qualities and properties of the materials themselves. They suggested attaching Post-it notes to each collected image with a list of adjectives describing the material characteristics of the composition. This technique became a turning point in O'Brien's research, because it allowed her to break down the broader material categories into the final archetypes.

Working one-on-one with her major professor, graduate researcher Marta Mendez mounted photographic examples of her initial categories on PowerPoint. Mendez showed her professor a series and asked her to guess the traits. In some cases, the professor guessed correctly, and in others, she did not, indicating to Mendez which categories needed more clarification.

Once a set of categories is established, researchers examine more trade journals magazines to gauge the longevity of the type, working backwards to trace the origins of a

typology to what Kubler calls a "prime object." The researcher then drafts a list of proposed archetypes for his or her graduate committee. Additional people may also be invited to these sessions, including other professors, students, and practitioners. The student's presentation during this stage is informal; quite often the committee gathers in a room around a long table. Students give the committee a list of "working" names with a preliminary list of characteristics, and then he or she makes a visual argument for a typology by producing a preponderance of evidence in the form of scanned color images, which the student lays out on the table in various groupings. These images are not bound in a document, so they can be moved around the table from one typological pile to another. By retaining the loose set of images, everyone at the table is able to relocate images, make new groups, or move one pile of typological information into another pile if appropriate. (PowerPoint has therefore not been effective here.) Everyone makes a contribution. The collegial discussions that occur during this stage are some of the richest and most collaborative of any the principal investigator has experienced as professor or practitioner.

Naming the typologies is one of the most important tasks. Naming also evokes very lively interactive discussions. In order for anyone to remember so many archetypes, the names have to be extremely memorable, not staid or pedantic. When Julie Yang named one of the Boutique Hotel Archetypes Naked, she effectively described not just the aesthetic of some boutique hotels, but how one feels in a space without walls (or with glass walls) dividing bathroom from bedroom. At the mention of this term in relationship to a hotel space, everyone conjures up an appropriate mind's eye image. Elizabeth O'Brien's Slicker designation for a Material Archetype effectively identifies not only the materiality she describes but also qualities of texture. Although the committee may come to an agreement that an effective argument has been made for a typology, the naming process may also extend until everyone is comfortable that a term is properly descriptive and unforgettable.

Also imperative to the study are site visits that follow the content survey and the draft versions of archetypes.



Figure 2. For the Material Archetypes study, O'Brien developed each timeline by breaking it into four sections of time that roughly corresponded to recognized design movements.

During the draft stage, a researcher arranges photographs in a chronological sequence illustrating design reiterations through time, as well as the social frameworks that influence the emergence and transitions of an archetype. Along the way, researchers began referring to this documentation as a timeline, although the term "line" is misleading. A line suggests an orderly pattern, when in Kublerian thinking, reiterations through time are very random and messy. They may even be clustered into sub-typologies. In fact, a typology may dwindle away for a period of years (or decades) before being revised at a later time. The research process described here is vigorous enough to account for such occurrences.

For the Material Archetypes study, O'Brien developed each timeline by breaking it into four sections of time that roughly corresponded to recognized design movements: Pre-Modernism (1899-1920), Modernism (1920-1980), Post-Modernism (1980-2000), and Contemporary (2000-present) (see Figure 2). These ranges helped to organize the timeline, but often they were then segmented further in order to highlight periods that have had a significant impact on the development of an archetype. A dashed line represents the origin and each successive solid line indicates development and further progression. Breaks occur when specific applications

have become obsolete.

For Museum Archetypes, such as Red Room, Joori Suh assembled a traditional timeline in a horizontal format, with photographs and citations branching out from the line. O'Brien presented her Material Archetypes sequences in both an image-based and a text-based format. She organized the photographs into a rectangular vertical block of about twelve photographs with the year superimposed on each image. A reader may click anywhere in the block to reveal the citation and photograph credits. O'Brien's organization of sequence allows the reader to immediately grasp the essence of a trait without being distracted by text; at the same time, it provides a summary sheet of examples of built work. O'Brien also developed a timeline analysis for each archetype whose outline of key developments reinforce the conclusions initially drawn from looking at the images alone.

Also imperative to the study are site visits that follow the content survey and the draft versions of archetypes. Relying on published photographs as evidence for the archetypes is problematic in that the pictures are not the same as three-dimensional documentation. The photographs are taken by professional architectural photographers with sophisticated lighting; the shots often cap-

According to feedback from the project participants, in addition to deepening their knowledge, graduate students also become empowered during the research process for several reasons.

ture vantage points (e.g., shots taken from ladders) that would not be ordinarily seen. In effect, the photographs represent market ideals. Without travel, a reliance solely on print sources would result in a limited understanding and analysis of each archetype. Experiencing these spaces in person with the actual designer or with a representative of the project offers opportunities to expand a researcher's perceptions of the interior space and to sharpen his or her critical observations.

Field studies are especially helpful in understanding circulation and human movement in relation to the overall space. Graduate student researchers receive travel grants from their college that enable them to make necessary trips, and they undertake site visits throughout the research process, assessing the real space against the virtual representation in print sources. In developing the Art Museum series, Joori Suh visited three major American cities (New York, Los Angeles, Chicago), as well as London, England, and Bilbao, Spain. Students choose the cities they visit on the basis of their archetypical category. In developing Boutique Hotel Archetypes, Julie Yang visited cities well known for cutting edge designs and stayed in many of the hotels to experience their spatial impact.

A slight exception to the research protocol was a thesis that examined only contemporary Chinese restaurants created by Jeffrey Beers and Tony Chi, two leading restaurant designers. The graduate researcher visited the cities where the majority of Beers and Chi's restaurants are located (New York, Chicago, Las Vegas). She also interviewed each designer regarding typical practices, concluding that Chinese restaurants depended more on concept than culture. References to traditional Asian design were few, abstract, and generalized (mixing Japanese, Chinese, and Korean artifacts and elements together). The Asian effect relied primarily on color, scale of elements, and materials to suggest Asian influence. The archetypes resulting from the study are found in many restaurants, not just those that are ethnically based.

Reviewing a full range of design projects published in

trade magazines emphasizes the sophisticated interiors created by top designers and firms internationally. Julie Yang stated that as a result of this research model, she was able to understand how a design paradigm evolved. She states that by examining each archetype in the context of a time sequence, she "discovered how certain types overlapped while others discontinued. The timeline is visually helpful in understanding the iterations of an archetype from its origin."

According to feedback from the project participants, in addition to deepening their knowledge, graduate students also become empowered during the research process for several reasons. By examining the review of literature, especially hundreds of design publications, they are exposed to the full range of contemporary design. Their confidence grows with the knowledge that they are the primary developer of the archetypical material; in today's vernacular, we might say that they "own the material." Certainly they know more about their research area than the people sitting around the review table, and they speak with a new level of confidence. The committee also treats the student as an equal, resulting in a newly-earned colleagueship. Although the studies result in a research thesis rather than in a design project per se, students' portfolio presentations are enhanced, and many students show their prospective employers a PowerPoint presentation of the archetypes they developed.

IMPLICATIONS FOR INTERIOR DESIGN HISTORY PEDAGOGY

This emerging set of interior design archetypes maximizes the usefulness of historic interiors within the design curriculum and provides links to design practice that encourage the application of theory. Adopting an archetypical vocabulary for the study of the history of interiors stresses links between that history and design studio practice. An archetypical vocabulary exceeds connections made between knowledge gained from traditional stylistically-based surveys and the design of contemporary spaces, and it does so through the adoption of a common grammar.

The archetypical approach asks students to strengthen their analytical and critical skills by looking for likenesses among seemingly dissimilar constructions.

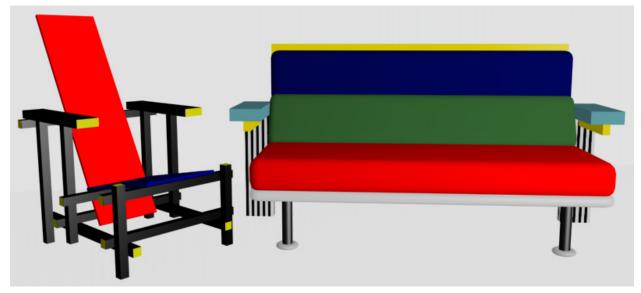


Figure 4. Susan Szenasy's history students at New York's Parsons School of Design found likenesses in design between the two chairs, thus opening the door to a rich discussion about the contextual differences between the chairs in terms of time and place.

The archetypical approach asks students to strengthen their analytical and critical skills by looking for likenesses among seemingly dissimilar constructions. Susan Szenasy, Editor-in-Chief for Metropolis, was dismayed when her history students at New York's Parsons School of Design identified a 1982 Memphis Chair from Italy as the product of the Dutch De Stijl movement of 1917. Further exploration of their analysis, however, led her to the conclusion that the students may have been on the right track. Her students found likenesses in design between the two chairs, thus opening the door to a rich discussion about the contextual differences between the chairs in terms of time and place (see Figure 3). Examined in this way, there may be similarities between these two short-lived movements that have not been explored in traditional histories.

IMPLICATIONS FOR UNDERGRADUATE STUDIO TEACHING

At Cornell University, archetypes are first introduced in the sophomore studio, which is taught concurrently with a history lecture course. The lecture material from the history course therefore becomes the knowledge base for the studio. In a variety of projects from abstract schematic studies to full-scale built installations, students learn how to conceptualize design and how to recognize archetypical practices. This body of research has supported project designs for interior design students, while archetypes have also been useful in interdisciplinary projects such as those conducted with studio students from the Theatre Lighting Design program (see Figure 4).

In 2005, students from the sophomore studio at Cornell University chose one of the archetypes, Rites of Passage, as a tool for solving two problems in the studio space—the presence of ambiguous circulation paths and the existence of undefined spatial areas. The Rites of Passage archetype has a long history, incorporating techniques from traditional 15th-century vernacular Japanese tea houses to Tadao Ando's interpretation of traditional passages in his Chapel on Mount Roko (1986, Kobe,

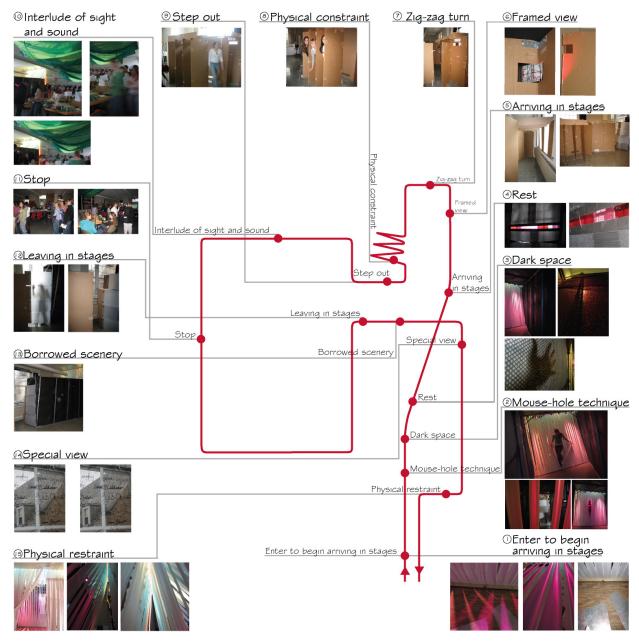


Figure 5. Students executed the "mouse-hole" technique, using bands of Lycra that forced visitors to bend down slightly to enter, emulating the two foot-by-two foot crawl space that exists in Japanese tea houses. The designs called attention to the body's movement through space. Visitors left the room through a hidden door and a new pathway that differed from the one they first entered.

Building full-scale installations of archetypal design expressions made historic theory real and applicable, rather than esoteric.

Japan). The Rites of Passage design installation creates new spaces by "slowing time down" through obstruction of movement. Small spaces are often enlarged experientially, while visitors arrive in stages.

In the full-scale designs developed through the design exploration of the archetype's implications, the second year students collectively used materials to configure innovative pathways leading from outside the room to inside. For example, some students executed the "mousehole" technique, using bands of Lycra that forced visitors to bend down slightly to enter, emulating the two foot-by-two foot crawl space that exists in Japanese tea houses. The designs called attention to the body's movement through space and included a space tunnel darkened with walls of Flex-force trash bags, a zigzag turn with recycled cardboard walls, alternating physical constraints, and an interlude defined by a low-hanging polyurethane tarp, borrowed scenery, and framed views. Visitors left the room through a hidden door and a new pathway that differed from the one they first entered (see Figure 5). In the Rites of Passage project, students utilized an archetype to create a contemporary design with historical underpinnings. Building full-scale installations of archetypal design expressions made historic theory real and applicable, rather than esoteric.

Already the online use of the archetypes has become so automatic for Cornell University's design students that no hard copy exists of a complete listing. However, memorizing one hundred archetypes is difficult for students and educators alike. Summary sheets with thumbnail images for types and elements are being produced for students to provide quick references (see Figure 6).

By their senior year, students use the language impeccably in their preliminary and final reviews. An archetype such as Light Seam works if everyone in the room understands its meaning when the presenter points to its visual correlation. Through anecdote, alumni of the program report that their office colleagues quickly adopt the vocabulary. Although others use the term as an articulation, graduates who have been trained with

CONTEMPORARY BOUTIQUE HOTEL DESIGN: INTERIOR ARCHETYPE IMAGE INDEX



Figure 6. At Cornell University, summary sheets with thumbnail images for types and elements are being produced for design students to provide quick references.

The archetypes have also proved useful in teaching research methods and criticism at the graduate level, especially for courses that focus on exhibition design and criticism.



Figure 7 (left) and Figure 8 (right). In 2005, seminar students drew from readings, class discussions and Retail, Museum, Exhibition, and Display archetypes to design, fabricate, and install an exhibit, entitled SOLD, that criticized the design of contemporary retail stores.

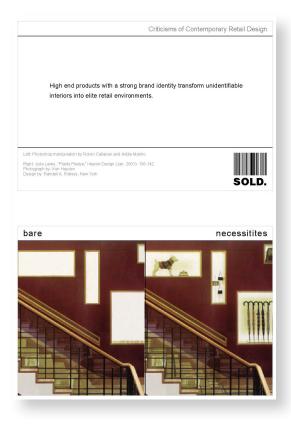
the archetype project understand a term's deep roots in history. The archetypes work toward establishing an interior-based language which also contributes to student's ability to grasp concepts.

IMPLICATIONS FOR GRADUATE STUDENT SEMINAR TEACHING

The archetypes have also proved useful in teaching research methods and criticism at the graduate level, especially for courses that focus on exhibition design and criticism. In 2003 and 2004, students in a graduate seminar in design theory and criticism used the Museum, Exhibition and Display archetypes to design two differently conceived exhibits in two differing venues using an historical photographic collection entitled Time and a Chair.

In 2005, seminar students drew from readings, class discussions and Retail, Museum, Exhibition, and Display archetypes to design, fabricate, and install an exhibit, entitled SOLD, that criticized the design of contemporary retail stores (see Figures 7 & 8). Eighteen retail archetypes provided the basis for exploring design practices in terms of meanings. The students chose comparison as their methodological approach, pairing two designs to make a critical argument. Each pairing represented a criticism presented as a visual essay, primarily through enlarged photographs of designs that had been published in professional trade magazines. Some of the criticisms were subtle, some overt. Each of the exhibition's kiosks displayed three paired comparisons. The use of comparison, as well as the scale and the placement of the kiosks, amplified the students' arguments, suggesting relationships between one criticism and another, be-

Because an archetype can be thought of as an organized body of knowledge, and because archetypes are free of value, the Interior Archetypes Project offers opportunities to generate new scholarship.



tween one kiosk and another. Viewed altogether, the criticisms multiplied. The students designed the exhibit to utilize a meandering path that slowed down arrival in order to extend the experience of place. The path was intended to stimulate multidimensional space-time experiences.

IMPLICATIONS FOR NEW SCHOLARSHIP AND SUSTAINABILITY STUDIES

Because an archetype can be thought of as an organized body of knowledge, and because archetypes are free of value, the Interior Archetypes Project offers opportunities to generate new scholarship. Based on an idea by Professor Herbert Gottfried that design practices could be examined critically in terms of sustainability, graduate student Virginia Gaskins used interior archetypes to examine the relationships between museum design and

sustainable design principles (see Figure 9). Her study theorized that some non-sustainable traits are embedded in archetypical practices, making them extremely difficult to alter. To establish just how deeply a practice is embedded and which practices work against sustainability, Gaskin broke apart an archetype's various elements and analyzed each one individually. This research process is termed "unpacking," signifying the deconstruction of an archetype into component parts of the cultural history associated with each type. Each of the traits can then be assessed in terms of its potential for achieving sustainability.

Gaskins concluded that the well-established White Cube archetype works against environmental sustainability and should be discarded as a design practice because of its inability to accommodate the subtleties of reflectance, its use of a constrained palette of interior finish materials, and its dependence on a rigorous and potentially harsh or wasteful maintenance regime. Kubler notes that the decision to discard something is "far from being a simple decision" and often requires "a reversal of values," because "though the thing was once necessary, discarded it becomes litter or scrap. What once was valuable now is worthless; the desirable now offends; the beautiful now is seen as ugly."

COMMUNICATING THE KNOWLEDGE BASE

The key deliverable of the Interior Archetypes Project is its website. Archetypes are organized and cross-referenced into sixteen categories on a searchable visual catalog of scholarly research. While each archetype can stand on its own as a case study, it is also possible for one to use the web site to understand characteristics shared among some of the archetypes.

The Interior Archetypes Project has been designed to accommodate the dominance of electronic technology in 21st-century teaching and learning. Electronic media makes for a good choice because of its ability to easily disseminate information to design professionals who have already successfully begun to incorporate the established vocabulary into their practice. The time is

unpacking

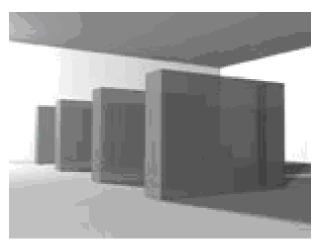
white cube as paradigm

a paradigm is a set of assumptions, concepts, values, patterns and practices that constitute a way of viewing design

TERMINOLOGY TECHNO technical / constra	implications	CULTURE cultural baggage / historical reference	SUSTAINABLE
impartial uninvolved evenhanded glass / ca pristine unprejudiced disinterested pure untouched immaculate non-space ultra-space ideal space no space-time clean unbiased non-position apathy non-emotion abstain undecorated white of walls. any signs surface. V glass / ca pristine wood / n display. In mechanic ment lighting. tion / son ton / climatic art flooring. surfaces / have been undecorated white	eutral materials aidden display es / glass encase- even distribune spotlighting / ure critical (even out space) ght. even distrindirect hidden o direct view to ents conspicuated out of vision y unnoticeable regulations for nonreflective carpet & wood in adapted ls. temporary is used on an as asis (2x4, sheet	modernism. 20th century minimalism. extreme simplification of form / monochromatic palette / objectivity / anonymity of style humanism. intellectual movement of renaissance (15th.c) rediscovery of art literature, and civiliza- tion of ancient Greek and Rome classicism. form / ideal (cube) political stance. commu- nist / unbiased space for all types of art science. objective scientific revolution. health / germ theory /ster- ile environments / void of multi sensory experience philosophy. aesthetic ideal (form). truth is beauty backlash. reaction to pre- vious eras. ex. Victorian	how can exhibition spaces be reused without the level of processing that occurs between exhibitions. in house dilemma material expenditures can be localized and minimized while maintaining same exhibition effect. eco friendly paint or a new surfacing material that simply needs cleaning after each use ethical. what materials are utilized. do they have a local reference. the white cube capitalizes on the fact that WB has no local references. it can be appropriated anywhere

Figure 9. Archetypical design practices can be formally assessed in terms of sustainability. From Virginia Gaskins, "Interface: Cultural Construction and Sustainability in Museum Interior Design," M.A. thesis, Cornell University, (2004), 8. Permission Virginia Gaskins.

The advantages of presenting the Interior Archetypes Project as a web-based digital library instead of in a printed format are many.



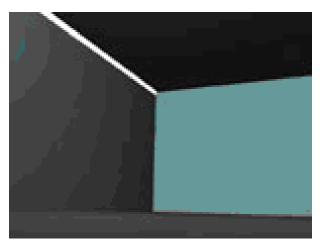


Figure 10. Each archetype includes a visual identification, a definition, a comprehensive description with citations, and a photographic chronological sequence of published interiors.

right to teach history and studio in ways that make them more accessible to students while maintaining the depth and range of traditional pedagogy.

The prevalent use of the computer in design education is changing the nature of studying design and the ways in which students acquire information and conduct research. In casual conversation among faculty colleagues, many report that students avoid the library in favor of the web as a reference resource. More and more, design students are bypassing traditional resource libraries to research materials and order current in-stock samples online. Students also seek out trade magazines on the web. Interior Design's digital publication LiveWire offers information for design professionals on a weekly basis. Many of the new practices engaged by students, the trades, and the trade presses represent positive changes. At the current moment, however, students who formerly sorted through a year's worth of magazine issues at one sitting in library stacks are still hard pressed to find that same kind of content online.

Szenasy characterizes the way she teaches history and the way her students study now as a generational gap, noting in 2005 that as she tried to enforce a more rigorous and useful ways of learning history, she "came to see that my methods—forged through seventeen years of teaching the subject and a master's degree in it—had stopped working. I remembered the old generation gap we never bridged in the 1960s, but this time the gap has been made even wider by technology... I now see my students as the outriders on a twenty-first-century frontier, pointing the way to what's coming up on the horizon. Yet we try to teach them as if the technical revolution is not raging around us." Szenasy concludes that she and others like her will need to change pedagogical approaches to meet students on their own terms and to make history relevant to the 21st century.

The format of interior archetypes is concise but comprehensive. Each archetype includes a visual identification (a schematic; see Figure 10), a definition, a comprehensive description with citations, and a photographic chronological sequence of published interiors (also with citations).

The advantages of presenting the Interior Archetypes Project as a web-based digital library instead of in a printed format are many. Design students access archetypes in an electronic database that is readily available

It is the mission of the Interior Archetypes Project to provide the design community a typological catalog of web-based scholarship about contemporary design practices, at no charge.

to them at the times and in the places where they work and study. New archetypes can be added and extant content can constantly be modified or updated. The web's capacity for large color images is also more cost-effective and flexible than the print format. Eventually, the Interior Archetypes Project website will show videos of building interiors that will illustrate the sorts of things that slides or photographs never can, such as relationships, contexts, sounds and movement. These videos will be necessary to understanding the spatial experiences and the theatrical lighting favored in the spaces of retail stores, restaurants, and boutique hotels. In this way, the Interior Archetypes Project will advance an understanding of design "in virtual situ."

MISSION, ORGANIZATION AND DEVELOPMENT

It is the mission of the Interior Archetypes Project to provide the design community a typological catalog of web-based scholarship about contemporary design practices, at no charge.

Currently, the project is organized loosely, directed by its founder-creator with the interdisciplinary collaboration of three professors at Cornell, and with the advocacy network of The Interior Archetypes Group, which is comprised of two consultants and several professional and academic collaborators. After ten years of ongoing development—from innovation to incubation, trials of the research model, a working prototype, and usages for research, teaching, and practice—the Interior Archetypes Project is moving from the production of knowledge into the product stage, preparing for dissemination. In this phase, intellectual rights protection, expansion of research, sponsorship, funding, technology, and ongoing research will be directed toward a new Interior Archetypes Projects website.

The current website was designed by a professional graphic design firm in 1997. The site was progressive then, but it is cumbersome now. The archetypes require a site that is intuitive and accessible for all users, in which multiple archetypes can be open at the same

time for comparison, and in which citations are available but do not clutter up the concepts. When the new website is installed, educators at Cornell will seek out joint ventures with other university interior design and interior architecture programs at both the undergraduate and graduate levels in order to test the usefulness of the archetypes in other settings.

Another limitation of the current stage of the study is its current dependence on photographs from trade journals. Because each archetype includes twelve or more photographs that require permissions for use, the limitations of copyright and royalty of the photographs necessitate password protection on the web site. For the project to be launched for trials in other academic programs and professional offices, a protocol for obtaining and funding permissions to publish must be achieved, or else another method of photographic illustration must be found. One solution will be for researchers to photograph the interiors they visit on-site. These photographs would be more akin to photojournalism rather than those traditional architectural photographs taken without people and from vantage points not ordinarily seen in person.

CONCLUSION

In 2005, architect Bruce Blackmer challenged interior design educators to "raise the knowledge level of the emerging professional entering into the profession," and to "raise the lifelong learning curve of the practicing professional." The research model presented here holds the potential to resolve this challenge, because it encourages designers to link history and contemporary criticism with the design studio and with practice using a structured, robust, and accessible method.

The Interior Archetypes Project may also answer Professor Tiiu Poldma's plea that students should "understand the theory of design meanings, exploring them in practice in the studio, and then returning back to theory to make critical and informed judgments." In this more critical sense, design education seeks to "engage in evolving design knowledge while also understand-

The methodological and theoretical approaches of the Interior Archetypes Project provide a formalized study of the creative/subjective side of design, as well as a means to interpret it.

ing design experiences in the studio as they really are in practice..." The Interior Archetypes Project collapses practice into theory and theory into practice, "studying design as it really is—tacit knowledge and complex and iterative and surprising."

The research model and pedagogical implications represented by the Interior Archetypes Project hold the potential to answer the challenges put forward above by Blackmer, Marshall-Baker, Beecher, Brandt, Szenasy, Poldma, and others because it links history and studio and practice using a compelling and accessible system. The study of interior archetypes may prove useful in earning Continuing Education Credits for practitioners. Just as practice expands and shifts, the Interior Archetypes Project is fluid and ever-evolving. It may never be completely finished, in that it has a limitless capacity for the addition and revision of practices as new renditions of old ideas continue to emerge.

In a recent Journal of Interior Design perspective, Paul Eshelman cites "a smoldering tension between the creative/subjective and the rational/objective sides of design," suggesting that "two separate and independent schools of thought" are vying for "dominance, rather than two complimentary dimensions of the same process seeking balance." In 2000, research summaries for the rational/objective side of the debate, represented by social science methodology and human behavior studies, became available as a web-based clearinghouse called InformeDesign (sponsored by the American Society of Interior Designers and created by the University of Minnesota).

The methodological and theoretical approaches of the Interior Archetypes Project provide a formalized study of the creative/subjective side of design, as well as a means to interpret it. When it is launched as an open web-based clearinghouse, the Interior Archetypes Project will disseminate a new knowledge base for the creative dimension of design—that is, the productions of practitioners. Then, perhaps, two complementary dimensions will be in balance.

ENDNOTES

Micha Bandini, "Typological Theories in Architectural Design," in Companion to Contemporary Architectural Thought, ed. Ben Farmer and Hentie Louw (London: Routledge, 1997), 395.

Andrian Forty, Words and Buildings: A Vocabulary of Modern Architecture (New York: Thames and Hudson, 2000), 304.

Forty, Words and Buildings, 304.

Nikolaus Pevsner, History of Building Types (Princeton: Princeton University Press, 1976), n.p.

Christopher Alexander, Sara Ishikawa, and Murray Silverstein, A Pattern Language: Towns, Building, Construction (New York: Oxford University Press, 1977), 916-918.

Alexander, Ishikawa, and Silverstein, A Pattern Language, xxixxxii.

Alexander, Ishikawa, and Silverstein, A Pattern Language, 1110-1112.

Roger H. Clark and Michael Pause, Precedents in Architecture (New York: Van Nostrand Reinhold, 1985), vii, 10-11, 94-95.

Frank D.K. Ching, Architecture: Form, Space and Order (New York: Van Nostrand Reinhold, 1996), ix.

Forty, Words and Buildings, 304.

Stephen Temple, "Using Fundamentals of Description: A Foundation for Historical Inquiry," Journal of Interior Design 24, no. 2 (1998): 46-54.

Mary Anne Beecher, "Toward a Critical Approach to the History of Interiors," Journal of Interior Design 24, no. 2 (1998): 4-11.

Anna Marshall-Baker, "Knowledge in Interior Design," Journal of Interior Design 31, no. 1 (2005): xiii, xix.

Leah Scolere, designer, Gensler-Denver, e-mail interview by Jan Jennings, 10 March 2007.

George Kubler, The Shape of Time: Remarks on the History of Things (New Haven: Yale University Press, 1962), 31-82.

Kubler, The Shape of Time, 45.

Beecher, "Toward a Critical Approach," 10.

David M. Lubin, Picturing a Nation: Art and Social Change in Nineteenth-Century America (New Haven: Yale University Press, 1994), xiv.

Robert Maxwell, The Two Way Stretch: Modernism, Tradition and Innovation (London: Academy Editions, 1996), 12.

Pevsner, Building Types, 9.

Jan Jennings, "Object Context Design: The State of Interior Design History," Journal of Interior Design 24, no. 2 (1998), 1-2.

Researchers also develop archetypes for practices named long ago or language used by specialists, such as Wunderkammer, from art museums. See O'Doherty, Brian, Inside the White Cube: The Ideology of the Gallery Space (Berkeley: University of California Press, 1999).

Beecher, "Critical Approach," 4.

Brandt, "Thematic Approach," 17.

Elizabeth O'Brien, "Material Archetypes: Contemporary Interior Design and Theory

Study" (master's thesis, Cornell University, 2006), 8.

Joori Suh, "Theory Briefs: Contemporary Interior Design in Museums and Exhibition

Spaces" (master's thesis, Cornell University 2004), 137.

O'Brien, "Material Archetypes," 8.

Marta Mendez is researching residential archetypes with Kathleen Gibson as her major professor and thesis chair. The thesis will be finished in the spring of 2008.

Kubler, Shape of Time, 39-45.

O'Brien, "Material Archetypes," 9.

O'Brien, "Material Archetypes," 9.

Jie Huang, "A Critique of Contemporary Chinese Restaurants" (master's thesis, Cornell University 2002), 164.

Mijin Juliet Yang, Theory Studies: Contemporary Boutique Hotel Design" (master's thesis, Cornell University, 2005), 96.

Susan S. Szenasy, "The New Generation Gap," Metropolis (Aug./Sept. 2005), 22.

Virginia Gaskins, "Interface: Cultural Construction and Sustainability in Museum

Interior Design" (master's thesis, Cornell University 2004), 53.

Kubler, Shape of Time, 31-82

Snenasy, "New Generation Gap," 22.

The Interior Archetypes Group includes Founder and Director—Jan Jennings, Professor, Interior Design; Consultants— Susan S. Szenasy, Editor-in-Chief, Metropolis magazine, New York City; Abigail R. Brueggeman, NCIDQ, Senior Project Manager, Northwestern Memorial Hospital, Chicago; Professional Collaborators—Christopher Budd, Managing Principal, Studios Architecture, Washington, D.C.; Rachael Fonda Franceschina, Designer, Environment Group, Chicago; Jie Huang, Designer, Interior Space International, Chicago; Julie Lin, Designer, Chien Architects and Associates, Taipei; Terry Mak, Designer, Hillier Group, Princeton; Elizabeth O'Brien, Designer, CAMA Incorporated, New Haven; Leah Scolere, Designer, Gensler, Denver; Joori Suh, Architectural Designer, Peter Gisolfi Associates, Hastings-on-Hudson, New York; Dorothy Williams Neagle, Designer, Lee H. Skolnick Architecture + Design Partnership, New York City; Julie Yang, Designer, Gensler, Morristown, New Jersey; Cornell Collaborators—Kathleen Gibson, Associate Professor, Interior Design; Paula H. Horrigan, Associate Professor, Landscape Architecture; E.D. Intemann, Resident Lighting Designer, Theatre, Film and Dance; Other Academic Collaborators—Mary Anne Beecher, Associate Professor, Interior Architecture, University of Oregon; Jeanne Mercer Ballard, Coordinator and Assistant Professor, Interior Design, Appalachian State University; Brian Davies, Associate Professor, Interior Design, University of Cincinnati; Young Heui Yoo, PhD, Professor, Interior Design, Hyupsung University, Korea.

Blackmer, "Knowledge on Knowledge," ix.

Tiiu Poldma, "A Complex Process," Journal of Interior Design 31, no. 2 (2006): ix, x.

Poldma, "A Complex Process," ix, x.

Eshelman, "Balance," v.

BIBLIOGRAPHY

Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. A Pattern Language: Towns, Building, Construction. New York: Oxford University Press, 1977.

Bandini, Micha. "Typological Theories in Architectural Design." In Companion to Contemporary Architectural Thought, edited by Ben Farmer and Hentie Louw. London: Routledge, 1997.

Beecher, Mary Anne. "Toward a Critical Approach to the History of Interiors." Journal of Interior Design 24, no. 2 (1998): 4-11.

Blackmer, B. "Knowledge on Knowledge." Journal of Interior Design 31, no. 1 (2005), ix.

Brandt, Beverly K. "A Thematic Approach to Teaching Design History in a Multicultural Setting." Journal of Interior Design 24, no. 2 (1998): 17-24.

Ching, Frank D.K. Architecture: Form, Space and Order. New York: Van Nostrand Reinhold, 1996.

Clark, Roger H., and Michael Pause. Precedents in Architecture. New York: Van Nostrand Reinhold, 1985.

Eshelman, Paul. "Perspective: Balance." Journal of Interior Design 30, no. 1 (2004): v.

Forty, Adrian. Words and Buildings: A Vocabulary of Modern Architecture. New York: Thames and Hudson, 2000.

Gaskins, Virginia. "Interface: Cultural Construction and Sustainability in Museum Interior Design." Master's thesis, Cornell University, 2004.

Huang, Jie. "A Critique of Contemporary Chinese Restaurants." Master's thesis, Cornell University, 2002.

Jennings, Jan. "Object Context Design: The State of Interior Design History." Journal of Interior Design 24, no. 2 (1998), 1-3.

Kubler, George. The Shape of Time: Remarks on the History of Things. New Haven: Yale University Press, 1962.

Lubin, David M. Picturing a Nation: Art and Social Change in Nineteenth-Century America. New Haven: Yale University Press, 1994.

Marshall-Baker, Anna. "Knowledge in Interior Design." Journal of Interior Design 31, no. 1 (2005): xiii-xxi.

Maxwell, Robert. The Two Way Stretch: Modernism, Tradition

and Innovation. London: Academy Editions, 1996.

O'Brien, Elizabeth. "Material Archetypes: Contemporary Interior Design and Theory Study." Master's thesis, Cornell University, 2006.

O'Doherty, Brian. Inside the White Cube: The Ideology of the White Cube. Berkeley: University of California Press, 1999.

Pevsner, Nikolaus. History of Building Types. Princeton: Princeton University Press, 1976.

Poldma, Tiiu. "A Complex Process." Journal of Interior Design 31, no. 2 (2006): ix, x.

Scholere, Leah. "Theory Studies: Contemporary Retail Design." Master's thesis, Cornell University, 2004.

Suh, Joori. "Theory Briefs: Contemporary Interior Design in Museums and Exhibition Spaces." Master's thesis, Cornell University, 2004.

Szenasy, Susan.S. "The New Generation Gap." Metropolis (Aug./Sept. 2005), 22.

Temple, Stephen. "Using Fundamentals of Description: A Foundation for Historical Inquiry." Journal of Interior Design 24, no. 2 (1998): 46-54.

Yang, Julie. "Theory Studies: Contemporary Boutique Hotel Designs." Master's thesis, Cornell University, 2005.