Design, Resource & Produce Locally... Disseminate, Reveal & Provoke Globally

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Today, a one-person architectural office can be simultaneously regional, national and international. Architectural design can be as much a process as a product. Sitting alone in my office I can coordinate, via telephone, skype, e-mail and websites, between source, fabricator, packager, distributor and customer.

I have been designing and fabricating architecturally specific furniture for over 20 years. Custom furniture and architecture incorporating my furniture can be found in businesses and residences throughout my regional area, a few locations nationally and thanks to online shopping, abroad.

Since Spring 2006 I have shared my interest in architecturally specific furniture design and fabrication with architecture students enrolled in my *Architecture and Furniture* course. *Architecture and Furniture* offers students the opportunity to experience in a single semester a sequence of master plan, schematic design, design development, construction drawings, fabrication, installation and use. As of Spring 2011, *Architecture and Furniture* student work is for sale to customers around the world on Etsy.com.

Recent academic and professional research into uses of urban wood led to a project for local retailer Crate & Barrel/CB2. My *Living Tree* project recycled urban wood into functionally beautiful objects without felling a single tree. The *Living Tree* project explored modern design with an emphasis on process. Using only trees harvested seasonally due to the effects of wind, damage and age, *Living Tree* tables not only reduced demand on our na-



Figure 1. Two versions of the CB2 chop chop table showing unique grain patterns and coloring of Chicago area ash trees

tion's forests, they were sourced, fabricated, packaged and distributed within the Chicago metropolitan area minimizing the carbon footprint between tree source, mill and production.

Tables were sold to customers internationally via

Crate & Barrel's CB2 stores, catalog and website. 500 tables sold in less than 1 month's time. 500 tables made their way into nearly 500 homes and businesses around the world. CB2's website and blog provided a forum where tables could be discussed and debated by customers, future customers and admirers from around the globe.

In the time typically spent on a single residential addition or remodel, a royalty, equaling or exceeding a typical architect's fee, was generated. More importantly, I was able to present my local ideas and work to a global audience.

RESEARCH

Spring/summer 2008 the Emerald Ash Borer beetle was identified as a causative agent in Chicago metropolitan area ash tree mortality. The penny sized green menace wreaked havoc on millions of ash trees in the Midwest.

A chain of phone calls starting in the Fall 2007 led me to Edith Makra, Community Tree Advocate at the Morton Arboretum and Illinois Emerald Ash Borer Wood Utilization Team Chairperson. Edith's Team controlled a grant from the U.S. Forest Service Northeastern Area Wood Education and Resource Center (WERC). Edith agreed to use a portion of the WERC grant for the purchase of emerald ash borer ash for IIT students in exchange for student designed and fabricated gift shop items and furniture. Edith was interested in product and furniture designs capable of expressing the diverse range of uses for the ash wood left behind in the wake of the emerald ash borer beetle's devastation.

During the spring & summer semesters of 2008, IIT *Architecture & Furniture* students designed and fabricated 15 gift shop items and 15 pieces of furniture. Gift shop items and furniture were initially exhibited at the Morton Arboretum. Post exhibition, gift shop items and furniture were placed on permanent exhibition in the offices of organizations involved with the emerald ash borer beetle: Village Hall, Homewood, Illinois, WERC USDA Forest Preserve Service Princeton, W. Virginia, Illinois Department of Natural Resources Wilmington, Illinois, Illinois, Village Hall Oak Park, Illinois the USDA Emerald Ash Borer Program Office Des Plaines, Illinois & the Morton Arboretum.



Figure 2. IIT Student Work & Process Documented & Described

RESEARCH TO MARKET

Ash wood for our project was locally sawed and kiln dried by Horigan Urban Forest Products. Through numerous conversations with Bruce Horigan, I discovered that emerald ash borer ash was the tip of the iceberg. The iceberg was urban wood. Chicago's urban forest is over 3.6 million trees, 57,000 of which are cut down annually, 5,700 large enough in diameter for lumber. The typical destination of these trees is pulp, mulch and firewood. According to Bruce Horigan "the problem isn't supply, the problem is not enough demand.1

Before I began the physical design of what would eventually become the Chop Chop table, I designed the process by which a piece of furniture might make it's way out of the local urban forest.

Supply was easy. Ash trees were dying at an alarming rate. Horigan Urban Forest Products increased

the volume of usable ash logs large enough for roughing into usable blanks by pulling more trunks from pulp, mulch and firewood piles.



Figure 3. Insert card included with each Chop Chop table. Text was roughed out by author then edited and formatted by the graphic design department of Crate & Barrel/CB2

Kiln drying was necessary and was handled by Bahr Lumber, a local company that kiln dries and distributes wholesale wood flooring. Wood blanks could be maneuvered into leftover space inside large kilns filled with wood flooring. The use of this leftover space kept our kiln-drying costs to a minimum. WW Displays, a local fabricator, agreed to sand, oil and package the tables during available time between large runs of retail displays and custom high-end speakers. WW Displays core business of retail store fixture and high-end speaker fabrication leaves random available time slots on machinery and unassigned salaried manpower.

Bill Scarim of WW Displays was anxious to fill these available time slots explaining, "I'm paying for the equipment, the employees and the overhead when things are idle. It's better business to keep both machine and employee busy throughout the day."²

I contacted local retailer Crate & Barrel/Cb2 and met with their product development team to discuss my design process and the products my process could yield. CB2 had a program called *One of a Finds*, which celebrates limited quantity products with compelling stories.

CB2 buyers selected the solid wood table from a number of designs presented. Final dimensions and proportions for the table were determined based on the table's dual function as table and stool, ideal shipping weight, access to trees with the necessary usable diameter and pleasing proportions.

500 tables were ordered, fabricated, sold and shipped. I was anxious to tell the story behind the table. I convinced CB2 that an insert card would be a nice way of communicating to their customers the process behind the product.

INSPIRATION OR CLOSING THE GAP BETWEEN LOCAL & GLOBAL

Conceptually, the Chop Chop table began with my desire to design a local product. Local design, materials, fabrication, packaging and shipping were one goal. A second goal was the local, national and global exposure of both product and process.

I have been inspired and/or influenced in my search for the connection between local and global by an inventory of examples absorbed into memory via multiple sensory experiences. I would like to discuss 6 specific examples critical to the evolution of my process.

1. Artisanal Cheese, The Smell of Local

Pastoral is a small cheese shop in Lakeview, a densely packed neighborhood on Chicago's North

Side. Pastoral sells small batch cheeses from local, national and international farms. Local and global cheeses arrive seasonally in limited quantities. On any given day, I can taste the air, soil and vegetation of Champaign Illinois, Humboldt County California and Nottinghamshire England.

Watching cows munching their way through the grasses of an English pasture, one can see why our British cheeses have a reputation for their sweet, creamy, rich and complex scents and flavours. The characteristic sea spray freshness of Cheshire can only be obtained from the rich salt deposits lying just below the surface of the pastures while the distinct herby, slightly metallic blue taste of Stilton must surely be influenced by the mineral rich seams of coal and iron running through the rolling fields of Nottinghamshire, Leicestershire and Derbyshire.³

Terroir is defined as "territory or soil"⁴. To cheese enthusiasts, terroir is the characteristic taste and flavor imparted to a cheese by the environment in which the cheese is produced.

Every region has its own special magic which chemistry and technology have thus far been unable to duplicate. The character, subtlety and perfection of a cheese attest to centuries of refinement in individual cheese-making methods within limited geographical areas sometimes no larger than a few fields. Vegetations, climate, rainfall, subsoil, and breed all contribute to the production of a cheese, which is unique and inimitable.⁵

Terroir and its relationship to the local qualities associated with cheese inspired the use of local wood in my *Living Tree* project. Local wood is an available resource, but more importantly, the unique character of trees growing in and around an urban setting give urban wood a color and grain which sets city wood apart from forest wood.

Bruce Horigan of Horigan Urban Forest Products mills and kiln dries the best trees removed from Chicago's urban forest each year. Visiting Horigan's warehouse in Skokie Illinois, you can select not only the species of wood you might prefer, but a tree or board with characteristics specific to the location and climate from which it originated. Bruce Horigan goes so far as to record each trees original address and the circumstances by which it met its demise.

2. Wilco, The Sound of Site

I have a collection of local music that begins with the 1923 Chicago recordings of jazz legends King Oliver and Louis Armstrong. My Chicago area band favorites include: Ministry, Smashing Pumpkins, The Sea & Cake, Phil Angotti & The Aluminum Group. I also collect performances recorded live in Chicago including: Sarah Vaughan, Ahmad Jamal, Muddy Waters, Patricia Barber, Phish and Wilco.

In my world, music is as vital to the design process as pencil, sketchbook, computer and table-saw. Listening to music performed, recorded, conceptualized and/or inspired by the city of Chicago is a glimpse into the world of the musician/designer and the immediate influence Chicago's local environment can have on their craft.

Although not originally from Chicago, Jeff Tweedy and his band Wilco have made Chicago home. Tweedy's music is influenced by the usual list of Rock precedents, but also by Chicago.

Chicago has an unbelievable history through the years. Things that stick out in my mind immediately are Howlin' Wolf and Hubert Sumlin, Mavis Staples – people like that. All these artists who made their home here form a huge part of my record collection.⁶

Chicago is pretty great for a lot of reasons, in my mind. If you're in a band, there are tons of places to play. Compared with other major cities, you can live reasonably well without a lot of money. And there are a lot of people who are very good at recording – there are great studios all over town, like Electrical Audio and Soma...Even for us, having our own place to record at, it's very helpful to have someone just a couple of blocks away who can lend you a reel of tape or come over and help troubleshoot if your machines aren't working. There's a great support system in that way. I feel very comfortable here, very taken care of and nurtured as a musician. It makes it an easy environment to be creative in.⁷

When it came time to record a live performance of their music, Wilco chose a small club in Chicago called the Vic Theater. The album was recorded during four live shows. *Kicking Television* was released November 15, 2005. The album has sold over 114,000 copies worldwide. The Vic Theatre can accommodate as many as 1,400 people or 5,600 people over 4 nights. Locally 5,600 Wilco fans had a chance to hear one of their favorite bands play live in Chicago. Internationally more than 114,000 Wilco fans are able to listen to one of their favorite bands play in Chicago each time they give their cd a spin.

The Auditorium Theatre, where we've played a bunch of times now, is such an unbelievably gorgeous building to get to see a show in. I would highly recommend that to anyone if they have a chance to see something they like there. It's a pretty historic concert venue for Chicago as well. The Who played there, as did Jimi Hendrix and Led Zeppelin. Frank Zappa played there a lot-I think he played every Halloween for a number of years. When it first opened, I think it was one of the tallest buildings in Chicago. Louis Sullivan built his offices in a sky cottage above the dome of the building to prove that it could withstand being that high. I guess people doubted him at the time. So there's a real cool history that goes with the place.⁸

You don't find too many rock stars describing the relationship between architectural history and music. Sam Jone's cover photograph and Lawrence Azerrad's art direction for Wilco's *Yankee Hotel Foxtrot* features a photograph of Bertrand Goldberg's Marina Towers.

Marina City was the most appropriate building for the album cover because it was very much a part of Chicago yet so very unique, which is a lot like Wilco.⁹

It would be a stretch to suggest that you can hear Chicago in the music of Wilco. The special characteristics that Chicago's cultural stratigraphy, geography, geology and climate bestow upon Jeff Tweedy and numerous other Chicago musicians is heard as much as unheard. There is a strong argument to be made that the music of these bands would sound different if they were located elsewhere (for proof listen to anything recorded by Liz Phair after she left Chicago)

3. Out of Sight, Globally Exporting Wright

The international or global exportation of architects is a rich history including: building designs, furniture, residential/commercial furnishings, product design, books, magazines, lecture's and visiting teaching positions. Architect designs have been both "one of a kind" specific to individual architectural projects, limited production and mass-produced.

Frank Lloyd Wright is well known for his project specific custom furnishings. Frank Lloyd Wright's custom designs for the Johnson Wax Headquarters and Price Tower were the first of Wright's project specific designs made commercially available. Wright's first non-project specific designs for the Leerdam Glass Company in the 1930's were never executed. It wasn't until 1955, at the age of 87, that Wright designed and had distributed his first line of furniture not associated with a specific proj-

ect. Wright's furniture for Heritige-Henredon and wallpaper for F. Schumacher & Co. were only moderately successful within the United States at the time of their initial production.

Years before the modest distribution of Wright's design objects, the mass distribution of Wright's words and images would radically change the history and direction of modern architecture.

When the March 1908 issue of The Architectural Record was published, it featured the largest number of Wright's designs yet to appear in print. Accompanying this essay were eighty-seven illustrations-photographs of executed buildings and drawings for other projects. With its circulation extending not only to the American professionals but to their European counterparts as well, this early publication began to disseminate the ideas of Frank Lloyd Wright to a substantial audience. However, it was not so much in the United States that his architecture would be first recognized, but rather in Holland and Germany.¹⁰

The same year as Architectural Record's publication, Wright met with German philosopher Kuno Franke in Oak Park a meeting that planted the seed for Wright's Wasmuth portfolio. By 1909 Wright had exported himself, his practice and his son Lloyd to Florence, Italy. In the spring and summer of 1910 Wright worked with his son Lloyd and draftsman Taylor Woolley on drawings eventually sent to Berlin with accompanying photographs. In Berlin, drawings, photographs and text were combined and transferred to lithographic stones. The Wasmuth monograph was published in an edition of 1000, 500 exclusively for sale in Europe. The 1908 Architectural Record article, the Wasmuth Portfolio and the Ausgefuhrte Bauten of 1911 would combine to give Frank Lloyd Wright's Midwest rooted work an international presence.

Soon after the work was published in Germany, we found they were using the folio and drawings in schools and universities for textbooks. There men like Gropius and Mies van der Rohe were students of my age, i.e. 19 & 20 years old, and were greatly impressed and I heard later Gropius' mother gave him one of the collections, he claimed he made it his Bible.¹¹

4. Touched by Artek's 10 Commandments

When the company (Artek) was founded in 1935 an operations chart was drawn up inspired by Functionalism...It depicted the interconnection of modern visual arts, rational furniture production and popular

educational work. To further this trinity, a series of radical exhibitions was to be held, a sales organization for Aalto furniture created and critical and propagandistic writings were to be published.¹²

At the end of Aalto's operations chart all arrows point toward the words "For increased world-wide activity". Aalto's approach towards a global or international reputation went beyond architecture and furniture. The top of Aalto's chart is dominated by the words exhibition & writings. The bottom of the chart repeats the words "sell both retail and wholesale". For Alvar Aalto, the idea of global or international was first and foremost the exporting of ideas and images followed by product and finally mass production.

By the time Aalvar Aalto's architecture physically arrived in the United States (MIT's Baker Dormitories designed 1947 – 1948 built 1949) Aalto's furniture designs had already been made available in Chicago.

Harry (Weese) asked for and obtained from (Alvar) Aalto the Midwest franchise for Artek furniture in 1947. This transaction was pivotal for both men. American distribution of Aalto's furniture had been minimal before the war, despite a prestigious show of his work at the Museum of Modern Art in 1938. The agreement with (Weese's) Baldwin Kingrey provided cash flow to Finland, which had suffered economically as a result of the war. The store also gave renewed exposure to Aalto's classic bentwood furniture designs, which were the precursors to the Scandinavian design boom that reached the broader American public in the late 1950s.¹³

Baldwin Kingrey was a collaboration between Harry Weese, his wife Kitty Baldwin Weese and their partner Jody Kingrey. The collaboration was inspired by architect Harry Weese's diary entry dated May 26, 193.

Thought of the retail furnishings salon/shop for gathering together all beautiful and useful modern objects which could be termed "furnishings"...Artek and anonymous discoveries subcontracted and assembled pieces of my design...A trip to S.A. to buy imports after peace. There could be a less snooty annex on Wabash for selling low cost good design in furniture. A retail manufacturer's outlet – exhibition space – focus and salon.¹⁴

Harry Weese's plans, written in his diary while still serving in the United States army during World War 2, emphasized the idea of importing good design. Weese also mentions the possibility of manufacturing and selling his own local designs. Baldwin Kingrey would go on to become, for a brief time in Chicago design history, perhaps the best local hub for the international distribution and dissemination of Chicago/Midwest design.

From the distance of 50 years one can see three streams converging with the founding of Baldwin Kingrey in 1947: the Cranbrook group, including Eero Saarinen and Charles Eames; the Scandinavian presence, in the person of Alvar Aalto at MIT; and the Institute of Design, which was housed only four short blocks from the Baldwin Kingrey Store. Harry Weese was, in a sense, the point on which these three influences pivoted.

The goods Baldwin Kingrey sold reveal the distinct approaches of the Cranbrook contingent (case and tubular metal, new adhesives, and plastic and fabric applications) and the Scandinavians (betwood laminations, jute webbing, wood veneer, and linoleum inlays). Into this mix the Institute of design group was a third (and local) force providing serendipitous contributions across the design and product spectrum.¹⁵

5. The Bitter Taste of Success

Prior to the Chop Chop table, there was the *Knight* Frame. The *Knight* Frame was designed as part of a collection of 33 picture frames based on 33 char-



Figure 4. Knight frame, packaging and assembly instructions. Design & Fabrication Instructions Paul Pettigrew Fabrication & Distribution Modulus Chicago, Illinois

acters from Chaucer's *Canterbury Tales*. 11 picture frames were designed and fabricated in white oak, 11 in white oak with aluminum and 11 using solely aluminum. I shopped my frames and my concept around to 3 local home furnishing companies. One of my frames was selected for production.

The frame selected was the first that I designed which meant it was also the least evolved of the 33 presented. The frame's conceptual relationship to the Canterbury Tales was considered irrelevant except for the name. The frames were made in Thailand with imported wood, rubber gaskets and hardware. Fabricators were unable to duplicate in their factories the design I perfected in my basement, therefore the frame's design was modified. Thousands were made and shipped back to the United States on a container ship. The contents of the container were then shipped by truck to a Chicago warehouse. Once in the Chicago warehouse, frames were shipped back around the world to home furnishing shops where they were finally purchased by customers. The designer's royalty checks arrived each month and I should have been happy.

Instead I was disappointed. The final product was not, what I considered, my best design. The Knight Frame was no longer my design once it had been altered in manufacturing. The overseas production and large carbon footprint rendered the process more trouble than triumph.

6. COLLABORATION A SENSE OF BALANCE

9 years ago I discovered Rakks, a company specializing in aluminum extrusions and brackets adaptable to custom shelving systems. Rakks and I have collaborated many times. Rakks supplies the structure; I supply the design and functional infill. Rakks and I have never met. I place my order and Rakks sends the components necessary for my custom shelving systems. I send Rakks images of my work which they post on their website. I then post on Rakk's blog, detailing the process behind our collaborations.

Rakks is located in Needham Ma. Their aluminum extrusions are fabricated locally in Fonda, N.Y. and Mountaintop, Pennsylvania. Rakks web presence has provided a global presence without a global infrastructure.

The majority of our business is in North America. We have a U.K distributor, but the Rakk's systems that



Figure 5. Custom Shelving/Storage Wall System Using Rakks Vertical Supports

have ended up in Europe, Asia and as far away as Bahrain, are customers who found us online. We can and do ship worldwide, but we haven't pursued that as part of our business plan. 16

I have been contacted many times by Rakk's customers locally, nationally and around the world who would like shelving systems just like one of mine they saw on Rakk's website. To the majority of inquiries, I respond with tips on how to work with a local cabinet-maker to complete their system. A few inquiries have been turned into clients.

DISEMINATE, REVEAL & PROVOKE

It is easy to allow one's work to be influenced by local, national and international regions. More difficult is the architect's opportunity to communicate the ideas and process supporting and influencing their work to an audience outside the profession.

By expanding the definition of the Architectural practice to include projects, products and publications of varying scales and types, Architects expand the potential impact and audience aware of who they are, what they are doing and why.

ENDNOTES

- 1 Bruce Horigan, conversation with author, 06 Sept. 2011
- 2 Bill Scarim, conversation with author, 06 Sept. 2011
- 3 Julie Harbutt, *Guide to the Finest Cheeses of Britain and Ireland* (Thames Ditton, Surrey, 1997)
- 4 The Compact Oxford English Dictionary,
- 5 Pierre Androuët, Guide du Fromage (Aidan Ellis Publishing; 2'nd Edition, 1988)
- 6 Jeff Tweedy Interview w./Bob Mehr, "Jeff Tweedy's Sweet Home", American Way Magazine, June 1, 2007, http://www.americanwaymag.com/chicago-jeff-tweedy-wilco-sky-blue-sky (accessed 04 Sept. 2011).
- 7 Jeff Tweedy Interview w./Bob Mehr, "Jeff Tweedy's Sweet Home", American Way Magazine, June 1, 2007, http://www.americanwaymag.com/chicago-jeff-tweedy-wilco-sky-blue-sky (accessed 04 Sept. 2011).
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- 9 Lawrence Azerrad interviewed by Dan Telfer, Video on the website A.V. Club, http://www.avclub.com/ articles/chicago-the-wilco-towers,57336/
- 10 Frank Lloyd Wrigt Collected Writings Volume 1 1894-1930, Edited by Bruce Brooks Pfeiffer (Rizzoli, New York, 1992), pg. 84.
- 11 Letter of February 3, 1966, from Lloyd Wright to Linn Ann Cowles, *An Index and Guide to An Autobiography* (New York: Greenwich Design Publications, 1976)
- Marja-Liisa Parko, *Alvar Aalto Furniture* (MIT Press, Cambridge, Massachusetts, 1985), 106.
- John Brunetti, *Baldwin Kingrey Midcentury Modern in Chicago 1947-1957* (Wright, Chicago, Illinois, 2004), 14.
- 14 Harry Weese, *Baldwin Kingrey Midcentury Modern in Chicago 1947-1957* (Wright, Chicago, Illinois, 2004). 13-14.
- 15 Ben Weese, *Baldwin Kingrey Midcentury Modern in Chicago 1947-1957* (Wright, Chicago, Illinois, 2004), 126.

16 David Greenberg Raaks, conversation w./ author, 09.01.11

The following local cheese, beer and bands were consumed during research and writing of this paper: Capriole Farmstead, Mont St. Francis & Sofia goat cheese, Prairie Fruit Farms, Little Goat & Moonglo goat cheese

Three Floyds Brewery Alpha King & Piece Brewery Wingnut & Dysfunctionale

Aluminum Group, Archer Prewitt, The Chamber Strings, Common, Eleventh Dream Day, Herbie Hancock, Liz Phair, Louis Armstrong, Lou Rawls, Lupe Fiasco, Ministry, Patricia Barber, Phil Angotti, Phish, Sam Prekop, The Sea & Cake, Smashing Pumpkins, Uncle Tupelo, Wilco & The 1900's