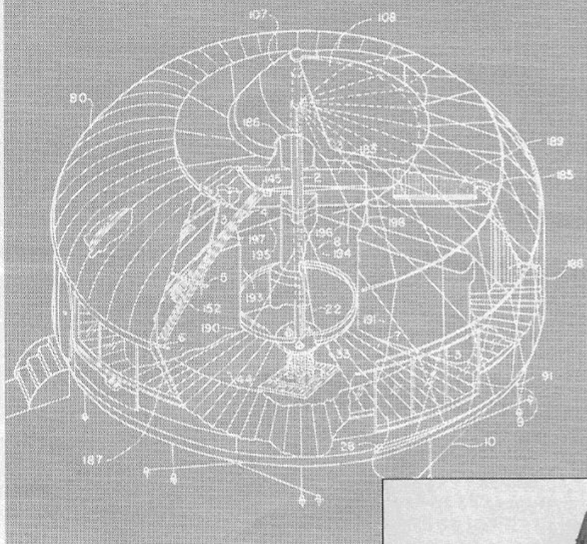


TRIMTAB SPECIAL SUPPLEMENT

BUCKMINSTER FULLER INSTITUTE

FALL 1992

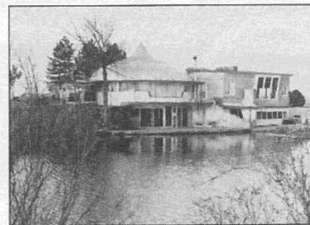
Dymaxion Deconstruction: The Wichita House Comes Down



As we disassembled the house, information began to unfold with the removal of every rivet (there were thousands) and panel. However, the times during and after a day's work, when we discussed and compared Bucky's design process to the Wichita House out on the Kansas plains, were my most memorable and informative experiences of the project. We learned a lot together, bringing together our different backgrounds into a unified team.

Christian Overland

In May through June of 1992, the Henry Ford Museum & Greenfield Village in Dearborn, Michigan enlisted Jay Baldwin and a crew of BFI members to disassemble Fuller's 1945 prototype for mass-produced housing, the Wichita Dymaxion House (see Trimtab Volume 7 #1). This talented and eclectic crew came together from all over the U.S. and Canada to successfully complete the disassembly a few days short of the task's estimated one-month. The deconstruction team led by Baldwin included Joe Eddy Brown, Pat Chipman, Robert Gray, Blake Hayes, Trip Hill, Scott Hudson, Bruce Larsen, Todd Millions, Robert Orenstein, Christian Overland, Charles Peck, Bob Sanderson, Mike Schuessler and James Tyler (Varian). Congratulations for a job well done!



The Wichita dismantling attracted unique characters from all points of North America. Fuller familiarity integrated everyone, dominated talk. The house had been occupied mainly by raccoons for the previous decade and though thankfully handyman Mike had swept out the first floor, the upstairs remained in its original feces-covered state. One day donning our gas masks and crow bars we began banging apart this non-original second floor. Unfortunately there remained in residence three raccoon babes. One certainly eccentric and sympathetic de-constructor, Varian, rescued these cubs and milk fed them for at least the remainder of my stay there. They became our unofficial mascots, and I believe Varian was planning to bring them home with him.

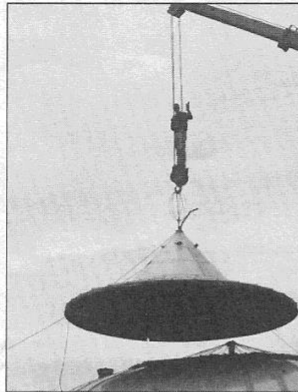
Pat Chipman



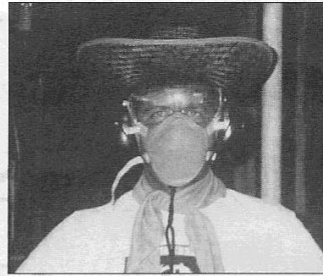
Daredevil Varian attaches crane hook to the "witch hat." Photo, courtesy Pat Chipman.

One humorous expression of the project was Jay's description of how the upper compression rings came down as "tubular rain." The feeling of accomplishment when the last bag of "miscellaneous dymaxion parts" was placed in the trailer and the doors were locked was wonderful. What kind of parts were in that bag, anyway?

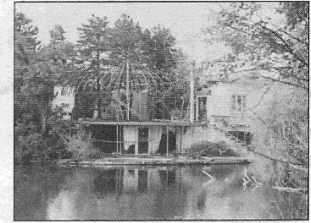
Trip Hill



The "witch hat" pops free without damage, whew! Photo, courtesy Pat Chipman.



Robert Orenstein about to attack the itchy insulation. Photo, courtesy Jay Baldwin.

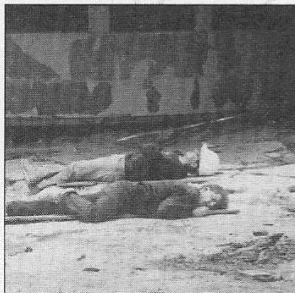


View of the de-skinned Dymaxion and the adjoining conventional house. Photo, courtesy Robert Orenstein.

Jay Baldwin, in his role as director of Dymaxion Dwelling Dismantling, frequently used the term "ad hoc." The dictionary does not offer much insight into what Jay might have meant. "To this" is not very informative. I think what Jay was really condensing into the term was, "trying to get a whole system to work in some acceptable way when its behavior is unpredicted by the design of its components."

The dismantling crew itself was very ad hoc - it would be a euphemism to say that we were somewhat eccentric. Jay's leadership of the project, complete with detailed expositions on the relative merits of Bugatti camshafts modified in conjunction with B-49 machine-gun turret retainer rings to run steam-powered sewing-machines, was brilliant. No kidding, we could do worse than support Jay in his efforts. In an ad hoc interface between pure reason and practical problem-solving, Jay seems to have a good balance: good humor, encyclopaedic knowledge, and high integrity.

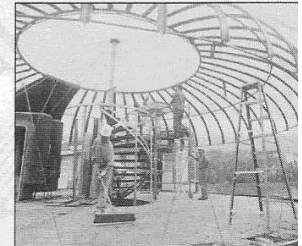
Bob Sanderson



Robert Orenstein and Pat Chipman, hard at work. Photo, courtesy Jay Baldwin.



Looking a bit forlorn, the front door frame stands alone, awaiting removal. Photo, courtesy Robert Orenstein.



Bucky referred to the system of compression rings and carlins (ribs) and accompanying tension rods as "the cage." The big box with door is a genuine Dymaxion Bathroom. Photo, courtesy Robert Orenstein.

Didn't Quite Make It

by Jay Baldwin

Bucky was jinxed. The construction trade unions were against him. The banks wouldn't lend the necessary start-up money. Beach aircraft refused to tool up for production and its workers, "airplane people," didn't want to make houses. Personal antagonisms wrecked the company. It was just a stock scam like the Tucker automobile. None of the above. Some of the above. All of the above.

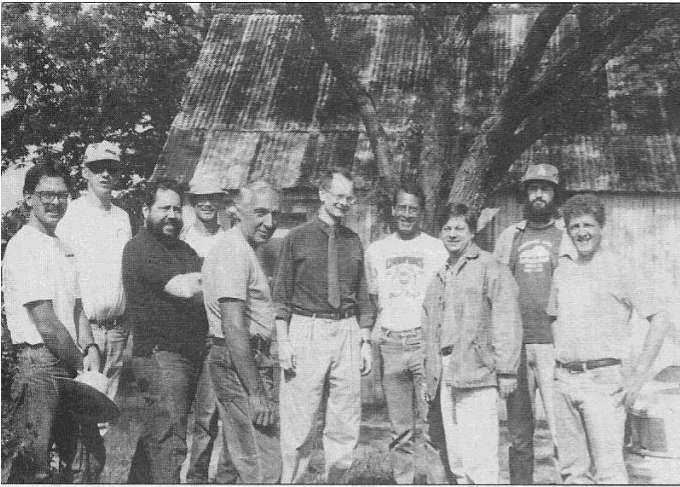
After nearly fifty years, people still ask why Bucky's conceptually brilliant "Wichita House" was never produced. During the takedown of the Wichita House prototype May-June 92, we found some answers. One is irrefutable: The Dymaxion Dwelling Machine couldn't have been produced and marketed because it wasn't ready.

It wasn't ready, but handsome brochures — made credible with photographs of what appeared to be (but was not) a complete Dymaxion Dwelling Machine in actual use — were available to the tens of thousands of would-be buyers who had been excited by heavy national publicity. The press loved it. The people loved it. The Wichita House was Big News, but nobody could buy one.

People could buy Dymaxion stock, though, and it sold well. The stockholders and Bucky's board of directors naturally wanted to take advantage of the favorable press coverage. Bucky, however, adamantly refused to approve production. In one letter he insisted that the house would not be ready until 1954! There was a boardroom fight which everyone lost. Bucky did win a bitter sort of victory in that he successfully prevented an insufficiently developed, unperfected design from being produced. Unfortunately, the squabble shattered the

company and its credibility at the bank. The public lost interest when no houses were available.

What we found as we took the Wichita House apart was that Bucky was right. If the house in which the Graham family uncomfortably lived had been a production model, the reputation of the Dymaxion and its inventor would soon have suffered. Some of the shortcomings were trivial, but turned out to be important nonetheless. For instance, the minor detail of where to put light switches and wiring had not yet been fully worked out. As there was no "wall" near the entry doors, the switches were installed horizontally in the adjacent (metal) window sills where they could be flooded by condensation that ran down the single-layer glazing. (The plans called for double-glazed windows which would have condensed less.) The water appears to have caused a slight electrical "leak" from the switches into the aluminum struc-



DAY ONE: An early morning skeleton crew from all over America meets nearby in Wichita to head over to the site. From left to right: Pat Chipman from CA., James Tyler ("Varian") from PA., Blake Hayes from HFM (Henry Ford Museum & Greenfield Village), MI, Todd Millions from Sask., Canada, Jay Baldwin from CA., Michael Ettema from HFM, MI, Scott Hudson from MI., Kirk Simon from NY., Robert Gray from NJ., and Robert Orenstein from CA. Photo, courtesy Scott Hudson.

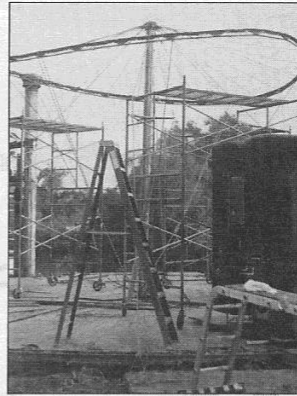
I was there for the first three weeks of the project, and had to leave to do a job during the fourth and final week. For me, the best thing about working on the Dymaxion House was simply the experience it provided using tools. I'm a computer programmer, and had never worked on any type of construction before. After working on the Wichita house, I now know how to use many tools, but only to take things apart. I can cut almost anything with a bolt cutter, use a drill in reverse, turn a screwdriver counter-clockwise, and use a hammer (but only the claw end).

One of the more interesting moments for me came when I was removing one of the baseboards. I found three items behind it: two late 1940s cereal boxes (Cheerios and Wheaties) and a live snake. The snake slid off after rearing up for a moment; to my credit, I didn't scream.

Robert Orenstein



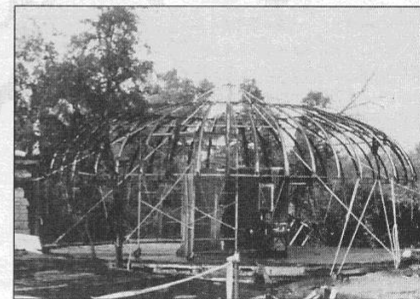
JB looks up from a bare "Dymaxion" floor. Photo, courtesy Wink.



Fuller's Archives didn't warn us that the "A-Ring" would assume a classic bicycle wheel "potato chip" shape when we removed the tension. Photo, courtesy Robert Orenstein.

Being involved in the project was the culmination of many years of interest on my part. Having first visited the sight when Bill Graham, Sr., was alive, I have since pursued various lines of investigation and attempted to generate local interest in the idea of restoration. This led me to two gentlemen who had been involved in the project, one as an upholsterer and the other the "crew chief" for Beech Aircraft, in charge of the assembly of the structure. Both of these retired workers have been involved in the restoration to some degree. Due to professional commitments, the time I could contribute was somewhat limited, consisting mostly of partial days. Most likely, my major role in the memory of the crew was to show up in the afternoon with the cookies.

"Wink" (Charles E. Peck)



Guy ropes steady "the cage" against an approaching tornado (it missed). Photo, courtesy Todd Millions.

ture, greatly increasing the structural galvanic corrosion we found throughout the house.

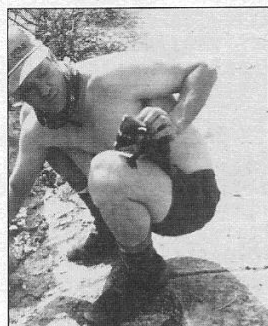
Another problem that appeared minor would be more difficult to remedy. The plywood floorboards are structural, held in position by clever aluminum clip/strips. They make it difficult to refinish the deck with a sanding machine, and board replacement is impossible without major disassembly of other components of the house. The need for replacement is not inconceivable — the plywood used was interior grade (never use it for anything!) that disintegrates when damp. It did. Those retaining strips retained spilled liquid along the hidden-but-vulnerable edges of the plywood, causing it to de-laminate. Chemicals from the soggy plywood enthusiastically attacked the strips and supporting structure. Correcting this would require expensive redesign, tooling changes, different material specifications, and much testing. The deck (Bucky didn't

like house carpentry terms) also "booms" when walked upon because it's supported by thin membranes under tension — like a drumhead. That may not be correctable without drastic redesign.

There were many other features of the Wichita House that needed further work. The Graham family de-ruddered and permanently immobilized the rotating vent. Rumor says it rumbled annoyingly as it turned. The screened openings below the window band encircling the house were not installed, though we found their operating mechanisms in place. We think that the prototype's wall proved to be too flexible for this duty. There was no trace of the radical air-handling hardware, the reflective "insulation" or cowl (roof) water-directing troughs and deflectors, without which the house leaked badly. At this writing, it is still not known if any of that equipment was ever installed and tested even at Beech, or if it worked.

So the Dymaxion wasn't ready. Bucky admonishes us to "never show half-finished work." This project shows why that's good advice. Bucky also might have had less problems with the prototype if he had lived in it himself, which would have made flaws obvious. But he tended to leave what seemed like small matters and testing to others, preferring to spend most of his time with the big concepts that he danced with so well. Whether this represents a strategic blunder or not is another discussion.

In any case, the Wichita House remains a wonderful concept worthy of further exploration. With more time, its flaws would have been corrected in the normal process that orders progress from concept to artifact. That it never came to market is not unusual, nor an indictment of Bucky or the design; only about ten percent of all inventions ever make it. An updated Dymaxion House may make it yet.



Varian with "Bucky Raccoon," the last surviving inhabitant of the Wichita House, from inside the walls. "Bucky" now resides with Todd in Canada. Photo, courtesy Todd Millions.



Varian and Joe Eddy unbolt the last segment of the inner deck ring, and the deed is done. Photo, courtesy Jay Baldwin.



JB, Trip, Varian, Joe Eddy, and Todd relax after loading the final piece. Photo, courtesy Todd Millions.

Everybody was called "Bud" except Jay. He was the non-bud.

Instead of swearing or complaining about what was going on, would all break out in song or one-liners about ex-spouses or something — cut the stress level down. I couldn't have taken five people with me who would have gotten along so well. No one told anyone else what to do. Everybody knew what to do. Everybody had a job to do, the key master, the pay master and the 2nd in command.

Our unified goal is to be part of the Dearborn construction crew. What would it be like to work together again. People were so interested in seeing it when it was put together again because of taking it apart, piece by piece. There was something magical about the house — you want to continue your association with it. We were concerned with taking care of the place — keeping it clean as a national park. JB was sweeping the place out on the last day.

Joe Eddy Brown

Captions, courtesy Jay Baldwin.

Weaponry to Livingry Conversion Update Resources

We were very excited to discover a number of excellent resources in preparing our article in the last issue of Trimtab on "Weaponry to Livingry Conversion: An Idea Whose time Has Come." A few were mentioned there; here is a listing of a number of others. (Many of these resources were found in Nuclear Times magazine.)

Places:

- Advocacy Institute,
1730 M St. NW, #600
Washington DC 20036
(202) 659-8475
- American Friends Service Committee
1501 Cherry St.
Philadelphia PA, 19102
(215) 241-7000
- Citizens' Budget Campaign National Information: (412) 361-3022
- Council on Economic Priorities
30 Irving Place
New York, NY 10003
(212) 420-1133
- Earth Island Institute
300 Broadway #28
San Francisco, CA 94133-3312
(415) 788-3666
- Hundredth Monkey Project
P.O. Box 402
Arcata, CA 95521
707/826-2641

- Jobs With Peace
76 Summer St.
Boston, MA 02110
(617) 338-5783
- Minnesota Peace & Justice Coalition
1929 S. 5th St.
Minneapolis, MN 55454
(612) 338-8111
- National Security Archive
1755 Massachusetts Ave. NW, #500
Washington DC, 20036
(202) 797-0882
- Nuclear Information and Resource Service
1424 16th St.
Washington DC, 20036
(202) 328-0002
- Pittsburgh Peace Institute
116 S. Highland Ave.
Pittsburgh, PA 15206
(412) 361-5900
- Public Citizen
2000 P St., NW, #700
Washington DC 20036
(202) 293-9142
- Rainforest Action Network
301 Broadway, Suite A
San Francisco, CA 94133
(415) 398-4404
- Women's International League for Peace and Freedom
1213 Race St.
Philadelphia, PA, 19107
(215) 563-7110

- Worldwatch Institute
1776 Massachusetts Ave., NW
Washington DC 20036
(202) 452-1999

People:

- House of Representatives members **Nick Mavriolis** (MA) and **Ted Weiss** (NY) kindly offered assistance with copies of bills they have introduced into the House.
- **Molly Rush** of Citizens Budget Campaign (see above) was very generous with her time and information.
- **David Cohen**, Co-Director of Advocacy Institute (see above) and once President of Common Cause spoke with me on the phone about conversion and the work of Buckminster Fuller:

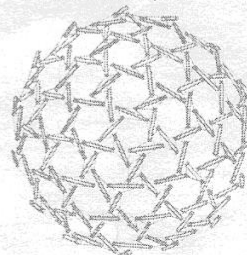
Books:

- **Between Fear and Hope — A Decade of Peace Activism**
Shah, Sonia, editor, Fortkamp Publishing, Baltimore, MD 21210, 1992.
This book is a compilation from the best of Nuclear Times magazine. And the best of such a fine magazine is very good indeed. These people and groups provide the underlying fissure in America which helped weaken and then destroy the Cold War. It is about morality and ethics,

fear and hope. It is about social movements in America. It is the very best kind of history — about great, good people working for all of us, and to some extent, succeeding.

Building a Peace Economy, Opportunities and Problems of Post-Cold War Defense Cuts
Lall, Betty and Marlin, John Tepper, Westview Press, Boulder CO 80301, 1992

The bulk of this book is a detailed state-by-state examination of where the Defense Department spends its money in the US. The introduction examines the effect of cuts on labor, in general. Most important, the authors present "ways to convert," including lists of groups already working on these issues, so the reader need not "reinvent the wheel." Excellent, timely, useful.



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