The Fitful Birth of Kroon Hall

The marvelous and striking Kroon Hall is taking shape now, and its super-green features are widely trumpeted around the university and far beyond. Our estimable builders, Turner Construction, bring employees here from all over to see how it's done. The dreaded Pierson-Sage Power Plant (PSPP) that once occupied the site is gone now. Soon, attention will turn to the landscaping of two magnificent courtyards where once there was asphalt and to the redesign of Sachem’s Wood, and one of Yale’s most magical places will emerge. We are scheduled to move into our new home in December.

Meanwhile, on a larger scale, Yale’s president, Richard Levin, has announced that all of Yale’s new buildings will be LEED-certified, perhaps not green to the climate-neutral Kroon, but still green. And Yale is busily reducing its greenhouse gases by 43 percent over 2005 levels by 2020, just 12 years away.

On a still-larger scale, the green-building movement is not just taking off—it’s flying high. In 2006 there were 400 U.S. LEED-certified buildings; in 2007, one year later, that number had jumped to 1,000, with 6,000 more in the pipeline.

All in all, an idyllic picture! But the burden of this piece is that it was not always thus. What seems in Kroon and around us as an elegant and inevitable progression was anything but. We are seeing a wondrous thing occur on the Kroon site not because someone said, “Let there be Kroon,” but because of vision, struggle, determination, great generosity and an amazing amount of hard work by lots of people applying their various talents. Let me assure you: getting to where we are today was not always pretty. Within the past decade similar struggles have occurred elsewhere in the United States and abroad, and the result is today’s green-building movement.

Thanks to Steve, these goals have guided us ever since. The school that year, 1998, was engaged in a vigorous argument with the university over the siting of our new building. Some faculty favored an “up-the-hill” location, across from Marsh Hall; others favored the site on Prospect near the canal, where Yale’s two new undergraduate residential colleges are now slated to go. Votes were taken, and almost no one favored the site where Kroon now rises. It was in many ways a dog of a site.

The university was adamant, however, and again it fell to Steve to craft, in April 1999, the conditions under which the school could accept this site and make a silk purse out of the sow’s ear. Steve’s conditions stressed the need to clear out the power plant, remediate the site as necessary and create beautiful grounds around the new building—grounds that linked into a new landscaping of Sachem’s Wood. Perhaps most of all, Steve’s conditions stressed the need to have the school deeply involved in all key decisions.

No history has been written of how we got to where we are today, but the story of Kroon Hall goes back to the mid-1990s, some years before I arrived on the scene in 1999. Yale’s work on what became the Science Hill Plan began in about 1995 and, with it, serious thinking about new facilities for F&ES. Thanks to Professor Stephen Kellert’s vision then and later, there was never any question that the school’s new facilities, whatever they were, would seek to “realize in built form our mission and ideals as an institution,” as Steve put it. In September 1998, a year before I began as dean, Steve drafted a dozen “design principles,” including the following three:

- Conservation and Sustainability. A new facility should emphasize the school’s environmental ideals and objectives, serving as a model for others. It should strive for the highest standards of energy efficiency, waste processing, environmental health and sustainable material use.
- Environmental Experience and Connection. A new facility should stress the quality of its natural surroundings, emphasizing healthy natural process and diversity. Landscape design should reflect the school’s work and ideals—e.g., demonstration sites, restoration areas, indigenous plantings and aesthetically and intellectually inspiring natural areas.
- Nature and the City. A new facility should be a model of how healthy natural process can be a compatible and enriching aspect of the modern city. Our facility should emphasize the complementary relation of the natural and built environments.

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Steve’s insistence on our participation was crucial. In a recent interview with the Yale Alumni Magazine, Steve pointed out the following: “The idea [of a green, sustainable design] was so foreign in those days,” recalls Kellert. “The initial reaction was to dismiss it as a kind of blue-sky thing. They
said, ‘You guys are academics, you don’t know anything about building, we have an office of facilities for that.’ There was an inclination to dismiss us as a bunch of interfering amateurs.’

I was dean-designate in the spring of 1999, and I was brought in to close the deal on location and a few other matters with then-Provost Alison Richard. Alison, an environmentalist herself, was positive on our views and reassuring in her answers to me. And so, with that agreement, the next phase, and the real work, began.

A huge amount of effort then ensued in which Steve, I and Assistant Dean Jane Coppock were heavily involved: defining the various buildings that F&ES would occupy, as well as their sizes, functions and costs to build or renovate, and phasing them into the chess-board that is the Science Hill Plan. One decision was to put our new building into Phase I of the plan. That decided, I was then told something by Mother Yale that caused the next few years of my life to become very clear to me: “Gus, being in Phase I means that construction on the new F&ES building can begin as soon as you raise the money for it.” I will not give you the details, but we did raise the money. It took a lot of hard work by me and our great development team and a lot of generosity from some wonderful people. I am especially grateful to the early, visionary lead donors, Ed Bass and Mary Jane and Rick Kroon, soon joined by Coley Burke, Carl Knobloch, John Mars, Gilman Ordway, Joan and Dick Tweedy, Jonathan Rose and William Waxter. Together, we did it. (Well, almost. We still have some additional funds we need to raise for Kroon Hall.)

Steve and I were also regularly reminded during this period by both Yale facilities and the provost’s office not to set our sights too high. [Their view was that green was at war with reality, especially economic reality, and green would have to give way sooner or later.] In response, well, we smiled, and hardened our determination to prove them wrong.

I should stress that a place like Yale is an inherently complicated place to do business for a customer like F&ES. It would be our building, for which we would raise the money, and it would reflect, for good or ill, our

“Dean Speth sits at the controls of an excavator to show his enthusiastic support for the demolition of the Pierson-Sage Power Plant.”

“Their view was that green was at war with reality, especially economic reality, and green would have to give way sooner or later.”
values and define our image to the world, but we are not in the driver's seat on any decision. The authority to make all relevant decisions lay elsewhere. It did from the beginning; it does today. This, of course, complicates everyone’s life in the normal course of things, but it can make life especially complicated when one is trying to accomplish is innovative, when it represents doing business differently, when it offers the potential—or the threat—of major change in the system. And our proposals for a path-breaking green building did all these things.

At the end of my first year as dean, on May 8, 2000, I wrote Steve an overview memo, which said as follows:

In conversations going back a year or so, three features of our new facilities have been discussed [by us] and, I believe, agreed upon:

1. The new facilities will strive to set a new standard in environmental, sustainable design;
2. Beyond our needs at the school, these facilities will provide an environmental center for Yale. Not only will they provide space for the undergraduate environmental studies major, but they will also serve as a place where all those interested in environmental affairs at Yale could come together for discussions, lectures, classes, exhibits, etc., and where Yale environmental groups, e.g., Yale Student Environment Coalition and Yale Institute for Biospheric Studies, etc., could have offices;
3. The facilities and grounds together will be a thing of great beauty, architecturally stunning (as Yale’s music library is), maximizing the natural setting and moving naturally to Sachem’s Wood and across to the Class of 1954 Environmental Science Center.

We need to put Yale’s environment school on the map, to create something that can both teach and inspire, to underscore Yale’s commitments in these areas and to have a plan that will attract major donors.

But then a week later, on May 15, I received a new draft of the Science Hill Plan from the provost’s office. It disturbed me greatly, and I sent it to Steve with a note to call me urgently. By May 26, 2000, I submitted our comments on the draft to the provost’s office. I assumed that the draft plan was unsettling because it had not caught up with the commitments that had been made, and so I made the following points to the provost’s office:

Regarding infrastructure, we believe the university should begin quickly to decommission the Pierson-

Sage Power Plant (PSPP) and associated facilities and operations. We would not want this step to delay the construction of the new F&ES building. ... We would like to take this occasion to request that an early environmental investigation and remediation assessment be commissioned by the university.

Our comments continued:
Regarding the discussion [in the draft plan] of the new F&ES facility on p. 64, there are several important points:
(a) We must take exception to the proposal to retain the additional referenced portion of the power plant. We need to look into this further, but if this proposal compromises the F&ES design objectives that were the basis of faculty agreement to move to the currently proposed site, then the agreement is undermined. We recognize that this issue has a history, but we are sufficiently concerned by the incompatible use issue that we request that the university begin investigations of options that would allow us to terminate entirely the PSPP facility. It is hard to believe that continuing operations on this site will not be incompatible with agreed objectives for F&ES. Noise, vibrations, temperature control, contamination, fumes, aesthetic limitations, space limitations, design constraints, etc., could all be problems.
(b) The description of the new F&ES building should, but does not yet, include two agreed features. One is that the building should meet the highest possible standards of environmental and aesthetic design, “making a statement,” as Joe Mullinix [the then-vice president for finance and administration at...
Yale] put it, and providing a learning and teaching experience for the university as a whole. The other is that the building will provide an environmental center for the university with space for student and faculty gatherings, meetings and lectures; for environmentally related exhibits; and for offices of YSEC [Yale Student Environmental Coalition], EVST [Environmental Studies] and similar things, all of which would further the stated goal and objectives of the Science Hill Plan. We envision an attractive setting that would draw together students and faculty from around the university. The building itself would be on display.

(c) We are concerned that there is no discussion in this document of the space between the new F & E S building and Sage-Bowers-Physics. As you appreciate, we cannot have a beautiful facility on one side and an unsightly mess on the other. New efforts should be undertaken to determine alternative means of servicing Kline Tower, in which we would like to participate. ... The area should be viewed as an extension of the Sachems Wood landscaping and should not be used for parking, trash, garbage, oil spills, etc., as is the case today.

It turned out that the phoenix-like rebirth of the PSPP was not a case of oversight by the provost's office. In truth, it gradually came out that what had been promised us regarding a site free of the PSPP was being reneged on. By early 2001 it was clear that the university had reversed field and decided to keep the PSPP operational. The university's energy czars had simply rolled over us. I was shocked and wrote Steve as follows:

Steve: Alan Brewster related to me a bit about your meeting yesterday on our new facility. He said you were quite forceful on the power plant issue. Let me underscore the need for a firm, clear position. ... We accepted the Administration's proposed site on the understanding that we would have the site to carry out the vision we had. We can accept no compromise here: any residual power facility can in no way infringe except insignificantly on realizing our objectives. If it does, the agreement is OFF. Please relate this on my behalf and that of the school.”

In April 2001 I wrote the deputy provost a long memo on this subject, which said in part:

Our deep concerns [regarding PSPP plans] should come as no surprise. In our letter to you of 26 May 2000 we raised these same issues and requested that the university “begin investigations of options that would allow us to terminate entirely the PSPP facility” within our site. We earnestly make this request again. This whole issue is occasioned by a change in university plans to something quite different from what we were originally told. There is no reason why our school should have to bear the burden of this change in plans. Let's think creatively. There will be lots of construction on Science Hill, and there will surely be other, better sites for whatever is necessary. The worst option is to locate two fossil boilers in Yale's flagship green building.

Over a period of months that became years, I took the case against PSPP to the deputy provost, to university planning, to the head of facilities, to the vice president for administration. My basic point was that the university should look seriously and creatively at alternatives, including green ones. Somewhat to my surprise, I see when I look over the old documents that I even urged the university to find a climate-neutral alternative. Frankly, I got nowhere. My frustration mounted. In continued on page 64
Dean’s Message...
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January 2002 I went directly to the provost herself. We met and I followed up with this note:

Alison, I want to say honestly that this PSPP has been the most distressing and disappointing thing that has happened to me in a long time. ... There is simply no way on God’s green earth that we can live with a new F&ES building anchored at one end by PSPP. Can you imagine how silly we would all look if Yale’s first green building had at its heart the very technology we are trying to replace? I believe Pierre [the deputy provost] made a huge mistake in going along with Roberto’s [Yale’s energy czar] proposal to reverse his original plan to terminate PSPP.

I suggested... that someone creative and informed be asked to come up with least-cost alternatives to Roberto’s current proposal. For a year and a half, no one has done that, unbelievably. For you to ask for that would not commit you or anyone to those alternatives.

This stalemate continued until finally my wife and I talked it over, and I decided that it was either me or the power plant—one of us was not going to remain at Yale. I communicated this to the provost. I’m shortening a very long story, but it has a happy ending. Imagine my delight and surprise when President Levin called to thank me for forcing the issue, because the university had actually found a way to save money through an alternative to keeping the PSPP!

A lesson from the building of Kroon and the greening of Yale is the importance of leadership. I have already spoken of Steve’s. But given the way Yale works, we needed leadership elsewhere at Yale, and we soon got it. Some members of the Yale planning and facilities staff bought into our dream and began to lead. Even more, there was a wholesale turnover in personnel in key positions—including in administration, finance and facilities; with the arrival of John Pepper as a new vice president, who brought in people like Jerry Warren and John Bollier; in the new sustainability office led by Julie Newman. And, of course, the greening of Yale has not occurred without the greening of Yale’s president. Rick Levin supported us every step of the way, determined to green Yale, and has taken the fight to protect our climate to universities around the world.

All of this new leadership has represented a sea change at Yale. That was the road taken, and as Robert Frost said, taking that road “made all the difference.”

The final lesson I want to stress is the sheer amount of hard work that has been involved. And here I must pay special tribute to Deputy Dean Alan Brewster. Along with Steve, Alan has carried the ball for us in the huge effort to get the building’s energy system right and has represented us in countless meetings with Yale facilities and planning and with our architects and our builders. He is now even fretting about where each faculty member’s new office will be, getting the furniture and fixtures right, and so on. And a constant for Steve and Alan has been the point count on the way to LEED-platinum certification. There will be plaques in Kroon recognizing our donors, and they certainly deserve it, but I personally would like to put one there recognizing Steve and Alan. Their vision, constant attention and inspired presentations have also made all the difference.

Now, most of the big decisions and, I trust, all of the big struggles are behind us. Kroon is rising. It is fun to see it take shape, and it will be a joy to be in it. Soon we will be able to enjoy the gift that the remarkable generosity of Mary Jane and Rick Kroon, Ed Bass, Carl Knobloch, Gil Ordway, Jonathan Rose, Coley Burke, Adrienne and John Mars, Joan and Dick Tweedy, William Waxter and many others, has made possible. We have learned a lot from this process, from working with some of the most talented and committed people in the world, like the inspired architects at Hopkins and Centerbrook and the green-building gurus at atelier ten. It’s been quite a ride. Yale has learned a lot. The whole process has brought the university forward. It has been a blessing and will be for a long time. ■

Saving Indonesia’s Tropical Forests for Climate Fight

By Michael Coren ’09

Standing in one of the hundreds of oil palm plantations in Borneo, on the ragged edge of Indonesia’s agricultural frontier, I stared across a flat landscape at a lonely cluster of rainforest trees as conspicuous as ship masts in the open sea. The once-dense wall of tropical forest has been replaced by surgically precise rows of plantation palms. There are now over 23,000 square miles of oil palm in Indonesia; this will double to an area twice the size of Maryland by 2020.

Indonesia’s forests are being lost in a wave of new plantations growing fiber, food and fuel, often accompanied by illegal logging. By 2020, the lush lowland rainforests of Borneo, which gave scientists an average of three new species per month during the last decade, will disappear. By mid-century, tropical ecologists estimate, most of the world’s tropical forests will have also shuffled off into history.

I arrived in Indonesia in August 2007 to help rewrite that scenario. Almost a quarter of the world’s greenhouse gas (GHG) emissions begin in the burning and clearing of tropical forests. If the worst of climate change is to be avoided, tropical deforestation will have to slow and then stop during the coming century. The market, once seen as part of the problem, could become the solution.