

**Science Chair's Council**  
**Summary of the 9th Meeting – May 11, 2010**  
**KGL 101**

**Attending:**

*Chairs:* David Bercovici, Jeff Kenney, Scott Miller, Tom Pollard, Rick Prum, Avi Silberschatz, Douglas Stone, Patrick Sung

*Divisional Director:* Bill Jorgensen

*Provosts:* Steve Girvin, Tim O'Connor

*Guests:* Ron Breaker, Laura Cruickshank, Peter Parker, Thomas Tomsich, Kyle Vanderlick

**I. Science Hill Plan** (Tim O'Connor, Laura Cruickshank, Thomas Tomsich, Steve Girvin)

Tim O'Connor provided an informal update on Science Hill planning. The Science Hill Master Plan, which includes the new Yale Biology Building (YBB) and the SCL refurbishment / KCL replacement, remains on indefinite hold due to budget difficulties. Part of this Plan has been a student center for social, fitness, and teaching activities in a refurbished SCL, re-imagined as centralized location on Science Hill. Yale is now revisiting the central theme of this plan and seeking input.

O'Connor described how they are approaching space plans in general. A group of provosts and planners toured department spaces in December 2009, following an email query. They seek to address short-term needs in the context of department-wide, longer-term planning. They will gather more data this summer, and establish a formal science hill planning committee this fall.

The next big Yale construction projects in the queue when the economic downturn hit were the new YBB and the SCL/KCL renovation. These are deferred but still a high priority. YBB needs to be financed from debt, which is difficult now, although Yale is still trying to fund this, and is looking for donors.

O'Connor said that teaching space was on their radar, as there is "less than wonderful teaching space" in every department. But chemistry teaching labs are a priority since there are safety issues. The existing Chemistry teaching labs in KCL are 'dismal', and are the least safe lab spaces on Science Hill. They don't want to fix the existing ones in KCL since they obviously don't want to invest in a building that will be demolished. The current medium-term plan is to vacate, clean out, demolish and then rebuild KCL with good teaching labs, then reoccupy. At about the same time (?) renovations would occur in SCL. All this takes time, so this will not provide a near-term solution for the Chemistry teaching lab problem.

The group discussed near-term options for Chemistry teaching labs. The provosts are working closely with the Chemistry Department on West Campus options for teaching labs. But we wondered whether this could be done in YBB as part of a modified YBB plan, or in a vacated KBT.

The biologists were not enthusiastic about the modified-YBB option, but full consideration of any such options would require knowing e.g., How much space would be needed? How long would we need to keep it there? If intro teaching chemistry labs are added to YBB, what loses space in YBB? O'Connor said it would not be animal space, but space on the ground floor.

Tom Pollard emphasized that the soon-to-change pre-med requirements will change the lab needs, and this is a big uncertainty for planning. The relevant departments (MCDB, Chemistry and Physics) need to huddle together to figure out the revised lab needs.

The provosts and planners are considering alternatives to the Master Plan for Science Hill dining and social spaces. Should KBT plaza be the centralized social hub of Science Hill rather than KCL? Could food carts be located on the KBT courtyard?

Yale is planning to consolidate the science libraries when the new residential colleges are built, freeing up the space occupied by the KBT library. Could this be a future social and fitness center? Scott Miller was not keen on having a gym close together with teaching and lab areas, as in the current SCL/KCL plan, and suggested having the gym below ground, between KBT and Gibbs.

We discussed the dilemma of what to do with KBT. It is not good for academic departments with a small footprint for each floor and elevator issues, which limit interactions. It is bad for wet labs but OK for dry labs. Options discussed were: Teaching classrooms on the lower floors, chemistry teaching labs on the lower floors (in the short term), swing space for offices/labs for people from Gibbs and Sloane, grad student housing, and administrative offices. There is currently lots of equipment in KBT, and more people could fit in.

There were varied opinions on grad student housing in KBT. Bill Jorgensen and Scott Miller didn't like it, and thought the mingling of academic and living functions could lead to awkward situations. Tom Pollard did like the idea, and said that having lodging and labs together had been successfully done at Rockefeller University, and that "students love it". The planners agreed to investigate what Rockefeller and other universities had done, and how successful they were.

Jeff Kenney pointed out the strong winds common on Science Hill, natural winds made worse by the wind tunnel effect due to the science hill buildings, was a relevant factor for planning. For example, the KBT plaza may not be a great "social center" for Science Hill because of the winds. He urged the planners to consider ways to reduce the wind tunnel effects.

Rick Prum commented on the new Kroon building, which has no labs and is operating as a "think tank" since Yale wanted to make it "green". As a result, no space has opened up in the Environmental Science Building with the opening of Kroon. Prum questioned whether a building with no labs makes sense for a Science Hill building.

Peter Parker, representing Physics, reported that Physics and Applied Physics are exploring a merger, but the lack of common space inhibits this plan. Physics is already in 3 different buildings, and if the merger happens, they will be in 4 buildings. In the Science Hill Master

Plan, it would be about 10 years before the needs of Physics are addressed, a timeframe which is too long for the Physics-Applied Physics merger. The Physics Department urges a new physics building to be given higher priority.

We discussed the swing space needed during the planned KCL rebuilding. Scott Miller says that the West Campus option is undesirable but doable if there is no better option. The Chemistry Department has "serious hiring needs" and is "willing to do almost anything" (such as agree to the WC option) to keep this on track. Alternatively, he wondered whether Science Park is a viable option for swing space.

After YBB is built, there will be freed space in OML and Greeley, and Yale does not currently have specific plans for this space.

#### **Action Items:**

1. (Chairs of MCDB, Chemistry and Physics) Huddle together to figure out the revised undergraduate teaching lab needs.
2. (Laura Cruikshank) Investigate the experiences of Rockefeller University and other universities with integrated lab & student living spaces.

#### **II. High Performance Computing at Yale (Steve Girvin)**

Girvin gave a status report on High Performance Computing at Yale. He noted 3 relevant committees: First, a high-level advisory committee for ITS overall is being formed now. Second, an HPC strategic planning committee ("HPC Vision Committee") was appointed a few months ago, but has only met once. It is charged with drafting recommendations for scientific computing at Yale. Third, the Yale Office of Digital Assets and Infrastructure (ODAI), established in 2008 as a Provost-sponsored initiative to develop a university-wide digital content strategy, is advised by a faculty committee (that includes Julie Dorsey from Computer Science and Charles Bailyn from Astronomy among others) that plans to get input from faculty on issues of data curation, storage, and backup.

He reported that several gene sequencers are up and running at the West Campus, and have already analyzed 12 gene sequences. Bulldogs L and M are now running. Bulldog L is a machine purchased with NSF MRI grant to the university; Bulldog M is an Astrophysics machine. Three climate scientists recently hired by Geology & Geophysics are pooling resources to purchase an additional machine, but not all of the funding has been identified and they are still exploring funding with the administration.

Girvin said progress was slower than is desirable since university spending is now limited. It is also hard to get staff members, and ITS recently lost one.

Jeff Kenney questioned the role of ITS in HPC, and suggested that the lack of sufficient

expertise and scientific leadership severely hampers progress and continues to cause problems. Faculty and graduate students in Astronomy have not been able to do enough of their scientific computing work at Yale since well-working systems are slow to come on line. Concern was expressed that the stated priorities of ITS a few years ago did not include scientific computing as a high priority, and in some ways seemed incompatible with it.

Kenney asked whether the placement of scientific computing in the organizational structure of the university was part of the problem. Scientific computing is currently under ITS, which is the responsibility of the VP of Finance and Business Operations (Shauna King), but perhaps the Provost should instead be officially responsible for scientific computing. Girvin and Spangler said that the Provost's Office works closely with ITS, and in their view this organizational issue was not a problem.

In Girvin's view the way forward is to first get a "white paper" on scientific computing from the HPC Strategic Planning Committee.

### **III. Departmental Voting and Promotions (Bill Jorgensen):**

Jorgensen, the head of PSEAC (Physical Sciences and Engineering Advisory Committee), circulated a 2-page handout with personal comments on the status of Yale Physical Sciences and Engineering, PSEAC, and the Tenure and Promotions Committee. In his view as head of PSEAC, things are quite good in general. For example, West Campus is a "terrific adventure" and lets us hire great scholars.

He expressed concern about lenient department voting in promotion/tenure cases, with reasons outlined in his handout. Historically Yale has been more lenient in internal promotions compared to colleagues. Making weak internal promotions keeps our rankings lower, making it harder to recruit and retain the very best faculty. Jorgensen urged the chairs to pass his thoughts on to faculty members involved in voting on promotion/tenure cases.

Tom Pollard suggested taking promotions out of the hands of the departments, where personal matters often get mixed with professional considerations, with negative consequences for building the strongest faculty. At other universities this is done outside the department, and done well, by committees of internal university and external people. Pollard had urged taking this step during the FASTAP process, and while some others agreed, it was deemed too difficult politically.

Steve Girvin mentioned that a high-level committee at Caltech explores potential future faculty candidates from very early in their careers, and keeps files on promising people. Yale could be more successful by doing something similar.

It was noted that Yale is generally poor in nominating people for awards. It is now done erratically, but it should be done in a more organized fashion.

Some chairs are not aware that their job is not to get the junior faculty promoted, but rather to mentor the junior faculty in order to optimize their chances for promotion. It was suggested that

we invite the Dean to the SCC next year to discuss the role of the chairs in the promotion process.

**Action Items:**

1. (Scott Miller) Invite Dean Mary Miller to SCC meeting next year to discuss the role of the chairs in the promotion process.

**IV. SCC Chair for 2010-11:**

Scott Miller of Chemistry was nominated by the group to Chair the SCC next year and he accepted.

In general, the new SCC Chair should be experienced as a department chair, but not in their final year as department chair. In order to promote institutional memory, increase the effectiveness of the SCC, and help the current SCC Chair, it is best if the prior SCC Chair serve on the SCC. Thus we should avoid last-year Chairs as SCC chairs.