

Minutes*

**Senate Research Committee
Monday, December 10, 2001
1:15 - 3:00
238A Morrill Hall**

Present: Scott McConnell (chair), Victor Bloomfield, Kris Davidson, Robin Dittman, Leonard Kuhi, Sharon Neet, Mark Paller, Virginia Seybold

Absent: Gary Balas, James Cotter, David Hamilton, Phillip Larsen, Susan Miller, Diane Nguyen, James Orf, Stephanie Root, Sarah Shoemaker

Guests: Associate Deans Charles Moldow (Medical School), Judd (Biological Sciences), James Ysseldyke (Education and Human Development)

Other: none

[In these minutes: (1) committee business; (2) research infrastructure (with three associate deans for research)]

1. Committee Business

Professor McConnell convened the meeting at 1:15 and quickly reviewed three items of Committee business:

- The Senate approved the change to expand the Committee from 8 to 15 faculty/P&A members. He asked that Committee members nominate individuals to fill the new positions.
- The Faculty Consultative Committee approved for the Senate docket a change in Senate bylaws to grant authority to Senate committees to issue interpretations of policies that they previously brought to the Senate for adoption.
- The next meeting of the Committee will be January 28, at which time one item will be a discussion of the report of the Faculty Development Working Group with Professor Carole Bland.

2. Research Infrastructure

Professor McConnell next welcomed Associate Deans Charles Moldow, Judd Sheridan, and James Ysseldyke to discuss how their colleges grapple with the problem of building the research infrastructure for faculty and for inter-college efforts. This is not a linear discussion, he said; the Committee is trying to analyze where things are: what the faculty and what they want (the latter being a more political process). He said he hoped the three deans would talk about how they assess needs and secure support.

* These minutes reflect discussion and debate at a meeting of a committee of the University of Minnesota Senate or Twin Cities Campus Assembly; none of the comments, conclusions, or actions reported in these minutes represent the views of, nor are they binding on, the Senate or Assembly, the Administration, or the Board of Regents.

Associate Dean Moldow began. By "research infrastructure" he said he assumed the Committee was interested in the core programs crucial to faculty and to recruitment of new faculty and start-up packages. ("Core programs" are activities in support of research such as electron microscopy.) There is no ongoing mechanism to depreciate core equipment; that is handled on a crisis approach, Dr. Moldow said. They have not grappled with depreciation of major pieces of equipment shared by a number of investigators. A huge part of the Medical School budget is committed or pass-through: the indirect cost dollars come by formula from the administration, of which 55% are forwarded directly to the departments (which are often used there to replace Operations and Maintenance funding that has disappeared).

The dean has a pool of funds, from various sources, that totals about \$9 million per year that is used to support research. It is used for such things as equipment purchases for new faculty, equipment replacement, start-up funding, and for the core research support programs. In a perfect world, the core programs would be set up, given a boost, and then expected to be self-supporting; none of them have achieved that status. Dr. Moldow described the funding and structure of the Center for Magnetic Research Imaging as an example and how there have been discussions about setting it up as an Internal Service Organization (ISO). At present it lacks the resources to grant time to someone who has a good idea but no funding; there are other core programs that find one way or another to offer time or support to a faculty member with a good idea but no funding.

About 18 months ago this unorganized structure was seen as impossible; a faculty-driven process led to the identification of eight themes the Medical School could focus on. In the first year there was an RFP process asking department chairs and faculty members for future investment proposals in these thematic groups. They are going from a model of a department chair and dedicated faculty member on a quest for money from the dean to a priority-driven process. People still come to the dean with a hat out with a crisis, however, so there still a lot of time spent on episodic needs.

Professor McConnell asked about the size of the awards from the RFP process. Dr. Moldow said that could depend in part on the state budget. There is a pool of funds, to hire new faculty in clinical and research areas, that seems secure; there could be leakage in the rest of the funding to the state, however. The initial plan included enough funding to bring 30-50 new faculty, which would be an enormous undertaking.

The Committee will hear about the discussion of ISOs in the Academic Health Center, Professor McConnell noted. They have said that ISOs must be established, Dr. Moldow said, and they are trying to get the core research support programs to establish legitimate ISOs. The resistance is impressive, he commented. In the past, for example, the Medical School used \$1 million per year to support Research Animal Resources; they are now changing the rates charged for animals and will be able to phase out most of that support.

Professor Seybold inquired if there is communication with other colleges about combining support efforts with similar units in other colleges. Dr. Moldow said combining is easier to do at the beginning than it is later. One faculty member with a small ISO may try to hang on to it; if the unit is larger, it will support intercollegiate efforts. Combination, however, has been difficult in the past.

Dr. Bloomfield said that in the biological sciences they have tried, with moderate success, for coordination of the research infrastructure, especially in expensive areas of research. That has made them

more aware that they used to be about sharing expenses when expensive items come up. There are two kinds of facilities, he suggested: (1) general use, such as Research Animal Resources, and (2) strong investigator-driven; there are cultural differences between the two in terms of how they are supported and their willingness to be put on a sound business practice basis.

Dr. McConnell asked if retention or recruitment offers ever produced “infrastructure-like” facilities or resources, and if the Medical School ever required that access to these facilities or resources be provided to others. Dr. Moldow indicated that these types of retention offers were more widely used by other units across campus, and that each was handled on a case-by-case basis.

Dr. Sheridan said that for more specific large equipment items, the primary way to get them is to identify one or more faculty doing research requiring the equipment and have them send in a grant proposal. This becomes more difficult when something is subject to broader use; faculty who seek funding for it must buy into the way it is used, the rules governing it, etc.

How often does it happen that an investigator wants to do something next week, Professor Davidson asked? Discovery of the unexpected is a fundamental motivation for having equipment. Some of this occurs, Dr. Moldow said. Dr. Bloomfield said that in the biological sciences it is easy to walk into another lab and use equipment. But that use is not recognized in funding, Professor Davidson observed.

What is as important as equipment is support for PEOPLE to run the equipment, Dr. Sheridan said; that support can help lead to a grant proposal. They want to avoid use of equipment by faculty who just want to try out this or that rather than building a research program; it can be hard to know whether that is happening when equipment is captive by an individual or group.

Dr. Sheridan next spoke about the College of Biological Sciences, and used a set of slides to make his presentation.

There are several categories of infrastructure, from their perspective. One, at the individual faculty level, which includes set-up and matching funds for individual grants. Two, at the department level, there are such things as staff for research accounting, computer support (which they must figure out how to pay for since federal grants do not), copying and paper and the like, departmentally-based centers and facilities, and renovation of space. Three, at the college level, facilities and some ISOs (which are expected to serve other colleges and outside organizations to generate funds), computer support, and research stations (Itasca). Four, cross-college facilities (genomics, bioinformatics) and new building support (Molecular and Cellular Biology).

One example is Biodale, consolidated facilities in one place, most multi-college in use and funding, that allows one-stop shopping for research support. The facilities include an imaging center, advanced genetics analysis center, mass spec consortium, high-throughput facility, biotechnology resource center, and bioinformatics and biocomputing center. It is a way to put facilities together so colleges can share them and also a way to link to the outside; small and large companies use the facilities and pay appropriately.

CBS receives about \$1.5 million per year in indirect cost recovery funds; of that, a very small amount goes to departments for staff handling grants. The remainder goes to faculty and departments for research infrastructure; the funds are not used for other purposes. A significant amount goes for set-ups; a

fair amount for renovation and for infrastructure generally. Small amounts are used for matching; the college generally finds other ways to put up matching funds.

Other funding for research comes from the Molecular and Cellular Biology Initiative: University funds are coming into the colleges to hire new faculty and for set-ups; that money is not freely given but requires college funds as well. Department budgets pay for computing, copying, and some personnel. College funds are used for center/facility/research station budgets.

Infrastructure needs include large equipment matches, specific facilities (e.g., electron microscopy), subsidies for personnel to manage equipment, training for faculty, grad students, and post-docs in use of equipment and technology, and computers for faculty. With respect to large equipment matches, there is no mechanism internal to the college to determine needs and distribute funds, so the decisions are made at the dean's level in a somewhat ad hoc fashion--but in a way that also responds to the needs of other colleges.

Professor McConnell inquired about ISOs in Biodale; he noted that Dr. Moldow had said the Medical School had no practice in terms of depreciating equipment. Does Biodale? There is nothing built in, Dr. Sheridan responded. There is a sort of depreciation in one of the Medical School ISOs, Dr. Paller said; it has been self-sufficient and has purchased new equipment.

Professor McConnell turned next to Dr. Ysseldyke for a presentation for the College of Education and Human Development (CEHD).

Dr. Ysseldyke used a series of slides for his comments, and began by noting that he was asked how CEHD defines, establishes, and funds the research infrastructure and about the relationship between ICR funds and infrastructure support. He said that his responses "should be understood in the context of no University or CEHD definition of research infrastructure. We support research in a variety of ways."

It is both a college and central responsibility to fund research infrastructure, and "it is not clear who is responsible for establishing and funding what." Although a percentage of ICR funds are allocated by the central administration, there is little agreement about the activities and costs that should be funded at the investigator, department, college, or central levels.

"Decisions about cost-sharing are made at Department or Center levels. Decisions about matching funds are made at [the Office of the Vice President for Research] level, college level, and department or center level. At College level the Associate Dean for Research seeks input and concurrence from the College Senate Research Committee regarding resource allocation. Ultimately, though, decisions are the responsibility of the Dean."

"The work of CEHD is 'different.' We do considerable work for the State of Minnesota (funded at 0% F&A [ICR]). We do considerable professional development for the feds (funded at 8%). We do much service and demonstration work, and much technical assistance to state and local education agencies (funded at 32%)."

"What is the 'real' rate of [ICR] recovery for CEHD?"

Number of sponsored accounts = 282

Approximate funding = \$17 million
Approximate [ICR] recovery = \$2.38 million
Average rate of [ICR] recovery = 14% "

Of the ICR funds, 49% goes to central administration and 51% to the college. Of that 51%, CEHD uses \$225,000 for three centers; of the remainder, 50% stays in the college, 30% is allocated to departments or centers, and 20% is allocated to PIs (no grant of less than \$1000 will produce ICR funds for a PI). About \$1.1 million comes back to the college (of the \$2.38 million generated in total); \$225,000 goes to the three centers and half the remainder goes back to departments.

The funds are used in a variety of ways: for personnel (who work on grants and contracts, some accountants, etc.), matches, cost-sharing, equipment purchases, and new faculty set-ups. His office uses the college money summer research support, bridge funding, travel related to new grants, seed money, and so on.

Issues for consideration, Dr. Ysseldyke said, include the following:

- "communication to PIs of practices and timelines re cost-sharing, matches and waivers
- need for faculty input on policy development re cost-sharing and matches
- need for faculty development
- equity in return when the source of funding for some colleges is agencies that return full [ICR], while some other colleges have large pools from the state
- unlimited competition for international competition that have 0% [ICR] and 100% match?"

International partnerships provide 0% indirect costs, require cost-sharing and involve matches from departments, colleges, and an international committee.

CEHD is at a disadvantage with respect to other colleges because it often receives 0% ICR while other colleges receive the full 48% that is the University's rate. In addition, Dean Ysseldyke asked, how important are international partnerships? The faculty believe they are important but they provide no ICR funds and often require a 100% match. They can be dealt with if there are one or two such partnerships, but if a large number of faculty have proposals, each comes with an enormous cost to the University. When does one say "no"?

Where do funds come from when the overhead on a grant is zero, asked Professor Kuhl? "Out of our hides," Dean Ysseldyke said--they must come from O&M funds. They are paid by the University from other sources, Mr. Wink confirmed. How did this evolve, Professor Davidson asked? Is it done this way because it was done this way 80 years ago or are these new kinds of grants made without consulting universities?

It used to be that all ICR funds went to the state, Ms. Schumi recalled, but the legislature agreed to let the University keep them. When it did so, there was the agreement that in return the University would not charge ICR funds to the state for state grants. What about the other grants, Professor Davidson

inquired? They have different rates and the University absorbs the rest of the cost, Dean Ysseldyke said. Most states do not pay indirect costs on their grants, Dean Sheridan observed; they argue that they are already paying for the university's infrastructure. But within a college, Dean Ysseldyke commented, a PI obtains a grant with no ICR dollars and still wants funding to support the research. Some require matching money, such as USIA [U. S. Information Agency], but typically not the state, he added.

Professor Davidson said he found it puzzling that these kinds of grants (with no ICR funds and requiring a match) exist without any questions being asked. His question, Dean Ysseldyke said, is why the University accepts them, how many it should accept, and why they do not come through the Office of International Programs.

There are two challenges to the governance system, Professor McConnell summarized. First, increasingly, business practices are a part of doing research; it is not clear that the faculty embrace or understand that. Second, these issues intersect with academic freedom: faculty want to do a project, important to them, and will seek funding to carry it out--but it will cost the college money. On what basis does the University, the college, or peers say "no"? Are there appropriate ways to set limits? There is need for a decision-making model to deal with these issues.

The grants that require matches do not mean sending money overseas, do they, Dr. Bloomfield asked? Sometimes money is used to pay faculty who come from other countries, Dean Ysseldyke said. Do the grants cover the University's share of its faculty? Right now the college has five grants that involve international partnerships with zero overhead, Dean Ysseldyke responded.

Professor Davidson said this struck him as a slightly sinister way to extract a lot from the University at a low cost. For example, what if a computer company provided a grant to test its equipment and required a match; the University would be testing its equipment for them. Dean Sheridan said he thought the University had a policy that it will not accept grants without ICR funding from companies but that it would do so from foundations. In effect, grants requiring a match but providing no ICR funds require a 150% match--the 100% match plus the 50% in ICR funding. This is considerable outside control, Professor Davidson opined. In the case of foundations, Dean Sheridan pointed out, the logic is that they are providing donated funds.

On the issue of academic freedom, Dr. Paller reported that the Medical School has adopted a faculty-driven strategic planning process and funds will be allocated to high-priority research areas. A faculty member may choose to do research wherever he or she wishes but cannot expect any matching funds unless the research is in one of these areas. Are the faculty aware of this, Professor McConnell asked? It is on the web, Dean Moldow said, but there is no mechanism to rank requests.

Professor McConnell asked the three deans to think about policy implications or directives that would help make support for research infrastructure smoother within and across colleges. The extreme business case, Dr. Bloomfield said, is MIT, with a 63% ICR rate. MIT tells the faculty that if they make a proposal, that is fine, but they must make up any difference between what the funding source would pay and the 63% rate. The other side, which all try to do more or less, is to have plans and priorities, but then someone the department or college values knocks on the door with a proposal and it becomes difficult to adhere to the strategic plan.

It important that cost-sharing of time be understood, Dean Sheridan emphasized, because when the University negotiates its indirect cost rate, cost-sharing is often on the wrong side of the equation. Faculty have no idea of the implications of time cost-sharing; they need to be as close as possible to actual costs. There must be ways to keep track of this short of a general policy.

Is there capitalization within ISOs, Professor McConnell asked? It is expected, Dean Moldow said, if not policy. Interdisciplinary centers will become ISOs, but they discovered in one case that after three years the ISO had the money to buy new equipment--but not to pay the technician required to operate it.

Of all the money the University spends on research, Dr. Bloomfield reflected, many would agree that the least well-funded element is staff support. That implies the University should take money away from other things and more into supporting faculty research. This is not necessarily a lack of funds, Professor McConnell responded; it is not clear that things get to the right spot at the right time. If there were a process to make judgments about where a unit wanted to be or wanted to go, it could offer long-term security to people who will help it go that way. Now, in a decentralized system, every PI tries to be sure his or her needs are taken care of.

The grants with zero overhead raises the question of priorities, Professor Kuhl said. There is a huge subsidy from O&M funds for grants with no or low overhead; how do those priorities get established? Without judging the merits of any particular research, it is nonetheless true that Professor X is subsidized while Professor Y is not. There is an implicit policy that is not articulated, Dr. Bloomfield responded, that says certain parts of the University have funding sources with no overhead but that those activities are still valuable to the University and the state (e.g., CEHD, CLA). There are large parts of the University that have no ability to earn ICR funds but in which the University still wishes faculty to do research, so it accepts the situation and puts money into their research. He said he did not know the dollar amounts involved but speculated that subsidies to well-funded parts of the University equaled those the to less-well-funded parts.

Professor McConnell adjourned the meeting at 2:45.

-- Gary Engstrand