

## **Tomorrow's Science Facilities: A Conversation with Arthur Lidsky**

**EDITOR'S NOTE** Arthur Lidsky is Senior Consultant in Dober, Lidsky, Craig and Associates, Inc., a Massachusetts consulting firm which specializes in advising educational institutions on facilities needs. Last year the College engaged Dober, Lidsky, Craig and Associates to assess Augustana's needs in the sciences as a first step toward creating new and better science facilities.

Lidsky's procedure for consultation, which began in the spring of 1993, involves two stages: first, he and associate Dorothy Atwood look at existing science facilities in the contexts of academic programming, institutional mission and direction, and national standards. This analysis includes conversations with science faculty and College administration and planning staff, as well as site observations. Then the team make specific space and facilities recommendations. During the current academic year the firm will be completing the first stage of this process.

Lidsky and Atwood were on campus last August to inspect facilities and conduct a series of interviews with science faculty. They talked to the Magazine about their work in general and provided an initial assessment of science facilities needs at Augustana.

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**AUGUSTANA COLLEGE MAGAZINE (ACM)** If we could deal with a few preliminaries first, how is a consultant different from an architect?

**ART LIDSKY(AL)** What we do is help colleges and universities make decisions about their environments, about their campus and facility needs. And we do that in the context of translating academic programming into facilities. What we don't do is architectural design. Our responsibility is to help institutions make decisions about a facility prior to bringing an architect in. I do have an architectural background [a B.Arch. from Clemson (South Carolina) University and an M. Arch. in Planning from McGill University], but there are others on our staff who do not. In reality I don't think I would need an architectural background to do what I do.

**ACM** Does your firm do any architectural designing as well as consulting?

**AL** No. We have created a niche for ourselves. As far as I

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know, there aren't any other firms that specialize in college and university planning at the level we do and which have our range of experience. We have worked with more than 350 colleges and universities worldwide.

**ACM** Do you specialize in advising about science facilities?

**AL** Our firm does not specialize in one aspect of the campus because we work with all aspects. I happen to have the most experience working with science facilities. I am a consultant to the National Science Foundation; I work with them in looking at facilities requests, proposals for money for facilities (I have done this for the last several years), and I'm also on the steering committee of Project Kaleidoscope, which is a program funded by the National Science Foundation as well as such other foundations as Keck and Kresge, and sponsored by the Independent Colleges Office. The thrust of Kaleidoscope is to improve science facilities at the college level throughout the country, and there's a series of workshops, seminars, symposia, and programs that Kaleidoscope sponsors. I'm on the steering committee and a faculty member of that program. I give workshops on science facilities.

**ACM** Your degrees are in architecture but did you study science in college?

**AL** I studied electrical engineering for two years until, at 2 o'clock in the morning when I was studying for a chemistry midterm, I said, "I don't really want to do this." So it was chemistry that forced me into the line of work I've ended up in. After my 2 a.m. discovery I sat out for a semester and decided that I wanted to be an architect; that's my science background.

**ACM** Dorothy, did you have science?

**DOROTHY ATWOOD (DA)** As support for the architectural degree.

**ACM** What are some of the continuing sources of satisfac-

tion when you complete a project? How would you profile a good, satisfying project?

**AL** You can define "good" in different ways. One definition of "good" is that the college recommends us to someone else! But beyond that I think a successful project is one which has allowed us to work together with an institution to solve a particularly difficult problem where the needs of the institution are beyond their resources, and despite that we come up with a solution that helps them get something built and continue the program. There isn't very much of a challenge if what they ask for and the resources they have available balance. The more difficult ones are where we really have to search out and work together to try and find a solution that addresses most of the needs within the dollar constraints, and almost all colleges and universities these days have those dollar constraints.

**ACM** What exactly is a science facility space study? Could you define some of the objectives of this and the process you're going through now and then tell us where you are in that process?

**AL** What we're trying to do is to help the college define its needs for the science program. We're trying to take a division that consists of six independent departments and to create a forum by which they can think about and plan for the future as one group of related departments instead of independent organizations. And we're trying to help them define their facility needs based upon that academic program. Part of our role, I think, is to bring a national perspective to that discussion. Part of our role is to challenge their current thinking. Part of our role is to bring normative standards to the table. And in the end it is to help the college look at the choices it has for the development of new facilities. More than likely, the end result will be a combination of new and renovated facilities because more than likely the needs will be beyond the financial resources. And so we will puzzle out with the college what those choices are, look at the costs and benefits of every one of them, and summarize the results in a way that can be used for fund-raising, and in planning the actual architectural process. For instance, today

[August 17, 1993] we talked about the fact that the present definitions of needs put together by the departments are really independent descriptions of a future and six views of that future. And what needs to occur, I think, is for the division and the college to agree on a certain set of assumptions that can guide those six descriptions so that everyone is in agreement about what the enrollment might be in the future, about numbers of faculty, about type of research and how research is being used for teaching. In other words, a series of internal discussions that will shift the independent descriptions to something that's more division-wide and college-wide. At this point we're at the beginning of those discussions.

**ACM** I want to go back presently to these matters that you mentioned: bringing in national perspective, challenging current thinking, and setting normative standards. First, though, what at this point are your strongest impressions of Augustana's strengths and weaknesses?

**AL** These are initial impressions. I think this is a beautiful campus. The landforms and the landscaping and the outer appearance of the buildings make a strong statement and create a very strong campus image.

**DA** And the arrival points are interesting.

**AL** You know you've come to campus. It looks institutional; it looks like a college setting. The changing topography here creates a lot of opportunities for viewing the campus from a variety of perspectives; it's an exciting place, handsome from an environmental point of view. There are probably too many trees! We don't know enough about the weaknesses yet, but we do know in terms of the sciences at least that there are some inappropriate spaces, spaces that grew, that are not here by design, that are environmentally inappropriate.

**ACM** One of your objectives is to understand the needs of the program based on the general mission and character of the school. Have you developed a sense for that from conversations you've had with faculty and administration so far?

**AL** During this academic year we're trying to get a better understanding of the academic program and what that means in terms of facility needs. We're trying to make some comparisons because we know enough so that we can look at the programs here at Augustana and compare them with some of the other institutions we're familiar with to get a sense of scale, etc.

**ACM** Can you describe the kind of national perspective that you are bringing, and have you yet been able to compare normative standards with what you see at Augustana?

**AL** Let me give you a couple of examples of how we use our understanding of what's going on in sciences on the national level. There have been some incredible changes in science disciplines in the last 30 or 40 years. There's been a blurring of boundaries between individual departments, and over time that blurring will increase. So although there are departments called biology and departments called chemistry, the line distinguishing those two departments has become blurred; there is more interaction between those departments. That means a problem for a small college with - as Augustana has - five separate locations because you can't have interdisciplinary activity with five different locations. So part of our conversation is to find out how to consolidate the activity. Another national perspective is the extent to which technology is driving the change in facilities. There's much more instrumentation now at the undergraduate science level than has been true in the past; much more sophisticated instrumentation, so that any change goes out of date fast. But there are now instruments available at the undergraduate level that fifteen or twenty years ago were not available at the Ph.D. level. That is going to be filtering down more and more to the college level, and there are some colleges which have embraced that to a greater extent than Augustana has yet. But Augustana will embrace it because it has to to keep up. So there will be more instrumentation, more use of instrumentation, more complex instrumentation here at Augustana than there has been in the past. That will affect facilities. And it has staffing implications, teaching implications. A third important national trend

is the changing nature of the student body. There are more students going to colleges across the country than had been the case even two years ago. There are fewer students graduating from high school presently, (although that trend will be changing in the next few years). The difference, and it's a significant difference, means that there is a greater number of nontraditional students coming back to college; they're older; they're sometimes more professional, sometimes not. But they're different, and that changes the way in which colleges need to respond to their needs. And those changes will filter down to Augustana and to the new science facilities. A final important trend relates to science pedagogy. Nationally more and more colleges are using research as part of the teaching curriculum, whereas fifteen or twenty years ago most facilities were designed for college level teaching - strictly for teaching. Now there's a great deal of pressure from faculties to provide resources to allow them to use research for teaching. That means you involve students in the day-to-day research program. And that means facilities have an impact on the way you teach. Using research in teaching means involving the students early on, as part of a teaching-research program. I think that younger faculty whom you'll be hiring in the next decade will come with the expectation of using research in teaching.

**ACM** These components that you are discussing would also function as normative standards. Do you have anything to add to that?

**AL** One of the aspects of our work will be to look at, for instance, how colleges - in particular how Augustana - is using its classrooms as a resource. There are normative standards in terms of how large a room should be, what different types of seating arrangements should be used for different styles of teaching, how many hours each should be scheduled and non-scheduled. As a general rule classrooms should be seen as a college-wide resource and not only as independent department-wide resources. Each of the departments will ask for some number of classrooms; when you add them up they will be a very great number, and one of our responsibilities will be to step back and ask what's really needed.

**DA** But also there are some special cases where the standards don't apply. We take those into consideration as well.

**ACM** Augustana sees itself as selective with a reputation for offering a good quality science program and with considerable evidence by alumni achievement that this is in fact the case. How do Augustana's existing facilities, in your judgment, compare to those of institutions that are like Augustana, sharing the same kind of mission seeking to do the same things?

**AL** In a quick comparison with a number of colleges that are both regional and national, if we look at the total amount of space for the sciences, you're on the low side.

**ACM** In space and equipment as well?

**AL** That's probably the case. I'm trying to differentiate between national and regional colleges, but looking at some of the regional colleges - because I think Augustana is at present more regional than national - I think some of the schools we have worked with have more sophisticated instrumentation than Augustana currently has. In part that's a factor of dollars; in part it's a factor of gift giving. Many times when a school has highly equipped facilities there are trustees or alumni who give that instrumentation to the school. Another aspect of the technology question: I think that Augustana has a way to go in catching up on computerization. I think its moving in that direction, but I have seen schools that are ahead of Augustana.

**ACM** Given that there is catch-up that needs to be done in some areas, what part of the existing science program at the college would you say you admire, and would you expect to recommend that Augustana preserve or maintain?

**AL** I know that there's a lot of excitement about the science disciplines which faculty convey to students. There seems to be a nice rapport between the faculty and the students, and that's important to maintaining the program. In terms of

facilities I don't think there is any particular one that is not standard. And though this isn't a "facility," the college has two field station sites (Green Wing near Amboy, Ill. and Collinson Ecological Preserve in Milan, Ill.) that are quite large (420 acres and 67 acres, respectively) and provide a wonderful resource. At some point Augustana will be making much greater use of those resources.

**ACM** What then would you describe as the ideal set of science facilities for a school like Augustana that is not a huge research institution but does rely on this rapport between students and faculty?

**AL** I think it would be one or a series of interconnected facilities, so that the science departments are in reasonably close proximity. It would be a facility that allows the use of modern-day computer and multimedia technology, both in the classroom and laboratory; it would be a facility that is flexible to allow the program to change and adapt; it would be a facility that kids absolutely love to come to because it's exciting and noisy and busy and light and full of activity. It would be a facility that supports the academic program and does not hinder interdisciplinary activity and the changing nature of research and science programs, and a facility that's probably more costly than the college can afford and too large to site! It would be a facility that would attract students to the college and to the departments and would also make faculty members at other colleges jealous.

**ACM** How great a discrepancy do you envision that there will be between this ideal facility and what will be possible for Augustana, given funding and other constraints?

**AL** Well, I think actually the college can come close to that ideal, with the exception of whether or not it can all be one building. It could be that over time. I think the first new facility won't be large enough to contain all of the sciences, primarily because of financial issues. So I think that the biggest constraint is whether the finances will be there to allow it all to be done at once, or whether it will need to be phased over time. But I think that the excitement, the flexi-

bility, the level of computerization, are all within reach, if the college wants to move in that direction.

Ann Boaden, Augustana College Magazine, Winter 1994

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