Interdisciplinary research, bringing together contributors from a range of fields to collaborate on broad problems, or bringing a novel perspective to a traditional subject, is the hallmark of scholarship in the 21st century. Why has it had so little impact overall on how we teach and learn? How can our colleges encourage the crossing of boundaries by our faculty and students? Answering these questions is critical for the future of liberal education in our institutions.

I spent the first 26 years of my career at a research university (the University of Chicago) and for the last nine years have been at a liberal arts college (Pomona College). My experience in the R1 world showed me the importance placed on interdisciplinary work in research and in graduate teaching. There was a flexibility that led to the formation of new research centers every year which brought together faculty members from a range of academic departments, almost always in response to external funding from grant agencies and foundations. New graduate programs were regularly created, at Chicago in the form of degree-granting "committees" which gathered faculty members from across the University. Of course, traditional departments persisted, but there was an openness to a variety of groupings, both on the intellectual side and in the allotment of space to faculty members and their research programs.

In coming to a smaller college, I expected such cross-departmental connection to become even easier. Given the smaller scale, and the ease for faculty members to make connections across the entire institution, surely interdisciplinary experiments would be easier to start and to maintain, and barriers to such exchange would be lowered. I was surprised to find that, if anything, the opposite was true. While much of what I say connects specifically to Pomona College, my contacts with other liberal arts colleges suggests that we all fall short of the ideal of those flexible interdisciplinary habits of mind that we seek, at least in principle, to convey to our students.

Why is this? First, the smaller scale of our colleges actually can reduce flexibility. If a single central person in a new interdisciplinary field is away on sabbatical, the entire program may suffer and be put on hold. Whereas at a large university it is common for one or more members of a department to have space in another building, in a small institution it is almost a matter of principle that everyone from a department should be housed together. Second, with this fixed, smaller number of faculty, it is simply harder to sustain a level of interdisciplinary work because
the same individuals are doing it all. One faculty member in our Politics Department, for example, also plays critical roles in three interdisciplinary concentrations: public policy, environmental analysis, and STS (science, technology, and society). Third, the disciplines often seem to be bound up in the local politics of fighting for and retaining faculty positions, which can be threatened if new faculty members are brought in who cross boundaries and can contribute to core teaching in more than one area. One small college I know had, at least until recently, separate departments of Spanish, French, and Italian.

But the principal reason for this lack of interdisciplinary effort at many liberal arts colleges is, in my view, the fact that most of us become more and more traditional in our mindsets as we move from research to advanced teaching to core teaching. I see this fault myself in my own teaching over a number of years. There are, of course, some noteworthy exceptions from the institutional level (St. John’s College stands out here) to the level of particular courses (courses in science for non-scientists tend to be especially open to cross-fertilization). But these are exceptions, not the general practice.

In the courses offered to satisfy concentration requirements, a look at recent college catalogs in comparison with those from 20 or 30 years ago shows a growing number of choices but, paradoxically, often less flexibility than in the past. Instead of a structure of “core plus electives” within a concentration, there are now often a series of tracks within a field, with each track specified in great detail. Many new interdisciplinary concentrations, which arose from student or faculty desires to connect disparate fields in creative ways, have evolved to become just as prescriptive as the disciplinary fields against which they began in rebellion. Are colleges giving in to the push (from students and from society) to plan everything down to the smallest detail? Do we not trust our students to make good choices within a framework that includes a large degree of flexibility?

Interdisciplinary experiments at the introductory level seem even harder to undertake and to sustain. If the lifeblood of a department is its majors, then there is an incentive for every department to create a strong, stand-alone introductory course that will attract entering students and get them to commit to further study. But is this the best approach? Could we, for example, conceive of an introductory course that might integrate sociology and anthropology? Students coming from high schools where neither subject is taught might welcome a chance to encounter both fields and understand how they connect to and differ from each other. If a substantial number of students will be taking basic courses in biology, chemistry, and physics (as is true now in all our colleges) should we consider a one- or two-year program in which
these different fields interweave with one another in a pedagogically valuable manner? Instead, while faculty and academic administrators recognize the value of interdisciplinary teaching and coursework, interdisciplinary courses often become themselves “siloed” into first-year seminar programs or core requirements created because we know it’s good for our students. Yet departmental and disciplinary silos continue to dominate the curricular landscape.

There are, of course, exceptional models of curricular or programmatic interdisciplinary education. I would mention an example from my own neighbor in Claremont, Scripps College, where the interdisciplinary humanities core is a hallmark. That program’s success and sustainability depend not only on continuing resources and careful faculty oversight, but especially on the commitment and participation of the entire faculty. There are other models, and I would be interested in hearing more from your own institutions.

Other structural and cultural impediments to interdisciplinary innovation remain just as strong as ever, in spite of many years of discussion and experimentation. Many of you are familiar with these challenges. As I mentioned above, interdisciplinary academic programs that burst forth from the clashing of disciplines themselves become, through the momentum of institutionalization, disciplines with their own professional associations, journals, jargon, and standards. Think of your programs in media studies, cultural studies, or neuroscience. Moreover, college-wide efforts to create interdisciplinary or transdisciplinary requirements or core courses can be thwarted by less-than-enthusiastic faculty struggling against the demands of their home departments and majors. Interdisciplinary teaching and research is sometimes a tough fit with promotion and tenure review. And contrary to all that we read about the need for “creative and integrative thinkers” and the tyranny of disciplinarity, graduating with an interdisciplinary major presents additional challenges in the job market or in applying to graduate schools.

All this said, I believe that liberal arts colleges may have unique opportunities for interdisciplinary innovation. While small departments and faculties can be an obstacle, they can also foster a willingness to collaborate for the purpose of building critical mass. Consortial relationships between colleges create other possibilities. In Claremont, our consortium of five undergraduate colleges and two graduate institutions lends itself to just this type of collaboration, and provides the structure for long-term viability and strength of interdisciplinary majors and departments. Intercollegiate departments and programs such as Media Studies, Africana Studies, and Environmental Analysis are successful not only because they bring what would otherwise be a small number of faculty, courses, and students on separate campuses together, but because they are refreshed and enlivened by the different approaches and
emphases on each campus. The Media Studies faculty at Pomona focus primarily on theory and analysis, but students take courses in media production at Pitzer College or Harvey Mudd College, where this is a faculty strength. A consortium also allows synergies to bubble to the surface through new majors that would not be supportable in a single college. For example, our faculty just last week approved a new 5-college undergraduate major in Late Antique and Medieval Studies, which will be housed in Classical Studies. It will draw on 17 faculty members and 47 courses in history, religion, classics, archaeology, and art history, and will offer language instruction in Arabic and Hebrew as well as Greek and Latin.

Perhaps another way around the challenges I’ve outlined is to foster interdisciplinary innovation focusing not so much on the programmatic level (by starting a new program or major or implementing a new requirement), but with an eye to the type of “outcomes” we hope our students will achieve, the kind of academic life we hope to enable for our faculty, or the habits of mind we hope to foster.

In recent years, colleges and universities in this country have been appropriately pushed by society and by students and parents to justify the investments being made in the education of students. Some of this pressure is in the direction of more “practical” courses of study, directly related to jobs that students can move into right out of college. As liberal arts colleges, we stand for a broader and deeper form of education, in which we prepare students for jobs that are rapidly changing and that may not even exist right now. But if these are our principles, we need to ensure that our product lives up to that promise.

For example, one of the goals of a liberal education is to teach students to engage with the “great problems”, those which go beyond the limits of a single discipline and which are not subject to easy answers. If we are to bring such problems into our classrooms, we need to be prepared to move outside of our disciplinary comfort zone to bring other approaches into play. This can happen through team teaching, or through individual faculty members being willing to take a chance and teach material from areas with which they are not fully conversant. Teachers need to learn from (and along side) their own students. I am fortunate to have this experience in the environmental chemistry course I teach at Pomona, where the issue of climate change brings suggestions from the class that connect to engineering, economics, and political science as well as from the core areas of chemistry that I myself know best.

Successful interdisciplinary programs have been launched with a “problem-based” approach that seeks to teach and model integrated knowledge through interdisciplinary approaches to
complex problems. For example, teams of students from across departments tackling the problem of global poverty would quickly understand the importance of not only economic analysis but cultural and historical awareness, understanding of religious worldviews, climate study, nutritional science, and more. A problem-based emphasis can involve individual courses or entire majors. Robert Sternberg, for example, argues that while problem-solving may actually be impeded by the narrow disciplinary thinking encouraged by traditional curricular requirements and structures, approaches such as interdisciplinary problem-based learning foster the kind of creative, integrated knowledge educators hold as ideal (Liberal Education 94.1, 15).

Another goal of liberal education is to teach students to become good citizens of the country and the world, who can apply critical thinking skills to help society make wise policy decisions. Here also, our faculty members serve as models for their students (as well as learning from them). Maintaining an openness to real-world applications of our disciplines, and keeping up with current policy decisions in the news, will enliven our classrooms but also challenge us to change our teaching continually. The risks associated with bringing the world into our classroom are more than compensated by the greater engagement of our students that can result.

Finally, I am interested in exploring another approach for fostering interdisciplinary learning and breaking down disciplinary silos on our campus. One of the core purposes of liberal education is to encourage the development of creativity in our students, which will serve them throughout their lives and their careers. This is done not by specifically teaching courses on “creativity”, “entrepreneurship”, or “leadership,” but by encouraging all students to develop their creative faculties through a range of courses outside their own zones of comfort. I have argued elsewhere (Liberal Education .) for the importance of integrating the creative and performing arts more centrally into the curriculum, and for the value of creativity and experiential or “embodied” learning to a liberal education. Going even further, I would venture that a visible and robust arts program can be a bridge that connects disciplines in a meaningful way, through thematic and practical experience in (art) making, design, conceptualization, and performance.

At Pomona College we are experiencing some of the possibilities of arts-focused initiatives through a new four-year program we call “Elemental Arts.” This initiative, funded—coincidentally—by the Mellon Foundation, takes one of the four classical Greek elements as an annual theme and the inspiration for study and creative activity. This year the element is water. With primary leadership from faculty in environmental analysis as well as theatre, dance, music, and studio art, the initiative also involves Pomona’s Draper Center for Community Partnerships.
Throughout the year, the initiative features symposia, film series, and lectures around the theme; theme-based arts programming such as a new play festival; dance performance, musical concerts, and arts exhibitions; and an arts-immersion course offered to first-year students. It also provides an organizational framework for connecting other happenings on campus, for example lectures on the tsunami in Japan and water resources in the California desert. I am particular proud of the community service emphasis of the elemental arts initiative. This year, Pomona College students worked with young students from the Fremont Academy in the neighboring city of Pomona to write and perform a play based on Axolotl, the Mexican Water Monster. And finally, through the initiative we are able to challenge our students by offering “ArtsInspiration” grants, which support student-initiated projects, and grants to support summer projects in the arts. What makes these grants so exciting is that they give life to student-generated ideas rooted in the goals and intended outcomes of the Mellon Elemental Arts Initiative.

As with any interdisciplinary initiative of its kind the question of sustainability arises. Long-term commitment of resources and leadership are essential, and faculty and students must feel the professional and academic support and rewards for their efforts. But of course this is true of any endeavor we undertake in higher education. Some are just more familiar or routine than others. A significant investment in the arts, and a commitment to integrate arts experience, art-making, and creativity fully into the campus environment, provide the foundation not only for vibrant and sustainable interdisciplinary work, but for the educational outcomes and goals of a liberal arts education.

As leaders of liberal arts colleges, we have a unique opportunity to model educational ideals not only through our curricular structures but through our campus environments and the nature of our communities. While interdisciplinarity has been an educational ideal for decades that presents persistent challenges, I believe that liberal arts colleges can take up those challenges with flexibility and nimbleness. Perhaps because interdisciplinarity resists the structures of institutions and traditions, it is always slightly out of our reach, it must be continually reinvented and rediscovered to retain its vibrancy and power. Liberal arts colleges may provide the best academic conditions for that invention and discovery.