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for Integrative Studies,
Western Program,
Miami University,
501 E. High Street,
Oxford, Ohio 45056-3653.
Phone: 513-529-2659
Fax: 513-529-5849
E-mail Bill Newell:
newellwh@muohio.edu
E-mail Phyllis Cox:
coxpa@muohio.edu

Find the AIS Newsletter at
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Liberal Education, the Disciplines, and IDS

By Cheryl Jacobsen
Provost, Loras College

The Spring 2009 issue of *Liberal Education: Liberal Education and the Disciplines*, a publication of the Association of American Colleges and Universities, offers abridged versions of six white papers on the state of the major

from working groups and learned societies of biochemistry and molecular biology, classics, economics, English or foreign languages, history, and religious studies. In introducing the issue, editor David Tritelli frames the reports, funded by the Teagle Foundation, as the most recent accounting of the disciplinary major and its relationship to the larger goals of liberal education. It is also possible to situate the most recent work on majors within a larger context of AAC&U's consistent

A REVIEW

"Liberal Education: Liberal Education and the Disciplines," AAC&U, *Liberal Education*, Spring 2009, 95(2).

focus on liberal learning, general education, pedagogies of engagement, and—most recently—access and graduation success. In that context, AAC&U has played an instrumental role through annual meetings, working conferences, and key initiatives in building a consensus that "specific liberal learning outcomes are essential for all college students, regardless of their major." As a corollary, the AAC&U also identifies a shift to new curricular models "that focus on students' cumulative and integrative learning across the entire curriculum" that impacts the major (*Liberal Education*, 2009, p. 4).

The Association's advocacy of curricular and institutional changes—a New Academy for the 21st century—can be tracked through its major foci and publications over the last 10 years, *Greater Expectations: The Commitment to Quality as a Nation Goes to College* (2002), *Liberal Education Outcomes: A Preliminary Report on Achievement in College* (2005), and *College Learning for the New Global Century*:

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Interdisciplinarity in Undergraduate Education in Australia

By Lorraine Marshall
Contributing Editor, *International Perspectives*
Associate Professor, Murdoch University
L.Marshall@murdoch.edu.au

In Australia, interdisciplinary pedagogy has been strongly influenced by the nature of the higher education system and the pre-eminence given the disciplines for research and for learning and teaching in national funding. However, global trends, especially the economic constraints on universities, have led to curriculum change which in turn has led to increased breadth in the undergraduate education in some universities.

1. The Australian system and context

Australia, with a population of 22 million, has 37 government-funded universities and three

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private universities. Many of these universities have multiple campuses. All are federally funded for research and teaching and all are under a unified national system. In spite of this, there are marked differences between the universities, with 20 of the 37 aligned into three separate 'coalitions' that emphasise their common aims. The historical background and context of each institution has strongly influenced the prevalence of and their approach to interdisciplinarity.

For international audiences, it is worth noting that Australian universities offer three-year bachelor degrees, with an additional year or two years for most professional degrees and honours. A three-

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A Report for Liberal Education & America's Promise (2007).

Two additional sources, part of a series on *The Academy in Transition*, are important to understanding AAC&U's positioning of interdisciplinary work and definition of "integrative learning": Julie Thompson Klein's *Mapping Interdisciplinary Studies* (1999) and Mary Taylor Huber and Pat Hutchings' *Integrative Learning: Mapping the Terrain* (2004).

Within the larger discussion of the evolving educational environment, the Association's focus on liberal arts and sciences majors dates to the late 1980s and a three-year project published in 1990 as *Liberal Learning and the Arts and Sciences Major*. At that time, the Ford Foundation along with the AAC (predecessor to the AAC&U) and the support of a FIPSE grant engaged 12 learned societies in reviews of "the major." Project participants represented biology, economics, history, interdisciplinary studies, mathematics, philosophy, physics, political science, psychology, religion, sociology, and women's studies.

The first of those earlier volumes, *The Challenge of Connected Learning*, and the second volume, *Reports from the Field*, explore a problem raised earlier in, *Integrity in the College Curriculum: A Report to the Academic Community* (1985): namely, that undergraduate majors are collections of courses without depth or meaningful organization. Accordingly, the problem—"challenge"—of the major is that "it often delivers too much knowledge with too little attention to how that knowledge is being created.... [and] ignores questions about relationships between various ways of knowing, and between what students have learned and their lives beyond the academy" (*Challenge*, 1991, p. 20). Embedded in the observation

are interdisciplinary and integrative elements believed to be essential elements of liberal learning.

At this juncture in the developing conversation around liberal learning, the elements are characterized as "connected learning": "relationships between various ways of knowing" (the interdisciplinary echo) and "between what students have learned and their lives beyond the academy" (the opening motif of AAC&U's definition of integration) (*Challenge*, 1991, pp. 20, 28). Of the "promising practices" that are included in the *Connected Learning* volume, at least half include curricular designs to integrate learning within the major (foundation courses, capstones, senior experiences) or to engage in cross- or interdisciplinary work (topics courses, clustered or parallel disciplinary courses, and thematic or theory courses within interdisciplinary studies).

The second volume of *Liberal Learning and the Arts and Sciences Major: Reports from the Fields* includes disciplinary responses to the charge to consider the major in the context of broad educational goals. The first liberal learning goal harkens back to the criticism leveled at disciplinary majors—need for coherence. Since "study-in-depth" is integral to liberal learning and can be achieved only by careful attention to scope and sequence of courses, faculties must become more intentional about the structure of the major, education in the field's modes of inquiry and argumentation, and the relation of the major to other parts of the curriculum. Connected learning—or students' competence in making connections—is the second of the two liberal learning goals; it includes both learning at "the intersection of disciplinary approaches" and engagement with the "significant questions in the world beyond the classroom" (*Reports*, 1990, p. 4). Finally, several

reports briefly address the growing diversity among students—but as an arena for more attention and work. In the 12 reports, the disciplinary depth, scope, sequence concerns predominate, more strongly for some disciplines than others.

History, mathematics, philosophy, political science, psychology, and sociology make some variant of the claim that the major depends on course work from other disciplines or has integrative academic work as an expectation for learning in the field. Mathematics argues that cross-disciplinary connections are "inherent" in the field which is what "gives mathematics its power...and reveals its beauty" (*Reports*, 1990, p. 85). Philosophy claims an identity as a "metadiscipline"; political science sees in its "amorphous conceptualization" opportunities for improved sequential learning but also rationale for requirements in related social science fields (*Reports*, 1990, pp. 135, 141). History, however, makes the strongest claim to connected learning—at the content, skills, and organizational levels. The discipline "incorporates the essential elements of liberal learning" (critical thinking, communication skills, ethics, and "appreciation of contexts and traditions"). It develops transferable skills for other studies and "all aspects of their lives and work" while "giving open and honest attention" to diversity and "world-wide interdependence" (*Reports*, 1990, pp. 44-47).

In contrast, two of the disciplinary reports are less responsive to the call for connected learning. Authors of the biology report note that the discipline's curriculum is relatively stable for three decades, but that improvements need to be made in emphasis on scientific and critical thinking, laboratory and field experiences, and openness to women and non-science students. There is a brief nod to assessment and advising—and then an admission that the life sciences must overcome any "negative picture of the general education program" and avoid "limiting

the potential for intellectual growth” of students (*Reports*, 1990, p. 21). General education, in this construction, takes on an identity akin to “the other”: other than integration within the sciences, other than depth, other than majors, other than disciplinarity. In identifying the purposes of the economics major, the authors point to teaching students to “think like an economist” and the widespread agreement about the structure and content of the major. The discipline’s methodology also is identified as an

To the call for both breadth and depth in liberal learning, as well as in the majors, interdisciplinary studies adds a third essential element of “synthesis” ...

obstacle to fostering students’ “capacity to interact with other disciplines using a broader mind set” (*Reports*, 1990, p. 31). Recommendations for changes in economics include more active-learning—economic laboratories, simulations, independent research—and more contextual studies, at least within the social sciences and area studies.

Two interdisciplinary areas—interdisciplinary studies and women’s studies—are included in *Reports from the Field*, reinforcing claims that interdisciplinary majors, programs, centers and research are prominent academic responses to the growth of knowledge and blurring of historic disciplinary boundaries. The two discussions, not surprisingly, are noticeably different from other reports. Women’s studies identifies its insistence on “interdisciplinary flexibility and reflexivity...by asserting obligations to a self-conscious critique of the politics of knowledge” and by maintaining an “unusually intense dialogue with other departments” (*Reports*, 1990, pp. 210, 213). The chapter on interdisciplinary studies lays out a rationale which can be traced through nearly all of the contemporary discussion of interdisciplinary theory, teaching,

and scholarship. The writers point to a “sense of urgency” about the need for interdisciplinary work arising from the complexities of life and knowledge, the phenomena of boundary work between disciplines, and the need for collaboration that brings disciplinary perspectives and knowledge together. To the call for both breadth and depth in liberal learning, as well as in the majors, interdisciplinary studies adds a third essential element of “synthesis”: the ability to “apply integrative skills in

order to differentiate and compare different disciplinary perspectives, to clarify how those perspectives relate to the core problem or question and to devise a resolution based upon the holistic interaction of the various factors and forces involved” (*Reports*, 1990, p. 65).

In the interim between the review of disciplinary majors in the 1980s-90s and the white papers published recently with AAC&U and Teagle Foundation support, the AAC&U promoted dialogue around liberal learning outcomes, advocated for increased access to and success in higher education, and defined and situated integrative learning as the curricular model for a “practical” and engaged liberal education that unites arts and sciences disciplines and professional fields, classroom academic learning and real world experiential learning. Early attention to interdisciplinarity resulted in AAC&U’s publication of Julie Thompson Klein’s *Mapping Interdisciplinary Studies* (1999). Part of a series on the evolving academy, *Mapping* documents the breadth of interdisciplinary interests and structures. Klein points to a shift from an emphasis on discipline-depth to images—and work—of boundary

crossing and cross-fertilization. From that starting point, Klein surveys the landscape of the professional literature, relatively widely-accepted definitions, programs, interdisciplinary fields, and general education manifestations of interdisciplinary approaches. Within that landscape, integration—or synthesis—is clearly identified as a process for achieving a holistic or new knowledge paradigm.

While the AAC&U understanding of interdisciplinarity parallels the definitions in Klein and others’ work, the Association sees integration in a different way. A “Statement on Integrative Learning,” in *Integrative Learning: Mapping the Terrain* (2004) clarifies the term:

Integrative learning comes in many varieties: connecting skills and knowledge from multiple sources and experiences; applying theory to practice...; utilizing diverse and even contradictory points of view; and, understanding issues and positions contextually. Significant knowledge within individual disciplines serves as the foundation, but integrative learning goes beyond academic boundaries. Indeed, integrative experiences often occur as learners address real-world problems, unscripted and sufficiently broad to require multiple areas of knowledge and multiple modes of inquiry, offering multiple solutions and benefitting from multiple perspectives (Huber & Hutchings, 2004, p. Appendix).

Based on their definition of integrative learning, the AAC&U advocates for a curricular model that privileges reflection as can be found in portfolios, application as in service or community-based learning, learning communities, and intentional links between liberal learning and vocations. That it

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also signals a repositioning and redefinition of “interdisciplinarity” and “integration”—moving the former under the umbrella of latter—is clear to those of us who have concentrated on interdisciplinarity. From this definitional beginning, the AAC&U weaves several of its concerns into a call for the 21st century New Academy that, among other things, “ends the traditional, artificial distinctions between liberal learning and practical education” (*Greater Expectations*, 2002, p. xii).

It is in this context that the AAC&U and Teagle Foundation revisit “the major.” Teagle president, W. Robert Connor, in his foreword to the special issue *Liberal Education and the Disciplines* (2009), references the impact of the AAC&U’s work in identifying essential learning outcomes for all of higher education. Developed over time and presented in several publications, the list includes knowledge of human cultures and the physical and natural world, intellectual and practical skills, personal and social responsibility, and integrative learning. Integrative learning is further defined as “synthesis and advanced accomplishment across general and specialized studies” and is “demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems” (*College Learning for the New Global Century, Executive Summary*, 2007, p.3). Most of the white papers funded by the Teagle Foundation reference the AAC&U outcomes, although they were not directly part of the charge to revisit the relationship between the undergraduate major and liberal education. This is in contrast to the charge to address connected learning that was part of the earlier liberal learning and the majors project.

Across the six white papers—

biochemistry and molecular biology, classics, economics, English or foreign language, history, and religious studies—authors pointed to the centrality of critical thinking skills, active learning pedagogies, the knowledge explosion, and the challenge of meaningful assessment. Some, especially economics, raise the specter of the structures of higher education—teaching versus research focus, departmental organization, tenure and promotion expectations, graduate education—as impediments to the broad goals of liberal learning. Almost all speak to the inclusion of or need for cross-, multi-, or interdisciplinary elements or awareness within disciplinary majors—as if the assertions require little explanation or rationale.

Two disciplinary areas which participated in both the Ford/FIPSE- and Teagle-funded reviews of the major, history and religion continue their claims on the central roles and multidisciplinary approaches they share with liberal learning, connected learning, and diversity issues. Within history programs, a common goal is to nurture students’ “liberal and civic capacities” and cultivate the “analytical imperative to step outside oneself” (National History Center, 2008, pp. 2, 4). Prepared by the National History Center Working Group, the authors conclude—in ways similar to their predecessors in *Reports from the Field*—that history is “inherently...a multidisciplinary field and one in which inquiry begins with the problem and the historical context, not the discipline or dominant theory” and “places a premium on the capacity for synthesis.” There is still room for more attention to “locating history in relation to other disciplines, and in relating to the ‘historical turn’ in other humanities and social sciences disciplines” (National History Center, 2008, pp. 2, 4, 6, 15). Although the white paper does not reference any specific initiatives, the conception of liberal learning is clearly in keeping with AAC&U liberal learning

outcomes in the discussion of skills in critical thinking, communication, and global awareness. As is true for other disciplinary reports, the history white paper points to needs for improved pedagogy and incorporation of learning theory findings, assessment, use of information technology, and graduate training.

In its review of the major, the American Academy of Religion situates the religious studies discipline in a post-9/11 world and in response to AAC&U’s *College Learning for the New Global Century* (2008). In these contexts, the claim that there is a “new appreciation of the importance of knowledge about religion...and a vivid awareness of the dangers that emerge when we fail to recognize religion as a potent source of motivation and behavior” (American Academy of Religion, 2008, p. 21) is indisputable. Flux in the major is associated with its growth outside of liberal arts and denominational institutions and in non-Western, non-Christian studies. The white paper also cites emerging subfields and interdisciplinary emphases as part of the evolving major. What is not in flux is religious studies’ decades-long focus on intercultural learning, engagement of big questions, critical thinking, moral reasoning, and applications in global contexts. It is somewhat ironic that the contemporary religious studies discipline must now work to distinguish its major from related majors in theology, history, philosophy, sociology, and classics.

The other two disciplines that participated in both reviews of the major vary more widely from the original reports in their emphasis on liberal or integrative learning as well as from the other disciplines included in the Teagle project. For example, the American Society for Biochemistry and Molecular Biology (ASBMB) indicates that in its consideration of “the relationship of a hierarchical, interdisciplinary science major...

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NAC&U: Promoting and Sharing Approaches to Integration

An Interview with Lynette Robinson, Executive Director of the New American Colleges and Universities

By Francine Navakas
Contributing Editor, *Focus on Innovation*
Bramsen Professor in the Humanities
and Associate Academic Dean
North Central College
fgnavakas@noctrl.edu

Q. *What is NAC&U?*

A. It is a relatively new consortium (15 years old!) of 20 selective, independent institutions that come together to explore ways to promote and share approaches to the innovative integration of liberal education, professional studies, and civic engagement.

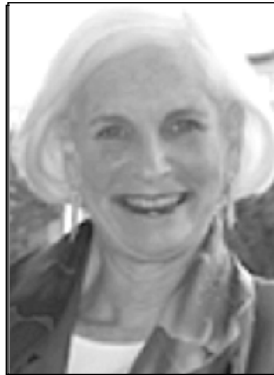
What makes these efforts somewhat distinctive is the setting in which we work—comprehensive, mid-sized institutions with both professional and liberal arts and science programs at both the undergraduate and graduate levels, and the commitment of campus leadership to make integration part of the institution's mission. The operative words are that we are intentionally *working toward* the goal of integration, realizing there is always more work to be done.

Q. *What/who were some of the major influences on the organization's decision to feature integration as one of its defining characteristics at the time of its founding?*

A. There were many founding visionaries, several who continue to be active in NAC&U today. Two key inspirations were the Provost at the University of Redlands, Frank F. Wong, and Ernest L. Boyer, former President of the Carnegie Foundation for the Advancement of Teaching. In 1994, they, along with Alexander Astin, met with a study group of administrators from several comprehensive institutions to discuss the role that these institutions played in the higher education landscape (Wong playfully

called these colleges the “ugly duckling of higher education”). Before his death in 1995, Wong drew an analogy to the health care industry in decrying the hazards of the “disconnected specialization” among university faculty. He characterized the faculty ideal as that of the “primary care professor” who focused holistically on student learning. Boyer saw potential in the legacy of the “strong American hybrid” and called for a New American College, an “integrative institution,” one that intentionally drew connections across the institution: theory with practice, liberal with professional education, scholarship with teaching, education with service, curriculum with co-curriculum, campus with community and the larger world. (*The Chronicle of Higher Education*, March 9, 1994, A18). His *New American College* would restore the tradition of higher education service to scholarship and society that he associated with these classic 19th century models of post-secondary education. Astin contributed the notion of “talent development” to the emerging concept of the New American College, arguing that institutional excellence should be measured by its educational outcomes, not by its resources alone. Our institutions saw themselves in this description, and the consortium was created in 1995.

Q. *The term “experimental laboratory” has sometimes been used to describe the intellectual and physical space in which integrative or interdisciplinary work comes to fruition on NAC&U campuses because their size,*



Lynette Robinson

character, and aspirations naturally bring into close proximity disparate areas of study, including liberal arts and professional studies. Could you identify for our readers several examples of some of the more promising innovations in integrative inquiry/studies emerging from particular colleges or universities?
A. There are exciting interdisciplinary

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programs throughout our consortium that bridge professional and liberal arts and sciences from innovative first year seminars and living-learning courses, to integrative seminars in the junior and senior year. Here are only a few examples of how various campuses have incorporated *and supported* interdisciplinarity:

- At Arcadia University, all students take two University Seminars, interdisciplinary courses, often linking liberal arts and sciences and an applied field: science and philosophy come together in a study of bioethics; geology and photography provides a distinctive opportunity to view and interpret the natural world in creative ways; global citizenship draws on politics, sociology, and economics to help students consider the meanings of collective engagement in the world.
- Drury University tenures faculty in its interdisciplinary general education program, Global Perspectives 21, which synthesizes the perspectives and insights of many disciplines into a coherent understanding of the world, its peoples and future possibilities. One of the learning outcomes for all students is to be able to apply disciplinary, multi-

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disciplinary, and interdisciplinary models of analysis to contemporary world issues. There is a campus-wide interdisciplinary theme each year. For 2010-11 it is *The Persistence of Memory: Perspectives on the Past*.

- Wagner College's *Wagner Plan* structures three learning communities that all students take during the course of their Wagner education, two of which are interdisciplinary programs that link liberal arts and professional program faculty in examining a common theme. Faculty from Nursing, Business and Education pair with colleagues from the liberal arts. All also include some type of community service. Faculty who participate for a defined amount of time are given released time to work on scholarship or research, an important incentive and opportunity for young faculty on a tenure track.
- The International Business and Global Studies Minor at Valparaiso University brings together a variety of fields within business study as well as foreign languages, history, political science, and geography, students gain perspective on the interdependent global environment that characterizes today's business world.
- The IBase program at the University of Evansville provides arts and sciences students with a 12-credit, educational and hands-on business experience, culminating in a Business Fundamentals Certificate.

Q. Especially at a time when many institutions struggle to support or retain interdisciplinary departments or programs, what might you say

explains the continuing commitments among NAC&U schools?

A. Member institutions are investing significant time in realizing the ideal of "deep partnerships" both within and across institutions in such a way as to maintain the viability of liberal education into the future. More locally, many of the interdisciplinary initiatives have emerged in the form of best practices in general education and in the form of interdisciplinary programs which respond to the need for professionals who can work in multi-disciplinary settings to tackle such complex problems as sustainability, hunger, or brain function. Moreover, there have been secondary payoffs for some colleges and universities in faculty development, faculty scholarship, the governance process, and in forging a more intentional learning community as faculty become more directly acquainted with the work of their colleagues and more trusting of the potential for joint ventures.

Q. What kind of organizational structure/leadership has characterized the institutions who have been successful in promoting integrative/interdisciplinary learning?

A. A key feature of the NAC&U mission is aspiring to achieve integration across institutional boundaries by doing more than just lip service to communication but enlisting creative approaches to integration from many staff, administrators, and faculty who play a role in student learning. The Summer Institute, for example, with its emphasis on communication and problem-solving across campus roles and between institutions, is unique in its practice of bringing such campus leaders as presidents, provosts, enrollment management, and chief financial officers into conversation with junior and senior faculty from an array of departments and professional schools, and with others who might never find themselves in professional conference settings with each other—for example,

directors of libraries, sponsored programs, communication and marketing offices, or residence life.

Q. How did you personally/ professionally become interested in questions of integration and interdisciplinarity (early in your career)?

A. As a student at Earlham College in the late 1960s, I was chosen to be "tutorial fellow" in an interdisciplinary freshman year program, called Program II, where students took all their courses their first term within an interdisciplinary program taught by three faculty from various disciplines. It was my nascent experience into the power of looking at common questions and issues from several different disciplines. NAC&U takes that even further than a pure liberal arts college can, by integrating liberal arts and sciences with professional studies, and applying that to real world situations, though internships and community service.

Q. Resources you'd recommend?

A. Check out the NAC&U website (<http://www.newamericancolleges.org>) for a selected bibliography of foundational texts and current scholarship on integrative higher education and for additional information about NAC&U. Some especially relevant voices today, in addition to AIS and Julie Thompson Klein's recent *Creating Interdisciplinary Campus Cultures (2010)*, have been Lee S. Shulman, Carnegie Foundation for the Advance of Teaching, who coined the term "professing the liberal arts" to underscore the two-way nature of contributions of liberal arts and professional programs to each other (in Orrill, *Education and Democracy*, 1997), AAC&U President Carol Geary Schneider, who called for "practical liberal learning" in the AAC&U's national report, *Greater Expectations* (2003), and NASPA's *Learning Reconsidered* (2004), encouraging collaboration between academic and student affairs. ■

2010 AIS Conference Focuses on Ethics, Sustainability

Kate Callen
The Center for Ethics in Science
and Technology

The Center for Ethics in Science and Technology is co-sponsoring this year's conference of the Association for Integrative Studies (AIS) in San Diego from Thursday, October 7, through Sunday, October 10. San Diego State University is the host university through its School of Public Affairs, Center for Regional Sustainability and Division of Undergraduate Studies.

The 2010 conference theme is "Interdisciplinary Approaches to Integrating Ethics and Sustainability." The event will take place at the Kona Kai Resort.

On Wednesday afternoon, October 6, an AIS-Ethics Center preconference workshop will take place at the Reuben H. Fleet Science Center. Delegates will

attend a briefing on the history and activities of the Ethics Center, and they will be special guests at the center's October "Exploring Ethics" forum on ethics and sustainability.

The Saturday keynote speaker will be Naomi Oreskes, a leading expert on the history of science, who is a professor of history and Science at UC San Diego. Oreskes will present on "Ethics, Climate and Disinformation: How Should an Interdisciplinary Respond?" She will be introduced by Ethics Center Co-Director Michael Kalichman.

Stuart Henry, Co-Director of the Ethics Center, is the AIS Conference Chair. He believes that AIS and the Center share a core principle that critical global challenges like sustainability must be addressed by harnessing the physical sciences, the biological sciences, the social

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sciences, and the humanities.

"People often think that sustainability is about science, technology and conserving energy," he said. "It is actually about caring for our future, and caring for the people who will follow us on the planet. It is about building relationships for a future that does not depend on using up resources in the present. Its ethical challenge is to think about intergenerational connections and to care about the effects of our actions on others, not just ourselves. I can't think of anything more ethical than that."

For more information, visit the AIS website: www.muohio.edu/ais/

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AIS Partners with AAC&U for Conference on Undergraduate Research

"Creativity, Inquiry, and Discovery: Undergraduate Research In and Across the Disciplines" is the theme of the Association of American Colleges and Universities (AAC&U) Network for Academic Renewal conference November 11-13, 2010, in Durham, North Carolina. The Association for Integrative Studies (AIS) is one of three academic partners for the conference. The other two are the Council on Undergraduate Research and PKAL: Project Kaleidoscope.

The conference will showcase promising models of undergraduate research. Thematic tracks include: defining and assessing undergraduate research and creative practice; faculty roles and rewards; mapping research preparation and practice in and across the disciplines; and implementing, scaling-up, and sustaining programs institution-wide.



AIS will sponsor two sessions: a Thursday pre-conference workshop, "Developing and Assessing Interdisciplinary Research," with AIS Board President Karen Moranski, University of Illinois at Springfield, and AIS Board members Allen Repko, University of Texas at Arlington, and Rick Szostak, University of Alberta; and a Saturday session on "Guiding Students to Perform Interdisciplinary Research," with AIS Executive Director William Newell, Miami University, and Repko and Szostak. For more information or to register for the conference, go to the AAC&U website, www.aacu.org.

AGLS Celebrates 50th Year

The Association for General and Liberal Studies (AGLS) will hold its 50th Annual Conference October 7-9, 2010, in Austin, Texas. St. Edwards University and Austin Community College are the co-hosts. The theme is "Meeting Current Challenges to Create Future Opportunities: AGLS at 50." For more information, go to the AGLS website, <http://web.oxford.emory.edu/AGLS>.

AGLSP 2010 Conference in Dallas

The Association for Graduate Liberal Studies Programs (AGLSP) will hold its 2010 conference October 7-9, 2010, in Dallas, Texas, hosted by the Graduate Liberal Studies Program at Southern Methodist University. The theme is "The Transformation of the 21st Century City." More information can be found on the AGLSP website, www.aglsp.org.

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Introducing a New Column Dedicated to Grad Students

I am pleased to introduce a new column for the *AIS Newsletter* dedicated to the scholarship of graduate students enrolled in interdisciplinary programs. Interdisciplinary studies, although rewarding intellectually, is often risky professionally:

Many institutions pride themselves on encouraging interdisciplinary scholarship . . . However, the reality is that it's a heck of a lot easier to have a traditional, one field identity (English, Geology, Physics, etc) than it is to create and maintain an interdisciplinary identity. . . . Departments are usually walled gardens, little islands of thought and practice that are surrounded by moats filled with sharks and patrolled by giant killer robots with instructions to kill on sight. (Watrall, 2010)

EMERGING SCHOLARS FORUM

Having been a grad student not so long ago, I can testify to the wonderful encouragement and support AIS provides for emerging interdisciplinary scholars facing these challenges. Through this column, AIS will help foster future developments in the field.

This column will grant grad students an open opportunity to present their research in progress, as well as works on diverse topics of interest to the AIS community. I have every expectation that the ideas contributed will challenge and expand the scholarship of interdisciplinarity. Our inaugural essay is by Adam Kissel, who

is finishing up his PhD in the Committee for Social Thought at the University of Chicago. Adam offers an alternative method for complex problem solving, which foregoes an emphasis on integrating disciplinary perspectives for one relying on ancient rhetorical techniques.

—James Welch IV
Contributing Editor
Emerging Scholars Forum
Assistant Professor, IDS
University of Texas at Arlington
welchj4@uta.edu

Reference

Watrall, E. (2010, April 1). Building an interdisciplinary identity in a (mostly) non-interdisciplinary academic world. (Retrieved August 24, 2010, from <http://chronicle.com/blogPost/Building-an-Interdisciplinary/23080/>)

Resolving Interdisciplinary Conflicts Using Ancient Heuristic Strategies

By Adam Kissel
University of Chicago

Resolving interdisciplinary conflicts can be difficult because the conflicting parties speak different academic dialects. Yet, the problem of incommensurability can be overcome if the parties agree to use non-disciplinary or transdisciplinary language to resolve the conflict. In conflict theory, this method can be called “reframing”; in rhetoric it is called finding “commonplaces” or *topoi*: common ground. One resource from ancient rhetoric, stasis theory, provides a method for populating that terrain.

According to stasis theory, any conflict can be characterized under a small number of headings that all parties can use to understand their disagreements and structure their arguments. In short, there are conflicts or questions of fact, definition, quality, and context. The stasis point is the

“sticking point” of disagreement on each question. The use of stasis questions originated in ancient law, which provides an easy way to understand how they work. In a murder trial, for instance, the opponents need to resolve just four kinds of questions: (1) Did he do it? (2) Was it murder? (3) Was it justified? (4) Are we following the rules for trials of this sort?

When an interdisciplinary team begins to work on an interdisciplinary problem, sometimes it makes sense to think of the problem in terms of disciplines. Give the physics part to the physicists; give the engineering part to the engineers. For more complex problems, however, disciplinary boundaries could be more of a hindrance than a help. Even if it were obvious which parts of the problem to assign to each discipline, the team eventually must reassemble and integrate the partial solutions. Yet, who has the transdisciplinary wisdom to put the

disciplinary pieces back together?

When a complex problem is divided in a non-disciplinary way, however, the team can more effectively work together, with individuals using specialized knowledge when necessary, while the group is able to utilize collective wisdom because the different parts of the problem are accessible to all. Instead of dealing with the difficult issue of how to integrate disciplinary perspectives, this strategy asks each member of the interdisciplinary team to examine the problem with a fresh eye.

In taking this fresh perspective, an interdisciplinary team still needs to carve the problem it is working on into manageable pieces. Again, ancient strategies of analysis can provide a reasonably good method for dividing up the problem. If the topics provided by stasis theory (facts, definitions, qualities, contexts) seem badly suited to the particular problem, other sets of categories are available. Aristotle’s

“ten categories” or four “scientific questions” in his philosophical works, or Cicero’s four “rhetorical issues,” provide good alternatives because each method of division produces (a) a manageably small number of (b) non-disciplinary topics for investigation that (c) are reasonably comprehensive.¹ It is important for the team to develop these topics under a reasonably comprehensive system like Aristotle’s or Cicero’s so that no important part of the problem is left out.

Let us take the design of a college’s core curriculum as an example. The rough-and-ready way to revise a multidisciplinary curriculum is to have turf-war debates after which the college adds a requirement here and takes one away there, discipline by discipline. A more thoughtful, comprehensive, and ultimately more satisfying and defensible method, however, is to treat disciplines and course requirements holistically.

That is, choosing to divide the problem using a “four causes” approach (to borrow another one of Aristotle’s heuristics),² the team could find *topoi* in the basic form of college-level education (the change of less-educated people into more-educated people), its materials (subject areas, courses, teachers, students, books), the means of achieving it (teaching, studying), and its aims (the educated person, following the college’s educational mission).

Alternatively, using the traditional stasis questions as the strategy of analysis, the team could examine the facts (e.g., What is the existing curriculum? What are the resources we have to work with?), definitions (What is a “course” or a “teacher” or a “student?”), quality (What counts as a college-level course? What counts as an educated adult?), and context (What language and culture, and what job market, are we sending graduates into? What is the role of teaching vs. research in the university?). Such questions reveal the true richness of this complex problem.

While some theorists put the stasis questions in a hierarchy, others take a non-linear or reciprocal approach. That is, sometimes it is preferable to know the context of something before it is defined, at other times, defining the problem should proceed contextualizing it. At any rate, different aspects of the problem are likely to be mutually reinforcing.

An interdisciplinary team thus might choose to employ another simple but effective trick that has evolved from ancient rhetoric. Today, when composition students complain that they are having trouble coming up with arguments or things to write, rhetoric instructors can turn to stasis theory to give students a method of envisioning and organizing the different kinds of conflicts and issues that might be worth examining about their subject, by setting up a simple grid.³ Once they have filled in each box, demonstrating that they have something to say under each of the stasis headings, they are ready to start organizing their essay. An interdisciplinary team could do much worse than to create and utilize such a grid.

Again, for an interdisciplinary team solving a complex problem, the point of proceeding in this way is to map out a comprehensive, neutral, non-disciplinary territory that everyone can participate in populating with ideas and arguments, not haphazardly but according to a system. Ancient rhetoric and philosophy, having evolved for centuries long before the modern hardening of disciplinary boundaries, offer a number of valuable heuristics for this purpose.

Notes

¹ Aristotle, *Categories*, in Richard McKeon, ed., *The Basic Works of Aristotle* (New York: Random House, 1941); Cicero, *De Inventione (On Invention)*.

² Aristotle, *Metaphysics*, 1013a.

³ This method appears to have been rediscovered in the 20th century, via cross-cultural linguistics work, and called “tagmemic rhetoric.” See Janice M. Lauer, *Invention in Rhetoric and Composition* (West Lafayette, Ind.: Parlor Press, 2004), 80. ■

Klein Receives 2 Awards

Former AIS President Julie Thompson Klein was the recipient of two recent awards.

On May 24, 2010, she received the

Ramamoorthy & Yeh Transdisciplinary Distinguished Achievement Award at Southwestern University in Georgetown,



Julie Thompson Klein

Texas, at the bi-annual meeting of The Academy of Transdisciplinary Learning and Advanced Studies (ATLAS). The meeting focused on transdisciplinary, transnational, and transcultural approaches to global problems. The award is given in recognition of distinguished and meritorious achievement of transdisciplinary research and education.

That same week, the president of the Association for General and Liberal Studies (AGLS) announced that the AGLS Executive Council had selected Klein to receive the Joseph Katz Award for Outstanding Leadership in General Education. The Award recognizes distinguished contributions to the practice and discourse of general and liberal education. Past winners include Carol Geary Schneider, President of the American Association of Colleagues and Universities (AAC&U), and Jerry Gaff, Senior Scholar at AAC&U.

Julie Klein is Professor of Humanities in the Department of English and Faculty Fellow in the Office for Teaching and Learning at Wayne State University in Detroit, Michigan. Her most recent book, *Creating Interdisciplinary Campus Cultures*, was co-published by Jossey Bass and AAC&U. She is currently working on a new book on “Mapping Digital Humanities,” and is lead editor of the new University of Michigan Press series *Digital Humanities@digitalculturebooks*. ■

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year degree leaves less flexibility for interdisciplinary or even multidisciplinary options. In Australia in the coming years, the ability to provide specialised undergraduate degrees will become increasingly problematic as momentum increases to implement a new national agenda. This aims to improve higher education participation for students of low socio-economic status, most of whom lack the educational background and cultural context for university. A general undergraduate education seems to answer this problem by providing a space within which students can adapt to university culture, and acquire the basic skills and knowledge required for more specialised learning.

Increased breadth in ‘sandstone’ and Go8 universities. The oldest universities in each of the six Australian states are commonly termed ‘sandstone’ universities, a name which carries connotations of prestige. These universities have tended to be structured around traditional disciplines, with little focus on interdisciplinarity in teaching and research. Five of these universities (with the exception of the University of Tasmania) and three other universities from outside this group (the Australian National University [ANU] in Canberra, Monash University in Melbourne and the University of New South Wales in Sydney) have formed a coalition called the Group of Eight (Go8) universities, which are “intensive in research and comprehensive in general and professional education”¹.

Some members of the Go8 have been involved in curriculum review and renewal designed to rationalise the undergraduate curriculum and provide a more general degree. This approach seems to emulate Liberal

Arts undergraduate programs in the US, while focusing resources on specialisation in postgraduate study.

In 2008, the University of Melbourne (one of the most prestigious Go8 universities) led this trend by introducing its generalist undergraduate degrees, commonly known as the ‘Melbourne model’. In 2012, a second Go8 member, the University of Western Australia (UWA), will follow suit with its new curriculum. The University of Melbourne now offers six ‘new generation’ undergraduate degrees whereby students complete a major in at least one discipline but are required to study outside their core area in ‘breadth subjects’, many of which are genuinely interdisciplinary. This new degree also includes knowledge transfer between students and the community and a capstone experience². Both the University of Melbourne and UWA stress the importance of disciplinary depth while providing breadth, as multi- or cross-disciplinary learning. However, in 2011, the University of Melbourne, in line with plans at UWA, will reduce the minimum requirement for breadth from a quarter to one sixth of a degree. Is the roll-back of breadth beginning before it really started?

Go8 influence. By broadening the undergraduate curriculum, these two prestigious Go8 universities have given other universities licence to follow suit. For example, in 2010, Macquarie University (one of the universities established in the 1970s), which recently gave up its membership to a coalition of similar universities and is now an aspiring Go8 member, closely followed Melbourne and introduced its new curriculum. The new curriculum reduced the number of degrees and requires that students enrol in two designated units, a People and a

² http://www.provost.unimelb.edu.au/melbourne_model/new_generation_degrees

Planet unit, one of which must be outside the students’ department and one outside their faculty.

These units are not mandated to be interdisciplinary, but they are designed to inform students about the mode of thinking in the discipline and its relevance to their field of study. A People unit is intended to help students “understand the world through learning about the challenges of modern society. A Planet unit looks at the physical environment in its fullest sense”. Towards the end of their degree, students must complete a capstone unit and, from 2012, they will also be required to complete a participation unit, involving a contribution to the community.³ Capstone units and community engagement are also features of the new Go8 undergraduate degrees.

Technical universities. A second coalition of universities is the Australian Technical Network (ATN), comprising five universities from each of the mainland states, which offer professional courses and work closely with industry and government. Most of these universities were once technical colleges, although the ATN does not include all such universities. In this group, changes to broaden the curriculum have also occurred perhaps as a result of the Go8’s influence. For example, some of these universities now require students to complete units in disciplines outside of their core field of study. Curtin University in Western Australia recently introduced its ‘triple-I’ curriculum including industry, indigenous, and international, and ‘interdisciplinarity’. This is designed to provide “students with rich educational choices beyond the narrow confines of a single discipline, including opportunities such as achieving interdisciplinary

³ See http://www.mq.edu.au/currentstudents/news/new_curriculum_faqs.html

majors, working in cross-disciplinary or interprofessional teams to solve complex problems, and completing elective units or modules".⁴

Third wave and innovative research universities. In the 1960s and 1970s, following trends in the US and the UK, Australia established several new universities in each of the Australian mainland states. During this time, a different approach was sought in higher education, and this difference was to provide an innovative, interdisciplinary and problem-oriented approach to undergraduate education. These universities became known as the 'third wave universities' (Walter, 1997). While none of them have remained interdisciplinary across the whole institution, many retain vestiges of their interdisciplinary origins. This has occurred for a number of reasons. First, they continue to provide an alternative to the traditional sandstone universities; second, they have a strong focus on innovative pedagogy; and third, dedicated staff, particularly in the smaller universities, have had a strong influence on maintaining this direction. In addition, more flexible degree structures have enabled students to study double degrees or majors in disparate areas, thus providing opportunities for a multidisciplinary education. In line with their innovative mission, these universities have often been the first to provide broad based interdisciplinary undergraduate degrees in the social sciences and humanities, in areas such as gender studies, tourism, indigenous studies and food studies, and also in liberal studies or general arts. These universities were also among the first to offer environmental science. Two such universities, which remain closely aligned, Griffith

and Murdoch, have maintained an especially strong commitment to interdisciplinarity (Frank, 2007; Marshall, 2010).

Like the Go8, five of these 'third wave' universities (La Trobe, Flinders, Deakin, Griffith and Murdoch) have formed a collaborative group with two other institutions (Newcastle University and Charles Darwin University in the Northern Territory). They are called the Innovative Research Universities (IRU), and focus on research and innovation, social inclusion and strong community connections.⁵

Based on their histories and in their rhetoric, these 'third wave' universities appear well prepared for the prospect of broadening their undergraduate degrees. In many cases, they should be more able than older universities to reconsider and re-evaluate interdisciplinarity as part of the now ubiquitous curriculum reviews.

New generation universities.

The ten universities established since 1980 are commonly called 'New Generation' universities and formed a short-lived coalition. These include most universities in rural and regional areas, and those located in low socio-economic urban areas. These universities focus on participation and equity and face the challenge of providing a three-year undergraduate education to students who lack the educational background typical of students studying at Go8 universities. This challenge is beginning to involve all universities as the national agenda to widen participation gains momentum.

Influences that have led to increased interdisciplinarity.

Australian undergraduate education is influenced by global trends, changing work patterns, student demand, an awareness of the need to address national and local problems and competition for

students between local universities. There are many instances of new degrees becoming available, many of which are more multi- than inter-disciplinary as many degrees recombine existing units from a range of disciplines. For example, the global decline in student numbers in the hard sciences is evident in Murdoch University's new BSc in Sustainable Energy Management. This course emanates from Physics, is the only such degree offered in Australia, is both popular and meets employment needs, and spans the disciplines of physics, chemistry, mathematics, economics, policy and management studies. Other examples of new, popular multi-disciplinary degrees at Murdoch University are in the School of Social Sciences and Humanities, and include Security, Terrorism and Counter Terrorism, a combination of political science, history, internet studies and international relations, and Community Development which grew as enrolments in sociology declined, is described as applied sociology, and includes politics and public policy. A growing focus on sustainability at Murdoch University is evident in the BSc in Sustainable Energy Management, in the BA or BSc in Sustainable Development and the BA in International Aid and Development, the former two are offered by the School of Sustainability. There are many examples at other universities.

A few general comments can be made about the interdisciplinary education that is provided.

1. Interdisciplinarity is marginalised across the sector, and the rhetoric of interdisciplinarity in university-wide advertising and in individual courses is stronger than the reality.
2. There appears to be some reticence to

⁴ See http://otl.curtin.edu.au/teaching_learning/attributes.cfm

⁵ See <http://www.iru.edu.au/about>

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identifying explicitly with interdisciplinarity. This is perhaps due to a belief that students need to have studied an undergraduate discipline before they can be interdisciplinary.

3. Strong pockets of interdisciplinarity do exist, with dedicated teachers running interdisciplinary courses and units. Some of these are within the environmental sciences (see below).
4. The increased breadth in undergraduate degrees and the introduction of new multi- and inter-disciplinary degrees has not been accompanied by the development of lower level and capstone units designed to enhance students' skills in integration and synthesis across disciplines, nor to develop their understanding of the integrative and interdisciplinary processes. Thus, these degrees are more multi- than interdisciplinary, and it is left to students to make the links between the disciplines.
5. A culture of reflection on interdisciplinary process is not evident, with little individual and collective reflection on such pedagogy. Many interdisciplinary teachers operate in isolation.
6. The wealth of literature on interdisciplinarity, particularly from the US, is not widely used and does not inform practice.
7. There is little discussion and agreement regarding the meaning of the relevant terms, including inter-, multi- and trans-disciplinarity.

2. Focus on disciplines in key funding bodies

Research. In most Australian universities, research tends to drive institutional priorities. Research funding through the Australian Research Council (ARC) and the Excellence in Research Australia (ERA) has become increasingly discipline based, with research funded according to defined discipline clusters. Projects are expected to be "a homogeneous body of work in a specific field", apparently for ease of categorisation. While there is an acknowledgement of "the emergence of new interdisciplinary and multidisciplinary fields of research"⁶ and some interdisciplinary (and transdisciplinary) research occurs within these categories, in reality the focus is on the advancement of knowledge in discipline clusters. The integration of knowledge between disciplines is not viewed as advancement in knowledge. Further, the Go8 universities are influential in determining national research priorities, and there is also considerable competition from other institutions to emulate their focus on research.

This discipline based research agenda across higher education has influenced the educational endeavour, and is particularly inimical to interdisciplinary pedagogy. Not only are staff interests more entrenched in disciplinary teaching, but recruitment and hiring, promotion and access to study leave have favoured those academics with strong research backgrounds and potential, thereby foregrounding a disciplinary focus.

Interestingly, the relationship between research priorities and teaching is evident in Environmental Science, which is an ARC research field and perhaps accounts for the existence of strong interdisciplinary

⁶ See <http://www.arc.gov.au/era/AN-ZSRC.htm>

undergraduate degrees in this area. Examples of this in the Go8 include the School of Integrative Systems at the University of Queensland (UQ) and the Fenner School of Environment and Society at the Australian National University (ANU). The Fenner School was established for interdisciplinary research and education on complex environment-society systems; it delivers education programs in collaboration with other areas of the university to provide maximum breadth and opportunity for students. It actively promotes interdisciplinarity and offers a Bachelor of Interdisciplinarity (Sustainability). It is the only Australian university that explicitly labels a degree 'interdisciplinary' and "draws from the complementary strengths of a number of ANU colleges in education and research for sustainability"⁷. Many of the 'third wave' universities also have long established research and teaching strengths in this area. For example, the School of Environmental Studies at Griffith University and the School of Environmental Science at Murdoch University have each maintained strong interdisciplinary identities in research and undergraduate teaching.

Teaching and learning. The Australian Learning and Teaching Council (ALTC) is the peak national government organisation dedicated to improving the student learning experience by supporting quality teaching and practice. The ALTC funds awards, fellowships and competitive grants, which are oriented to practice and not to educational research. The ALTC, like the ARC (its national research counterpart) is entrenched in the disciplines, and to date funding has only been awarded to a very small number of projects that bear any

⁷ *The Fenner School of Environment and Society: 2010 Undergraduate Handbook*, p. 10. See <http://fennerschool.anu.edu.au>

relationship to interdisciplinary or transdisciplinary pedagogy.

In 2007, a forum on Learning, Teaching and Curriculum Design funded by the Discipline Based Initiatives Scheme of the Carrick Institute (the forerunner of the ALTC), examined trans- and interdisciplinary pedagogies with the aim of fostering creative interdisciplinary engagement. The forum identified the need to clarify interdisciplinary terminology. It also recognised that the barriers to interdisciplinary pedagogy include university structures, processes and management, support for research development at the expense of curriculum development, and the power of professional accreditation bodies that drive the curriculum. The forum acknowledged the unique position of the ALTC to influence outcomes and lead in this area.

However, around the same time, the organisation changed direction and interdisciplinarity was pushed to the periphery. As a result, the promised outcomes of the forum were not forthcoming.

In 2010 the ALTC received funding from the federal government for a Learning and Teaching Academic Standards Project. Academic standards are defined as “minimum standards, expressed as the core learning outcomes that a student of any given discipline must have achieved by the time of graduation”.⁸ However, this new initiative ALTC to improve learning and teaching nationally is virtually silent on interdisciplinarity, with the term rarely mentioned in any documentation.

Due to the focus on disciplines, there is no national Australian organisation that foregrounds interdisciplinary or integrative pedagogy or research, and efforts to establish inter-institutional links have been left to individuals. While funding has been sought, it has not been provided for national studies

or surveys to ascertain the extent and approaches to interdisciplinary pedagogy across the higher education sector. Definitions of the terminologies used to define inter-, multi- and trans-disciplinarity across the sector remain unclear, with little reference to international literature. In Australia, there is little analysis of the overall situation and few published exemplars of interdisciplinary pedagogy in Australia. At the end of 2010, a forthcoming book *Interdisciplinary Higher Education: Perspectives and Practicalities* will partly redress this problem by providing a number of examples of interdisciplinary teaching in Australia.

Conclusion

What does this mean for trends in undergraduate interdisciplinary education in Australia?

1. The nature of interdisciplinary pedagogy in Australia cannot be separated from the nature of the institutions or the context in which these universities operate.
2. Curriculum renewal has been driven largely by economic factors. While renewal, in many cases, has led to a broadening of the undergraduate curriculum and has increased multidisciplinary options, it has not necessarily led to increased interdisciplinarity.
3. The focus on the disciplines of key funding bodies in research and in learning and teaching continues to marginalise interdisciplinarity.
4. Fundamentally, Australian universities are firmly locked into the disciplines, and although there are many examples of interdisciplinarity in the undergraduate curriculum, it has a low profile and is marginalised.

5. An important question is whether the Go8 will set the national agenda for increased breadth or slowly succumb to the conservative national agenda of the key funding bodies in research and teaching, which reinforces the disciplines.
6. A culture of reflection on interdisciplinary pedagogy is lacking.
7. The terms ‘interdisciplinarity’ and ‘integration’ are not widely used to describe undergraduate degrees, nor are they commonly advertised to students in this way.

In conclusion, Australian higher education is locked into a conservative discipline-focused paradigm. This largely fails to recognise that the issues facing Australia are not discipline based, and that undergraduate students need to be prepared to work across disciplines and not just within them. The 2010 federal election is unlikely to make much difference to this situation.

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⁸ See <http://www.altc.edu.au/>

Liberal Education

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to broad educational goals,” it can report that “great value is placed on undergraduate research and integrative thinking” (ASBMB, 2008, p. 3). “Integrative” in this context refers primarily to the “ability to dissect a problem into its key features” and “ability to think in an integrated manner and look at problems from different perspectives.” Surveys conducted by the ASBMB raise two concerns related to integrated work: first, that the skills of integration or integrative thinking are taught or assumed primarily in an advanced course or research experience. The explanation is a familiar one for either scientists or interdisciplinary teachers in that introductory courses are more content-driven and lay the disciplinary foundation needed for subsequent interdisciplinary work. Second, the ASBMB surveys also reveal some ambiguity among respondents who acknowledge that integrated courses may be a good idea but are administratively problematic. Nonetheless, a recommendation in the biochemistry/molecular biology white paper that comes from undergraduate faculty recognizes that “interdisciplinary fields like biochemistry are much more amenable to students from a variety of backgrounds than narrow fields. One of the goals of an interdisciplinary course should be to have the students gain an understanding of its bases in the parent disciplines. We should consider integrated, team-taught, first-year science courses for everyone, not just majors” (ASBMB, 2008, p.15). The white paper also identifies a gap between biochemistry/molecular biology major outcomes and what is proposed as essential liberal learning foci. The gap is in the category of Personal and Social Responsibility with little attention to how scientists engage with the larger community. This represents the AAC&U’s

definition of integrative learning as the means of applying knowledge to real-world engagements (Huber & Hutchings, 2004, p. 1).

The American Economic Association’s white paper approaches the question of how the major is related to liberal education goals with a wide-ranging critique of institutional structures and patterns. The argument presented is that the passion for teaching (and for a field) is the “catalyst for education” and that students will be liberally educated to the extent that they develop a passion for learning. What follows is a full discussion of the obstacles to that paradigm that arise from graduate training, the equation of breadth with superficiality, and the difficulty of finding professors with interests and passions beyond their disciplinary home. Consequently, “introductory and interdisciplinary courses taught by disciplinary-trained researchers are too often seen by professors as obligations that they must teach, rather than as the courses they want to teach, and hence the courses are not taught with the same passion as the upper level courses” (AEA, 2008, p. 5). The authors of the report conclude that there is merit in the claims for liberal learning and a revised economics major that will be “more liberal education friendly.” However, the likelihood of structural and institutional changes to support such meritorious goals is equivalent to “the chances of pigs flying” (AEA, 2008, p. 15). Nonetheless, the AEA perseveres in suggesting potential revisions: i.e., create interdisciplinary departments for both social scientists and general education faculty, revive graduate work in the more liberal or integrative areas of economics, divide the major into economics science and economics policy majors, improve pedagogy to include more interactive approaches and applications, and increase opportunities for integration—within and beyond the major.

Missing from this collection of reviews of the major are the examples of interdisciplinary programs. Although the Teagle Foundation supported a project on interdisciplinary education, that report is not included in the AAC&U’s *Liberal Education: Liberal Education and the Disciplines*. The Social Science Research Council Working Group’s white paper, “Interdisciplinary Education at Liberal Arts Institutions,” begins with the complexity of contemporary problems in its discussion of definitions of interdisciplinarity, interdisciplinary education, and interdisciplinary understanding. The existing literature devoted to theory and the survey of practices among 109 liberal arts institutions reveal parallels among interdisciplinary program goals and those associated with liberal and general education: “intellectual multiplicity, discovery-based orientation, diffuse skills, and complex and ambitious goals” (SSRC 2006, p. 3). Fundamental to interdisciplinarity, and in contrast to the AAC&U’s framing, integration is the *process* for analyzing a complex problem, event, or issue that results in a more holistic understanding, sometimes identified as synthesis, than what can be achieved through using a single disciplinary approach. It will involve critical thinking skills, breadth and appreciation of diverse types of knowledge, creative thinking, and tolerance for ambiguity, among other elements.

In contrast to other reports on the majors, the SSRC focuses a major part of its discussion on the assessment of interdisciplinary student learning. Regardless of the particular conception of interdisciplinarity or integration, assessment presents challenges which differ from content-driven disciplinary assessment but which parallel those associated with liberal learning. The questions related to integration or synthesis arise from the understanding of integration as process:

What are the key points of integration proposed in the work (i.e., where are disciplinary perspectives clearly brought together in a phrase, metaphor, interpretation, or explanation)? Are the integrations enabling students to advance their understanding effectively (e.g., to produce more comprehensive descriptions, multi-causal explanations, novel interpretations or deeper explorations that benefit from the combination of perspectives)? (SSRC, 2006, p. 18).

"Interdisciplinary Education at Liberal Arts Institutions" concludes that "interdisciplinary programs might best be considered a 'modern' strategy to achieve some of the broader goals of liberal arts education" (SSRC, 2006, p. 20). This is essentially the same claim that the AAC&U makes for integrative learning (however defined by pedagogical approaches and the goal of "practical" liberal learning).

Disappointing as it may be for those whose work is defined as interdisciplinary not to be included in *Liberal Education: Liberal Education and the Disciplines*, interdisciplinarity still holds an essential place in the AAC&U's conception of liberal and integrative learning. In her foreword to Julie Thompson Klein's *Creating Interdisciplinary Campus Cultures: A Model for Strength and Sustainability*, Carol Geary Schneider offers her own intellectual autobiography in defense of interdisciplinary learning as the "framework for pathbreaking intellectual work" (Klein, 2010, xv). She further credits Julie Thompson Klein's and other interdisciplinary scholars' important work as fundamental to the vision of 21st century liberal learning and education quality in which learning across disciplines and contexts is essential.

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AIS NEWSLETTER

CONFERENCES

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CIEL Theme 'Sustaining Innovation'

The Consortium for Innovative Environments in Learning (CIEL) will have its 2010 fall annual meeting October 22-24, 2010, at New College of Florida, Sarasota, Florida. The theme will be "Sustaining Innovation." More information can be found on the CIEL website, www.cielearn.org.

SLSA Conference in Indianapolis

The Society for Literature, Science and the Arts (SLSA) will hold its 24th annual conference October 28-31, 2010, in Indianapolis, Indiana. More

information can be found on the SLSA website, <http://litsciarts.org>.

Washington Center to meet

The Washington Center for Improving the Quality of Undergraduate Education will have its 15th annual conference November 4-6 in Bay City, Michigan. The theme is "The Transformative Power of Learning Communities." More information can be found on the Washington Center website, www.evergreen.edu/washcenter.

Links to these organizations' websites can be found on the Interdisciplinary Connections page of the AIS website, <http://www.units.muohio.edu/aisorg/Resources/connections.shtml>. ■

About AIS

The Association for Integrative Studies is an international professional association for interdisciplinary teachers, scholars, and researchers. The use of "integrative" in its name emphasizes the key feature of interdisciplinary activity, namely the integration of narrow disciplinary perspectives into a larger, more encompassing understanding of a complex issue. AIS serves as an organized professional voice and source of information on integrative approaches to the discovery, transmission, and application of knowledge. Founded in 1979, it is incorporated as a non-profit educational association in the state of Ohio.

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