



IN THIS ISSUE:

■ EMERGING SCHOLARS

A visual interpretation of interdisciplinarity.

Page 3

■ REVIEW

Handbook of Interdisciplinarity spurs insights on IDS.

Page 4

■ BIBLIOGRAPHIC ESSAY

Advancing the Networked Society.

Page 7

■ CONFERENCES

Conference proposals are due March 31.

Page 10



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E-mail Bill Newell: newellwh@muohio.edu
E-mail Phyllis Cox: coxpa@muohio.edu

Find *Integrative Pathways* at www.muohio.edu/ais/

Members may e-mail coxpa@muohio.edu for password information.

Interjecting Interdisciplinary Thinking into a Dialogue on Science and Religion

By Shirley Shultz Myers
*Director of Honors Program
and Professor of English
Gallaudet University*

Last June 16, the American Association for the Advancement of Science (AAAS)—whose mission is summed up in the website byline, “Advancing Science, Serving Society” (<http://www.aaas.org/>)—hosted a presentation entitled “Re-envisioning the Science and Religion Dialogue.” This presentation was the inaugural event organized by the new director of an AAAS program called Dialogue on Science, Ethics, and Religion (DoSER), Dr.

Jennifer Wiseman. An astrophysicist from NASA who studies the formation of stars and planetary systems, Dr. Wiseman also lectures on the excitement of science and astronomy and their relationship to religious faith. Through the invitation of Bill Newell, I attended as the official representative of AIS, which is an affiliate of AAAS. My overall impression was that, while AIS members would undoubtedly applaud dialogue between representatives of these two very different domains, science and religion, we might have wished for a greater diversity

(continued on page 2)

Remembering Beth Casey: A Tribute

By Julie Thompson Klein

Upon hearing of the death of Beth Casey on August 23rd of 2010, AIS member Stan Bailis expressed what so many thought:

“I cannot recall a single occasion of being with Beth when she did not give light to the moment—unfailingly up, smiling, bright and kind.”

Beth died from complications of a serious stroke suffered the previous week. Veterans and newcomers to the Association for Integrative Studies (AIS)



Beth A. Casey

came to know Beth over a 30-year-period. She attended her first AIS conference in 1981 and served as President in 1986-1987 and on the Editorial Board of *Issues in Integrative Studies* from 1988 until her passing. On behalf of AIS she also hosted two national conferences, worked on several national task forces, co-directed faculty development and consulting workshops, and engaged in collaborative projects with national organizations such as the College Board, the American Association for Higher Education, and on numerous occasions the Association of American Colleges and Universities (AAC&U). In addition to being a consultant across the country on general and interdisciplinary education, she wrote chapters on administering interdisciplinary programs for the books *Interdisciplinary Studies Today*, *Interdisciplinary Education in K-12 and College*, and the recently published *Oxford Handbook of*

(continued on page 14)

Dialogue on Science and Religion

(continued from page 1)

of viewpoints than occurred at this event, as well as a more structured approach to identifying and integrating issues that were raised.

Preceding the panelists' presentations, the AAAS CEO and Executive Publisher of *Science*, Alan Leshner, provided an overview of three models of the relationship of science and religion: (1) conflict; (2) contrast; and (3) contact.

[W]hile AIS members would undoubtedly applaud dialogue between representatives of these two very different domains, science and religion, we might have wished for ... a more structured approach to identifying and integrating issues that were raised.

In the first model, conflict, science and religion are not only different but competing so that only one or the other can be accepted and no common ground or resolution is possible. A prime example is Intelligent Design versus Evolution. Most proponents of evolution, if not all, are atheists. Richard Dawkins has been an outspoken representative of this model. The panelists expressed strong dislike of the conflict model because they see it as perpetuating our "confrontational society" and setting up a straw man, cartoon version of religious people. One panelist characterized adherents as "new atheists" and likened them to intolerant fundamentalists.

In the second, contrastive model, science and religion are two different but complementary domains. Leshner mentioned as exemplar the current NIH Director Francis Collins, former director of the Genome Project and geneticist noted for landmark disease gene discoveries, whom Leshner said sees science as a demonstration of God's truth. Author of the best-selling *The Language of God*:

A Scientist Presents Evidence for Belief (2006), Collins rejects Creationism and Intelligent Design, instead regarding science as an "opportunity to worship" God. And, like the panelists, Collins expresses antipathy toward the conflict model. On the dust jacket of a book by Alistair McGrath on Dawkins' atheism, Collins is quoted as saying that Dawkins "has abandoned his much-cherished rationality to embrace an embittered manifesto of

dogmatic atheist fundamentalism."

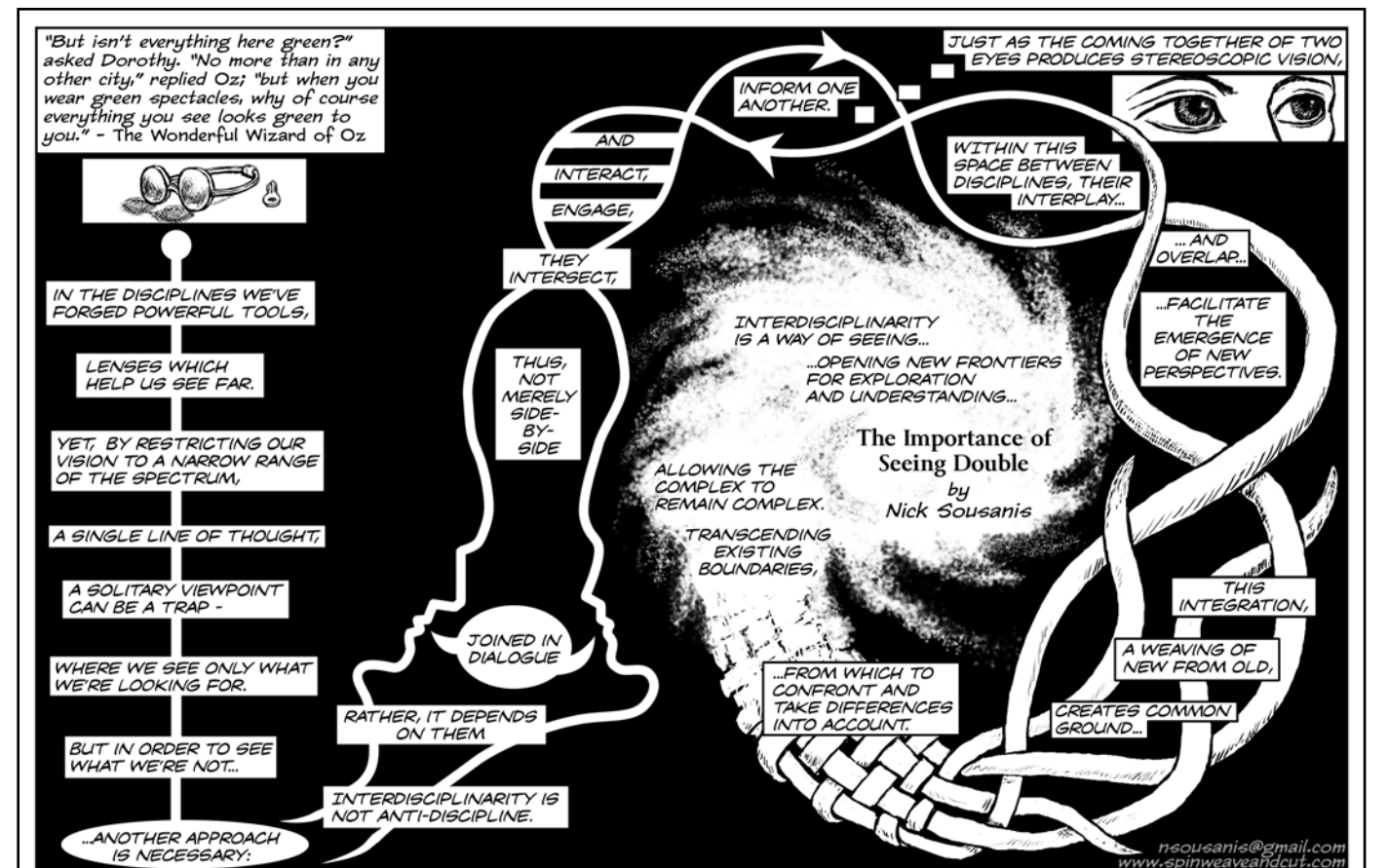
Although not mentioned at the panel, Stephen Jay Gould also represents this contrast or complementary model in his view that science deals with what the world is made of (empirical facts) while religion deals with questions of ultimate meanings or morality. These two realms have different questions, rules, and criteria for judgment. In fact, Gould sees a danger in using science for non-scientific realms—for instance, social Darwinism.

The third model, contact, posits the possibility of dialogue and common ground. It differs from the contrastive model in that the contrastive model focuses on differences while the contact model focuses on similarities, even asserting, according to *the Encyclopedia of Science and Religion*, parallels in questions, methods and concepts.

All of the panelists claimed to represent this third model, but some were more successful than others at illustrating it. The panelists included three scientists, all of whom described themselves as religious (two Christians and one Jew), and a Christian minister:

- Dr. William Phillips, part of the Joint Quantum Institute (National Institute of Standards and Technology and the University of Maryland) and a Nobel Prize winner in physics for finding ways to cool and trap atoms with laser light, professed himself to be a Methodist who attends church regularly.
- Dr. Rick Potts is a paleoanthropologist, director of the Smithsonian's Human Origins Program, and curator of the new Koch Hall of Human Origins at the Natural History museum, who did not claim any denominational affiliation but who acknowledged some sort of spirituality and a Christian orientation. He also has a book out—*What Does It Mean to be Human?*—that includes discussion of the different models of the relationship between science and religion and favors the contact model.
- Dr. Howard Smith, an astrophysicist at the Harvard-Smithsonian Center for Astrophysics, based in Cambridge, Massachusetts, and once chair of astronomy at the Smithsonian's Air and Space Museum, is a religious Jew who has studied Kabbalah, even publishing a book—*Let There Be Light: Modern Cosmology and Kabbalah, A New Conversation Between Science and Religion*.
- Claiming weekly service attendance of 2,500 people, Dr. David Anderson is a pastor of "Bridgeway Community Church," an inclusive, multicultural congregation in Columbia, Maryland. Anderson met Wiseman when they participated in a radio show about religion and science. He also hosts his own daily radio talk show.

(continued on page 12)



By Nick Sousanis
Teachers College, Columbia University

'Seeing Double': A Graphic Artist Interprets IDS

One of the advantages of interdisciplinarity is that it can be conceptualized in many ways. We academics are prone to confine scholarship to words, but words are merely an evocation of ideas, a means of moving the minds of others.

The activity of crossing disciplines necessarily involves exploring all doors of perception—image and sound, movement and rhythm, intellect and intuition, spirit and material, the abstract and the concrete. Within the synthesis of all these avenues of understanding, we interdisciplinarians experience knowledge in its widest spectrum. In this vein, I am pleased that our latest contribution to this column is a work of art by Nick Sousanis. Nick is currently pursuing a doctorate at Teachers College, Columbia University. This piece illustrates his ability to weave image and word into a synthetic understanding of the interdisciplinary approach to knowledge. It literally and figuratively draws a thread through the cognitive permutations of interdisciplinary thought, reminding us that interdisciplinarity is, foremost, a mindset that embraces a kaleidoscopic outlook. In this illustrated narrative, the synoptic passageways from linear thought, around spiraling levels of reflection, eventually coalesce into synthesis. The journey is simultaneously traveled and reflected upon; we recognize our thoughts as they sweep us away. This metacognitive awareness, the activity of knowing how we know, is expressed beautifully in the images here. And the fact that these images might evoke a multitude of interpretations by our readers, well, that's a welcome interdisciplinary inevitability.

EMERGING SCHOLARS FORUM

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

Handbook Provides Structure To Map Interdisciplinarity

By Diane Lichtenstein
Professor of English
Beloit College

Daniel Callahan reports in his chapter in *The Oxford Handbook of Interdisciplinarity*, "A Memoir of an Interdisciplinary Career," that "young applicants for jobs at the Hastings Center" feel "it is unrealistic to expect them" to know the interdisciplinary field of bioethics since "each one of the issues the Center works on is now a large research area with a huge literature" (427). I expect that those of you who are reading this issue of *Integrative Pathways* feel the same way about interdisciplinary studies generally. It is daunting to try to keep up with the publications in and about interdisciplinary fields as wide-ranging as Design and Biology, let alone with the "metadisciplinary" books and articles about interdisciplinary studies as a field.

The Oxford Handbook of Interdisciplinarity can help, not because it condenses or simplifies but because it provides a structure through which we may organize our process of mapping what in 2011 we identify as interdisciplinarity. In addition, each chapter's "References" supply the reader with extensive lists of additional relevant sources. As is true of the many other Oxford "handbooks," this volume comprises discrete, original essays. How might you approach a collection of 37 chapters? You might read it from cover to cover in order to see the "forest" of interdisciplinarity (patterns, trends, connections among the chapters), but you might also read one or two chapters at a time to see the "trees" (and thereby fill in gaps with respect to new interdisciplines and/or new approaches to interdisciplinary knowledge).

As I read through the volume, I

A REVIEW

The Oxford Handbook of Interdisciplinarity, Robert Frodeman, Ed., Julie Thompson Klein and Carl Mitcham, Associate Eds. New York: Oxford UP, 2010. 624 pp. 30 illus. ISBN 13: 978-0-19-923691-6 hardback. \$150.

found myself asking the following questions: Must interdisciplinarity be oriented toward problem-solving? Is interdisciplinarity an academic field of its own? If it is, in what stage of development might we locate it? Do authors feel compelled to review definitions and/or the history of the development of interdisciplinarity to prove their authority as interdisciplinarians? Do these reviews suggest that the "field" is relatively new (so its practitioners need to establish their individual authority because it is not clear who does have authority to speak as an interdisciplinarian?) Does the repetition of those definitions and history contribute to a field's evolution into a discipline? Can interdisciplinarity ever be a "field"? If it is not, and if it is not a methodology, then what is it? The *Handbook* will likely inspire your own questions as well as point you to provocative responses.

The Editor-in-Chief, Robert Frodeman, is the director of the Center for the Study of Interdisciplinarity at the University of North Texas. The associate editors are Julie Thompson Klein (Wayne State University) and Carl Mitcham (Colorado School of Mines). The international editorial board includes Jose Antonio Lopez Cerezo, Wolfgang Krohn, William Newell, Nancy Tuana, and Peter Weingart. As is true of the editorial board, the *Handbook's* authors are international. Many of those authors' names will be

familiar as "leading thinkers on interdisciplinary research, education, and the institutional aspects of interdisciplinarity" (OUP website). Others' names will be less familiar, but their contributions are equally thoughtful and thought provoking.

In the "Preface," Frodeman, Klein, and Mitcham report that in their proposal to Oxford University Press, they described "the goal as: to introduce a greater degree of order into the field of interdisciplinary research, education, and practice by creating a work that will become a basic reference for all future attempts at interdisciplinarity.... This handbook will offer a historical survey of attempts at interdisciplinarity, a review of successes and failures within both research and education and across the sciences and the humanities, and identify a set of best practices that will serve as the launching point for future explorations of interdisciplinarity" (viii). Because the *Handbook* absolutely meets these goals, it will function as *the* touchstone for years to come for students, teachers, researchers, and administrators who pursue interdisciplinary studies. Without a doubt, other editors would have solicited essays on different topics, devised alternative sections, and/or organized the chapters within and across those sections differently. But that is unimportant. What matters is that now we have an invaluable resource. We have new insights, new paradigms, new approaches that are intellectually compelling. As a result of my reading, I am thinking more actively about "information science" and interdisciplinary studies, for example, as well as about the complexities and challenges of interdisciplinary "peer review."

The Oxford Handbook of Interdisciplinarity complements the studies and anthologies that have been published in the past decade.

For me, it is a sequel, so to speak, to the edited volume, William Newell's *Interdisciplinarity: Essays from the Literature* (1998), in that it focuses not only on interdisciplinary science (as do several other recent anthologies) but includes essays on "philosophies" of interdisciplinarity, on institutional and administrative challenges, etc. All of the essays in the *Handbook* were written just for the volume, and all of the authors situate their work in larger contexts (such as interdisciplinary science or "systems thinking"). This volume does not aspire to replace all of the excellent scholarship of the past; rather, it builds on that scholarship. We are witnessing a process of accretion of theories, knowledge, and understanding of interdisciplinarity, and this volume provides, as Frodeman states in the "Introduction," "a picture of current efforts of knowledge production that cross or bridge disciplinary boundaries ('interdisciplinarity'), and of the growing effort to make knowledge products more pertinent to non-academic actors ('transdisciplinarity')" (xxx). He also points to the volume's heralding of "the centrality of philosophic reflection for twenty-first century society" (xxxi) and emphasizes that the volume does *not* "offer a synthesis of the disciplines, an overarching theory of interdisciplinary education, or a universal methodology of inter- or transdisciplinary research" (xxx). It *does* include "accounts of the institutional and administrative [as well as pedagogical] aspects of interdisciplinarity" (xxxii).

Frodeman asserts that "[i]nterdisciplinarity' often ... announces an absence, expressing our dissatisfaction with current modes of knowledge production." He continues, "It contains a collective unconscious of worries about the changing place of knowledge in

society, and expresses a feeling that the academy has lost its way. Excessive specialization, the lack of societal relevance, and the loss of the sense of the larger purpose of things are tokens of these concerns" (xxxii). Interdisciplinarity, as Frodeman conceptualizes it,

If someone ... picked up this book, what would that person come away thinking interdisciplinarity is? In true interdisciplinary form, the contributors provide multiple and varied responses, using diverse approaches in their essays.

not only reveals concerns about knowledge but also offers solutions: It is "a means ... toward the ends of greater insight and greater success at problem solving" and "toward the end of preserving or achieving the good life in a complex, global, rapidly innovating society" (xxxii). Perhaps for some readers, these claims endow interdisciplinarity with more power and influence than it can possibly wield. I myself am inspired by it to continue challenging academic institutions' structural rigidity.

What does the *Handbook* reveal about interdisciplinary studies now? If someone were completely ignorant and picked up this book, what would that person come away thinking interdisciplinarity is? In true interdisciplinary form, the contributors provide multiple and varied responses, using diverse approaches in their essays. Some authors refer to the state of the "field" and raise invaluable "meta" questions about how fields develop. Others provide linear histories or descriptions, while still others present what might be identified as genealogies, in Michel Foucault's sense of an interrogation of the development of a concept or practice that searches for and reveals multiple and even contradictory

histories and "truths" and raises questions about the power structures that determine those truths. A few contributors use their disciplinary perspective to raise questions about interdisciplinarity. Sarah Fredericks in "Religious Studies," for example, points to three lessons

interdisciplinarians can learn from religious studies: 1. "the dangers ... of evaluating other disciplines with the criteria of one's own and calling it a dialogue"; 2. the value of "forging terms that resonate with multiple perspectives to avoid privileging or ignoring one viewpoint"; 3. a process for linking "communities who not only have different methods, assumptions, and subjects, but also experience deep distrust or animosity toward the other based on centuries of prejudice, persecution, and power imbalances" (171). An essay such as Fredericks's reveals the richness of the *Handbook's* offerings and addresses Frodeman's "concerns" about "specialization, the lack of societal relevance, and the loss of ... the larger purpose" of academia.

As we know, defining interdisciplinarity plagues students, instructors, scholars, and even administrators. Many of the essays in the *Handbook* review definitions, while some develop their own. Klein offers numerous approaches to defining "interdisciplinarity" in chapter two, "A Taxonomy of Interdisciplinarity." Using other scholars' as well as her own concepts, she describes a variety of types such as "Encyclopedic

(continued on page 6)

Handbook

(continued from page 5)

ID," "Indiscriminate ID," and "Methodological ID." "Taxonomies," Klein reminds us, "construct the ways in which we organize knowledge and education. However, they are neither permanent nor

The function of the definitions of *interdisciplinarity*, as well as of *multidisciplinarity* and *transdisciplinarity*, emerges for me as one of the tensions in the *Handbook*.

complete and their boundaries change" (15). This meta-analysis of the ways in which we organize not just interdisciplinarity but definitions of interdisciplinarity certainly is valuable in organizing foundational concepts but also in reminding us that the *organization* of the organization of knowledge needs interrogation.

Veronica Boix Mansilla, in "Learning to Synthesize: The Development of Interdisciplinary Understanding," provides a new perspective on interdisciplinarity by focusing her attention on "interdisciplinary learners"—those who "integrate information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines to craft products, explain phenomena, or solve problems, in ways that would have been unlikely through single-disciplinary means" (289).

Several contributors imagine metaphors for interdisciplinarity. Robert Crease refers to "trading zones" (94-96). Sheila Jasanoff in "The Emergence of Science and Technology Studies" uses a "cartographic metaphor": in one map, "the disciplines are tightly lined up, one against another, as in a map of the contiguous United States"; in a second map, "as in a map of the Indonesian

archipelago, the disciplines are oddly and idiosyncratically bounded formations, haphazardly scattered across a sea of ignorance, with unexplored waters in between" (192). Jasanoff proceeds to explain how an interdiscipline forms, using these two models, and suggests that Science and

Technology Studies "is less a program of interstate highway construction among existing disciplinary states than an attempt to chart unknown territories among islands of disciplined thought in the high seas of the unknown" (193). Anne Balsamo and Carl Mitcham develop the metaphor of "shift work" in their discussion of "Interdisciplinarity in Ethics and the Ethics of Interdisciplinarity." Shift work, the authors explain, "start[s] and end[s] with the punch clock," whereas "interdisciplinary shifts from one framework to another require the on-going crossing of boundaries" (268). They add that "shift work interdisciplinarity" relies on the following "virtues": intellectual generosity, confidence, humility, flexibility, and integrity (270).

Are these definitions (and the others articulated in the *Handbook*) so varied as to leave an ignorant reader confused and skeptical about interdisciplinarity as a field or approach with any coherence or consistency? Or do the multiple definitions reveal the energetic state of a field and/or approach to knowledge and its production that celebrates not only variation but also the tensions that emerge from diverse perspectives? Are multiple definitions and approaches productive? What do they produce,

and what do they reveal about interdisciplinarity now? The function of the definitions of *interdisciplinarity*, as well as of *multidisciplinarity* and *transdisciplinarity*, emerges for me as one of the tensions in the *Handbook*. Audience is another tension about and in the *Handbook*. Is the ideal reader ignorant or an expert? Each essay does seem to have a specific answer, but the volume as a whole does not. "Biological Science" by Warren Burggren et al., seems directed at biologists who are relatively new to interdisciplinary studies, while "Deviant Interdisciplinarity," by Steve Fuller, which certainly provides pertinent contextual information, assumes knowledge of interdisciplinary theory. I also feel compelled to ask, would undergraduates find all or even most of the chapters accessible? Specifically, could seniors in a capstone course make productive use of the majority of essays? I remain unsure. And given the price of the book (\$150), it is hard to imagine an instructor asking students to purchase their own copies.

I would like to mention a "positive tension" I experienced as I read *The Oxford Handbook of Interdisciplinarity*. It is the "conversation" among chapters. Although they do not mention this overtly, it seems to me as if the editors chose to disperse, rather than cluster, essays that do, indeed, "speak to" one another. Several chapters which seem to be in dialogue with one another are Cathy Davidson's "Humanities and Technology in the Information Age," Sytse Strijbos's "Systems Thinking," and Carole Palmer's "Information Research on Interdisciplinarity," all in different sections of the book. (At least two additional essays, "Against Holism" and "A Taxonomy

(continued on page 11)

Integrating Sciences: Advancing the Networked Society

By Joan Fiscella
Contributing Editor, Bibliographic Essay
Emerita Associate Professor
University of Illinois at Chicago Library
E-mail: jbf@uic.edu

Works discussed or referred to in this column:

- Brint, Michael, Marcey, David J., & Shaw, Michael C. (Eds.). (2009). *Integrated Science: New approaches to education, a virtual roundtable*. New York: Springer Science+Business Media. ISBN 978-0-387-84852-5. \$39.95. e-ISBN: 978-0-387-84853-2 DOI 10.1007/978-0-387-84853-2
- Slaughter, Anne-Marie. America's edge: Power in the networked century. *Foreign Affairs*, 88(1), 94-113.
- Brooks, David. (2010, November 9). The crossroads nation. *New York Times*, A29.

According to Ann-Marie Slaughter, Dean of the Woodrow Wilson School of Public and International Affairs, in the 21st century power is intimately related to networking: "In this world, the measure of power is connectedness" (94). Its driving concepts are "community, collaboration and self-organization" (96). The networked model is relevant to businesses, NGOs, governments. David Brooks mentioned in a *New York Times* column, November 9, 2010, echoed Slaughter: "Building that America [the crossroads nation] means doing everything to thicken connections.... The nation with the thickest and most expansive networks will define the age."

Connectedness, too, is central to interdisciplinary education and research: connecting problems and

themes in multiple disciplines to generate deeper understanding and to bring together knowledge from multiple disciplines to investigate complex problems. Such education and research prepare citizens to function in this networked world.

Connectedness, too, is central to interdisciplinary education and research. ... Such education and research prepare citizens to function in this networked world.

Slaughter provides a context for the main work in this essay: edited by Michael Brint, et al., *Integrated Science* deals with institutional level issues and support of scientific knowledge research, specifically the possibilities and problems inherent in integrating the sciences, science and government, and science and industry. It also addresses the implications for education. The contributions of 25 active or emeritus researchers and administrators in academic, governmental or professional organizations are drawn from presentations, papers, reports, newsletters or websites, journal articles, and book chapters, dating between 1996 to 2006. The editors developed questions for the book to frame the excerpts as conversations between two or more contributors.

The key term in the contributions is "integration." Often it refers to bringing together work of the subject disciplines to solve complex problems; more often, however, it refers to integration of theory and practice, research and application, sectors of society

such as academy and industry or the academy and political or social issues. Some contributors explicitly refer to interdisciplinarity; others

BIBLIOGRAPHIC ESSAY

do not. Several subthemes weave through the contributions: 1) the role of integrative or interdisciplinary processes in constructing cutting edge or advanced knowledge in the sciences and related areas; 2) the (often uneasy) relationship between the academy and business and industry; 3) the kind of support (funding, infrastructure, organizational structure) needed to encourage and facilitate the advancement of knowledge; and 4) the role of the academy in educating students to prepare them for new discoveries and new workplace demands.

Role of interdisciplinary research to solve problems

Elias Zerhouni (Director, National Institutes of Health, 2002-2008) provides one of the more explicit discussions of the kinds of scientific issues that require interdisciplinarity. The NIH Roadmap, enacted in 2006, enabled among other things the establishment of the Interdisciplinary Research Consortia. The consortia are teams of researchers from various disciplines that work on problems in medicine that have not responded to either disciplinary or multidisciplinary approaches. Less explicit in concept but clear by example, both William Haseltine (President, Haseltine Foundation) and David Baltimore (Biology, California Institute of Technology) note the major transformation in biology in the last part of the 20th century, due to applications from information science and other sciences. Haseltine points

(continued on page 8)

BIBLIOGRAPHIC ESSAY

(continued from page 7)

to the “intersection” of material science and biology rather than an application of one discipline to another. Rita Colwell (University of Maryland, Director of the National Science Foundation, 1998-2004) characterizes contemporary science as interdisciplinary and integrative, because the important problems to investigate resist specialized approaches. The traditional disciplines still have a place, however, both for their contributions to knowledge and as the foundations of learning.

Relation between academy, industry and government

Several of the contributors stress the importance of integrating among the sectors of society. Al Gore (former Vice President of the United States) notes that a population of legislators without scientific background undercuts government support for the pursuit of science, while Bruce Alberts (President, U.S. National Academy of Sciences, 1993-2005) notes the importance of scientific findings to develop policy, worldwide, country by country. One of the ways that Zerhouni seeks to encourage working across traditional disciplinary boundaries is through Public-Private Partnerships (PPPs). While some such partnerships are a matter of cost-sharing, others are collaborations between the academy and industry to solve problems.

Other contributors are less sanguine about these integrations. James Duderstadt (President Emeritus, University of Michigan) for one, signals the complexity of academic science, industry, and government collaborating on research. The shift to commercialization of the products of research has limited the open availability of research data, thus

preventing replication and further development of new research; and it has led to conflicts of interest. Profit has become a stronger motive than public interest, and the market is driving restructuring in higher education and changing

The contributors acknowledge that the advancement of interdisciplinary or integrative science requires support. Funding through government grants, institutional support, or industry partnerships is mentioned by a number of the writers.

priorities. Stanley Aronowitz (Sociology, CUNY) mentions a study from the 1990s showing that a very high percentage of studies funded by the pharmaceutical industry gave favorable results on the drugs studied in contrast to a smaller percent based on non-industry-funded studies. Still, Steve Brint (Sociology, University of California, Riverside) acknowledges that market emphasis in higher education may be a function of low state funding for public higher education and the need for those institutions to keep pace with highly endowed private research institutions.

Kinds of support needed to support interdisciplinary advancement

The contributors acknowledge that the advancement of interdisciplinary or integrative science requires support. Funding through government grants, institutional support, or industry partnerships is mentioned by a number of the writers. Other types of changes are also necessary. Zerhouni recognizes the need for institutional structures to change in order for such approaches to succeed; thus, he proposes awarding multiple principal investigator status on grants awarded for integrative projects, developing more adequate review

strategies for interdisciplinary research proposals, and fostering public-private partnerships. Alberts, who looks at the question globally, highlights the role of professional societies. For example, he advocates providing free access

to scientific data to scientists in other countries, as the U S National Academy of Sciences does with its reports and books. (See www.nationalacademies.org [accessed January 21, 2011].) He also notes that the federally funded grant process is not set up to give awards to the most innovative work, because it is hard to neatly categorize such research. It also requires that the investigator has already done work in the area.

Interestingly enough, with all the discussion of the importance of technology and the difference it has made in the development of disciplines, only a few of the contributors identify the importance of physical spaces to support innovative work. Thomas Cech (President, Howard Hughes Medical Institute) talks about helping break down walls among disciplines by constructing buildings that bring people from different disciplines together to facilitate collaboration. Architect Robert Venturi also notes that newer buildings need to be open and flexible to adapt to changing research and changing team needs. Such buildings have to incorporate different kinds of spaces: openness for spontaneous discussion outside of labs, quiet spaces for individual work, and research space to accommodate and facilitate communication among investigators.

Changes in education to prepare for interdisciplinary work

Educating students for integrative science brings together issues raised earlier, and contributors address the need for a new approach to prepare for careers in industry, for changes in doctoral education, and the role of the master's degree. Donald Kennedy (President Emeritus, Stanford University) notes that the growth in specialized knowledge pressures educators to cover increasing amounts of complex content, thus forcing curriculum revision even at the undergraduate level. One example is engineering, where William Wulf (President Emeritus, National Academy of Engineering) argues for the need for education in multiple sciences and information technology. He laments the absence of practicing engineers contributing to the new curriculum.

The relationship between integrative sciences and careers in industry has led to a new form of master's degrees called the Professional Science Master's, prompted in part by the development of a technology- or knowledge-based economy. Graduates of these programs, which may be discipline-based or interdisciplinary, can find positions related to the sciences and also in banking, foundations, or government, according to Sheila Tobias (National Outreach Coordinator for the Professional Science Master's, 1997-2005).

Doctoral work is also changing. In biology, for example, with its changed paradigm, will follow a model similar to physics, where, according to Baltimore, there are small-scale laboratories, experimentalists working on large-scale problems and theoreticians. In particular, the theoreticians drive the experiments, and their training will be not only biology, but physics, chemistry and applied mathematics.

They will not be bound by just one institution, but will find education in institutions other than their own so that they make creative integrations. Chris Golde (Stanford University) and H. Alix Gallagher (SRI International) comment on the conditions necessary to support grad students who wish to do interdisciplinary work. The ability to identify an advisor who has done interdisciplinary research and the ability to put together a dissertation committee that can assess interdisciplinary work are essential. Institutions may have to adjust requirements that allow multi-author dissertations so that interdisciplinary research collaboration qualifies for the PhD.

In spite of its highly ranked cast of contributors, *Integrated Science* cannot be categorized as a scholarly work as such, and the reader might wonder

about the extent to which some of these insights have changed, particularly from the earliest dates. Nonetheless, the book has value: It brings together a disparate set of thinkers reflecting on key issues that affect how governments set policy, how higher education (the academy) can contribute to policy and the education of citizenry, how industry and the academy can benefit from collaboration, as well as the dangers of such collaboration, and the implications for education. Drawing from presentations or writings directed outside specialized communities, in a conversational format, suggests that the book would be a useful introduction to the issues for undergraduates or for an interested public in any field.

With thanks to Julie Thompson Klein for consulting on choice of work. ■

JOBS IN INTERDISCIPLINARY STUDIES

The Brooks College of Interdisciplinary Studies at Grand Valley State University seeks a dynamic chair for the Liberal Studies Department. This position is an exciting opportunity for a strong leader with vision and imagination to lead a rapidly expanding department that offers an individualized major on four campuses, 200+ majors in self-designed programs of study with an emphasis on high-impact, active learning that integrates multiple disciplines with community engagement.

Grand Valley State University's Frederik Meijer Honors College invites applications for two tenure-track positions at the rank of Assistant or Associate Professor, beginning Fall 2011. The Meijer Honors College offers an alternative, interdisciplinary undergraduate general education program, which encourages active learning.

Western Kentucky University is seeking two assistant professors for the Honors College. These two faculty positions are the first of a number of new hires dedicated to the Honors College. The new faculty will play an important role in developing the first track (Citizen and Self) of the College's new four-part interdisciplinary core offering.

Montclair State University's Department of Political Science and Law anticipates a tenure-track faculty line in jurisprudence for Fall 2011 at the rank of Assistant or Associate Professor. Candidates must have expertise in law, legal theory, and public policy, as well as a research agenda focusing on the relationship between law and issues in the humanities or social sciences.

Look for more information on these position openings in the Jobs in Interdisciplinary Studies section on the AIS Website, www.muohio.edu/ais.

AIS Conference 2011: Deadline for Proposals Is March 31

The deadline to submit proposals for the 33rd annual conference of the Association for Integrative Studies will be March 31, 2011. Proposals should be submitted online via the conference website, <http://gvsu.edu/aisconference/>.

The 2011 AIS conference is scheduled for October 13-16, 2011, in Grand Rapids, Michigan. Grand Valley State University's Brooks College of Interdisciplinary Studies and the Liberal Studies Department will be the hosts. Grand Valley State University has had integrative and interdisciplinary learning at the core of its mission, vision, and values since its founding 50 years ago, and members of its faculty have participated in AIS conferences since the early years of the association.



The theme of the conference is "Traditions and Trajectories: Interdisciplinarity and Integrative Learning." The conference will examine and reflect on the roots and histories of interdisciplinarity and integrative learning. Attendees will talk about the highlights and future of teaching interdisciplinary classes, share best practices in administering, sustaining, and assessing interdisciplinary programs, and discuss key theories and research about interdisciplinarity and integrative learning.

The conference committee is considering proposals for papers,

panels, workshops, roundtables, and posters that address issues in the following categories; Biographies and/or Autobiographies (involving interdisciplinarity and integrative learning, and focusing on key contributions, articles, experiences, successes, and obstacles); Institutional and Administrative Realities (examples of successful or challenge integrative practices); Sustainability and Teaching and Learning Models (best curricular, co-curricular, sustainable, and service learning designs and practices); Outcomes and Assessment; and Integrative and Interdisciplinary Theory and Research.

Judy Whipps is the conference coordinator. She can be contacted at whippsj@gvsu.edu.

CONFERENCES

'Science on FIRE' Symposium

A national symposium focusing on "Science on FIRE: Facilitating Interdisciplinary Research and Education" is scheduled for March 28-29th, 2011, in Boulder, Colorado. The symposium will be presented by the American Association for the Advancement of Science and the Colorado Initiative in Molecular Biotechnology. The FIRE Symposium will convene many of the nation's leaders in interdisciplinary science, with a primary focus on the biosciences, to define best practices to support current and future interdisciplinary research and education programs across the country. Topics include organizational design and management of interdisciplinary programs, mutual implications of interdisciplinary and disciplinary research, and interdisciplinary education. Proceedings from the FIRE Symposium will be made freely available in the form of A

Practical Guide to the Organization of Interdisciplinary Research and Education Programs. Registration and other information can be found on the symposium website, <http://firesymposium.colorado.edu>.

SciTS Conference To Meet

Registrations can still be made for the second annual International Science of Team Science (SciTS) Conference, which is scheduled April 11-14, 2011, at the Wyndham Chicago. The conference is a forum to enhance understanding of how best to engage in team science to meet society's needs, an important conduit for translating empirical findings about team science into evidence-based effective practices for scientific teams and funders of team science—a bridge between the praxis and science of team science. The conference aims to serve as a point of convergence for team science practitioners and investigators studying

science teams, to engage funding agencies to provide guidance on developing and managing team science initiatives, and to afford data providers and analytics developers insight into team tracking and analysis needs. More information can be found on the conference website, <http://scienceofteams.cornell.edu/scits-2011-conference>.

May 1 Deadline for AGLSP Proposals

"Source of Life and Strife: Multidisciplinary Perspectives on Water" is the theme of the 2011 Annual Conference of the Association of Graduate Liberal Studies Programs. The conference is scheduled for October 13-15, 2011, at Saratoga Springs, New York. It will be hosted by the Master of Arts in Liberal Studies Program at Skidmore College. The deadline to submit proposals is May 1. More information can be found on the AGLSP Website, www.aglsp.org.

AGLS Conference October 6-8

The Association for General and Liberal Studies has scheduled its 2011 national conference for October 6-8 at the Hyatt Regency in Miami, Florida. Miami Dade College will be the host for the conference. More information and the Call for Proposals can be found on the AGLS Website, <http://web.oxford.emory.edu/AGLS>.

AAC&U Seeks Proposals

"Arts and Humanities: Toward a Flourishing State?" is the theme of the Network for Academic Renewal Conference in November. The deadline to submit proposals to the Association of American Colleges and Universities (AAC&U) is March 30, 2011. The conference is scheduled November 3-5, 2011, in Providence, Rhode Island. "Educating for Personal and Social Responsibility: A Twenty-First-Century Imperative" is the theme of the Network for Academic Renewal Conference in Long Beach, California, October 13-15, 2011. More information can be found on the AAC&U Website: www.aacu.org.

'Creativity, Play, and the Imagination'

"Creativity, Play, and the Imagination across Disciplines" is the theme for a conference at Teachers College, Columbia University, May 26-28, 2011. The interdisciplinary conference will bring together educators, artists, scholars, and game-makers from all disciplines to reflect on and experience creativity as a central site for learning and everyday living. The conference is organized in conjunction with Game Show NYC, an art exhibition of games that expands the concept of an art show by making the enjoyment of art an active and educative experience. For more details go to the conference website, <http://blogs.tc.columbia.edu/creativityconference2011/>

(More conference news is on page 13)

Handbook

(continued from page 6)

of Interdisciplinarity," could be brought into this "cluster"). All take up in some way "the need to develop effective information systems for interdisciplinary researchers" (174). Davidson writes, "the Information Age is less significant for its technology than for its rearrangement of all of the aspects of human life with which the humanities concern themselves" (209); she also observes that "technohumanism ... necessitates a rethinking ... of the disciplinary compartmentalization of knowledge that has been instantiated within and rewarded by the research university as an institution" (211). Strijbos concurs: "Systems thinking ... relate[s] to a basic reorientation in scientific thinking attempting to overcome ever-increasing specialization, and trying to make a shift from reductionist to holistic thinking, while acknowledging the unity of reality and the interconnections between its different parts and aspects" (453). Palmer explains that "LIS [Library and Information Science] has a unique orientation to interdisciplinarity ... since it is concerned with the organization, preservation, and mobilization of knowledge across the entire landscape of disciplines and is guided by a core mission in research librarianship to promote the transfer and exchange of knowledge among scholars" (175). She describes "scatter," the "great dispersion of potentially useful information across disciplines which results in serious problems in information seeking and use. Innovation often comes not from the core of a discipline but from the margins where knowledge is more diffuse, and scatter outside the core promotes discovery and integration of disparate knowledge rather than

isolation within a domain" (176). The conversation among these essays deepens and broadens the arguments in each and produces a richer analysis of interdisciplinary

It seems to me as if the editors chose to disperse, rather than cluster, essays that do, indeed, "speak to" one another.

information systems. But what do we, as readers, gain, by having the dialogue spread out over different sections of the volume? And if one reads the book one or two essays at a time, in random order, will one even hear the conversation? I would suggest that the discovery of conversations such as this one will enhance a reader's experience with the *Handbook*, but perhaps the editors might have provided some notes and directions about ways to listen in on the dialogues.

In the final paragraph of the final essay, "Corporate Innovation," Bruce Vojak, Raymond Price, and Abbie Griffin propose that one of interdisciplinarity's "features" is "the seeking of coherence and regularities across, and independent of, a wide range of disciplinary boundaries or restrictions" (558). Even more powerful than the statement is its placement. I do not mean to suggest that the editors chose to conclude *The Oxford Handbook of Interdisciplinarity* with what could be construed as *the* definition of interdisciplinarity, but I do think that leaving readers with a definition upon which to reflect provides appropriate closure to a monumental representation of interdisciplinarity at the beginning of the 21st century. We needed this volume, and we will use it for decades to come. ■

Dialogue on Science and Religion

(continued from page 2)

Here are five examples of the panelists' ideas. The first three focus on possible similarities as is appropriate for the contact model; all of the similarities seem to deal with affective elements or values rather than any specific methods or concepts. The fourth one, however, suggests the contrast model. And the last one seems an attempt to draw in those hostile to science but could be construed as illustrating the conflict model.

1. **Doubt or skepticism is an essential feature of both religion and science.** Phillips commented that he continually explores and grows in both. The suggestion of commonality of attitude is positive, but the vagueness frustrates any interdisciplinarian. How or why he doubts, what differences in methods create or check doubt, and more such pesky questions of rigorous integrative processes interdisciplinarians practice were not mentioned.
2. **Tolerance is important for dialogue.** Phillips noted unhelpful attitudes such as religious people who call science evil because of the theory of evolution and scientists who call all religious people ignorant, deluded fools. Such attitudes led to the scientific community's calling for the removal of the NIH director (Francis Collins) at NIH because he happened to mention he was also a person of faith. Interdisciplinarians likewise take such a stance as essential to the possibility of productive integration. Anderson also supported dialogue, noting one of his church's mottos: Comprehension begins with conversation. He quoted an African proverb about shifting perspectives resulting

from increasingly closer contact—first, from a distance, one might see some strange creature as a monster, then, coming closer, an animal, then a fellow human being, and then, through conversation, a brother. In more practical terms, he welcomed scientists to visit his congregation for dialogue as long as they were not on a “conversion” mission. Implicitly suggesting that conversion belongs to the work of religious people, not to that of scientists, the minister seemed to indicate that common ground is less his goal than the live-and-let-live approach suggested by the contrast (but complementary) model.

3. **Scientific knowledge allows for meaning that inspires as much as religious beliefs.** Upholding this view, Smith disputes Stephen Weinberg's opinion that the more we understand about the universe, the more pointless life seems. Smith's example is one that might make Stephen Jay Gould cringe, since he suggests a way that scientific knowledge may suggest meanings for human life. His example was the Big Bang theory and all the attendant ideas in the expansion of the universe since the Big Bang: the continual formation of stars as well as the dying of stars, planets still forming, black holes eating matter and changes in galaxies getting pulled apart. These facts not only support evolution but may also suggest a creative role in evolution for ourselves. Smith's examples provided a pleasurable moment of imagining what this creative role might mean, imaging that had to suffice since Smith did not expound on what our role in continuous evolution might involve. In addition, it would have been helpful if he had discussed whether such

meaning supplements religious faith or spiritual insights or has actual counterparts in any religious doctrine or spiritual practice.

4. **Science satisfies a need for information; science fiction provides entertainment, another need; and religion inspires, filling a need especially prominent in times of trouble.** The example the minister gave is that, if an “asteroid” of trouble hits a family, getting information (science), allowing for some distraction (science fiction), and finding inspiration (religion) all allow the family to deal with the troubles. Although the minister characterized religion as inspiring people, his example suggests more reassurance or comfort than inspiration. In any case, this argument conceptually fits the contrast/complementary model instead of the contact model since it suggests different functions or realms, not common ground.
5. **Evolution has practical value as well.** For example, Potts explained, unlike all our cousins, we Homo Sapiens have survived because of adaptability and flexibility during especially difficult times in the history of the earth—adaptability in the sense of controlling the environment for our survival. However, too much control in the form of over-specialization can lead to less adaptability, for example, if climate change destroys the few plants we mostly rely on (corn, wheat, rice). Evolution helps us understand the dangers of such agricultural practices. We certainly want to know about this aspect of evolution since it potentially has practical consequences of survival. However, the practical benefit does not indicate common ground between science

and religion. It only seems to insinuate that religious people cannot afford to discount science, particularly evolution. But religious people could agree that overspecialization is a danger without accepting evolutionists' explanation for it. An alternate explanation they might provide, for example, is that overspecialization is a result of inexperienced stewardship of God's gifts. They don't have to cite adaptability and flexibility of evolving humans but simply historical examples of crop mismanagement or, more broadly, other negative consequences related to various kinds of over-specialization. Thus, if the example fits any model, it is the contrast or conflict model—two competing explanations for the same phenomena.

Overall, the panelists seemed intent on cultivating good will between scientists and religious believers rather than engaging in a rigorous, probably more controversial, and surely more intellectual pursuit of common ground. Good will counts for something, but too much politeness hampered serious work remaining to be done in finding common ground between science and religion.

The one hint of how to move to a more rigorous exploration occurred when all of the panelists agreed with the statement that ethics could facilitate the bridging of views of religious people and scientists on social issues. If only we could have had an ethicist to illustrate tough-minded grappling with challenging conceptual conflicts.

Leshner's goal for this event was to have a civil dialogue. The event indeed featured civility but possibly at the cost of no vigorous exchange of diverse points of view. The organizers invited people from university religion and science departments, as well as

journalists who report on these areas, representatives of think tanks, scientific institutes, and retired AAAS people. During the Q&A, one person commented that

The one hint of how to move to a more rigorous exploration occurred when all of the panelists agreed with the statement that ethics could facilitate the bridging of views of religious people and scientists on social issues.

perhaps the organizers were hoping these reasonable people could talk to the discomfiting fundamentalists whether these fundamentalists were of the religious or the atheistic stripe.

Besides the homogeneity of panelists' views, time constraints and the rules for discussion also limited intellectual exploration. By the time we got to the end of the panel presentation, we had time for only three of four audience questions to which only panelists were allowed to respond.

At a public presentation of about 90 minutes, it is probably unreasonable to expect more than some buzz about apparent shifts in views about science and religion within the general public as well as among scientists, shifts indicating greater tolerance, even appreciation, and the possibility of mutual influence. But perhaps some AIS-trained interdisciplinarians might follow up with AAAS persons to structure an extended, rigorous, productive dialogue. Ethics, particularly bioethics, is already an interdisciplinary field. This field might be the way to connect with AAAS to promote their mission as well as ours. ■

CONFERENCES

(continued from page 11)

SLSA To Meet in September
The Society for Literature, Science and the Arts has scheduled its 25th annual conference for September 22-25 in Kitchener, Ontario, Canada. Events will include a contemporary arts forum, a showcase of pioneering tech art, book and art panels, a 24-hour video challenge, and bicycle tours. The plenary speakers will be Bernard Stiegler, director of the Institut de Recherche et d'Innovation and author of *Technics and Time*, and Isabelle Stengers, of the Université de Bruxelles, author of *The Invention of Modern Science*. More information can be found on the conference website, <http://litsciarts.org/slsa11>.

AAAS Accepting Proposals
The deadline to submit proposals for the 2012 annual meeting of the American Association for the Advancement of Science will be April 26, 2011. The annual meeting is scheduled for September 16-20, 2012, in Vancouver, Canada. The theme will be “Flattening the World: Building the 21st Century Global Knowledge Society.” More information can be found on the AAAS Website, www.aaas.org.

ISEA To Hold Istanbul Conference
ISEA International (formerly Inter-Society for the Electronic Arts) will hold its 2011 conference in Istanbul, Turkey, September 14-21. More information can be found on the conference website, <http://isea2011.sabanciuniv.edu/>.

Links to these organizations' websites can be found on the Interdisciplinary Connections page of the AIS website, www.muohio.edu/ais. From the homepage, click on Resources>>Connections. ■

Remembering Beth Casey

(continued from page 1)

Interdisciplinarity. Casey served as President of the Association for General and Liberal Studies (AGLS) as well.

Beth A. Casey was born July 23, 1935, and raised in Matamoras, Pennsylvania. She received a bachelor's degree from

Time spent with Beth was often laced with humor as well, underscored by a laugh echoing what her friend Nancy Struever so aptly called a "life-enhancing glee."

Pennsylvania State University in 1957 and master's and PhD degrees from Columbia University of New York in 1978. Her career took her to the University of Rochester, Bard College, Empire State College, Hobart and William Smith Colleges, and Bowling Green State University (BGSU) in Ohio. When she arrived at Bowling Green in 1987, Beth created the University's first general studies curriculum and was Director of General Education at Bowling Green until 2002, at which point she became a full-time Associate Professor of English. After her retirement in 2005, she continued to teach one semester a year in the English Department, with particular devotion to Canadian Studies.

Upon hearing of her passing, former AIS Presidents offered rich memories of Beth. Cheryl Jacobsen, recalled her warmth and eagerness to share interdisciplinary experiences when they met at an AIS conference. Beth's professional interests and generosity, Cheryl noted, continued into her retirement, including serving on a new AIS assessment and accreditation task force as well as writing a review of a special issue of *Critical Inquiry*

for the May 2010 edition of the AIS newsletter. Steve Gottlieb, a former AIS president who found in AIS an academic home that he had long been seeking, called Beth "among my finest facilitators." She was relentless, he recalled, in asking questions: "What did I teach? How did I teach it? Why so? What do I read? Why? Oh, how about ...?" Embodying the philosopher

Ernst Cassirer's assertion that questioning promotes the finest learning, Steve reflected, Beth was a "sweet socratic woman" with an insatiable curiosity. When she suggested in the course of a conversation that he read something, he suspected she might phone him about it in due order. And she did, with a characteristic delight in learning and "a grace in discussion" that was always absent of competition or pretense.

Many AIS members also forged close bonds of friendship with Beth. Bill Newell, Executive Director of AIS, described their bond as so strong "we understood each other implicitly, often without uttering a word." As he looked back through the AIS archives, he was struck by the fact that Beth was involved in so many of its major projects over three decades. In addition to the public activities already noted, she worked tirelessly behind the scenes on developing the organization's current conception of interdisciplinary studies, putting together an AIS brochure, writing a successful grant proposal, and training future interdisciplinary consultants and administrators.

Ray Miller remembered countless conversations and meals shared at

conferences. They also collaborated on the planning of AIS conferences in Bowling Green and in San Francisco. Time spent with Beth was often laced with humor as well, underscored by a laugh echoing what her friend Nancy Struever so aptly called a "life-enhancing glee." When Ray visited Bowling Green in the mid-1980s, he arrived at Beth's Ohio farmhouse driving a gigantic Lincoln. The mismatch between the only rental car available on the lot and his own 1963 Volvo was a source of good-natured teasing for years. Ray was visiting Bowling Green in his capacity as AIS President to coordinate with Beth on the upcoming annual conference. The meeting, he recalled, proved to be extremely well organized and successful, indicative of Beth's reliability and competence. In 2000, Ray and his San Francisco State University colleague Stan Bailis also came to her side when she was program chair for the annual meeting of AGLS. The planned conference on "Internationalizing the Curriculum" had experienced a low number of proposals. Ray and Stan joined other AIS members in contributing proposals that would make the conference a well-attended joint endeavor of the two organizations.

Ray was also struck by the respect and affection local colleagues had for Beth. Bridget Tharp captured those qualities in her obituary story in the August 30th issue of *The Toledo Blade* newspaper. She quoted Beth's longtime friend Diane Regan, who was Fulbright Scholarship adviser at BGSU: "I don't think people at Bowling Green would really understand what a gem they had in this woman until they went away to a conference." They realized, then, that she was considered a national force in general education. She was not only involved in pioneer experiments at Empire State

College but, Regan added, "Beth was talking about integrated studies before anybody really thought about it." Emeritus professor of education and longtime friend Adelia Peters was on the selection committee that hired Beth. She was chosen, Peters was quoted remembering in the *Toledo Blade* story, for "her intellect and ability to weave together ideas from many different sources She could pull from the philosophy and history of many different groups to get people thinking." English and General Education colleague and friend Tom Klein, also paid tribute to Beth's "encyclopedic capacity for knowledge" coupled with an ability to get students excited about ideas.

Beth Casey left behind what Peters so aptly called an "army of friends." She was a "coveted travel companion" known for researching the culture and history of a destination before takeoff. Regan agreed: "I always made sure I sat next to Beth, and we would eat together and we would walk the sites because this woman was a great source about all that we saw." At the time of her death, she was planning a trip to Sicily only weeks away. And then, there was the food. Beth was a remarkable cook, as deeply engaged in the culinary arts as the liberal arts. A meal at her house was a treasured invitation. Friends remember pots and pans flying in her farmhouse kitchen then later her new home in town. Her beloved cats were also at the center of her life. My daughter, who grew up knowing Beth through countless visits to our respective homes, cherished a very special

Case Studies in Interdisciplinary Research published

Case Studies in Interdisciplinary Research, edited by Allen F. Repko, William H. Newell, and Rick Szostak, was published by SAGE in February. Sponsored by AIS, the new textbook successfully applies the model of the interdisciplinary

gift she received in the mail when she was still in elementary school. "Auntie Beth" wrote her a short story about the adventures of Sweetbear, Thumper, and Mingtoy—as charming a tale as ever came from the pen of Beatrix Potter.

"Beth was always so energetic and vibrant," former AIS President

"Beth was always so energetic and vibrant," former AIS President Joan Fiscella recalled, that "it's hard to imagine she's gone."

Joan Fiscella recalled, that "it's hard to imagine she's gone." She leaves behind, though, a remarkable career, cherished memories of friends, and a legacy of commitment to education. In her will, Beth provided for scholarships named in honor of her parents: the Mae W. Casey scholarship in creative writing and the Thomas A. Casey scholarship in literature. She also created the Beth A. Casey Canadian Lecture Fund.

We will miss her.

** Grateful thanks to AIS members who contributed tributes; Beth's friend Carol Heckman for sharing the brochure assembled by Beth's friends and colleagues for a September 9th funeral and memorial at St. Mark's Lutheran Church in Bowling Green; and Bridget Tharp of the Toledo Blade for details of Beth's history and colleagues' tributes. ■*

research process outlined by Repko in *Interdisciplinary Research*, (SAGE ©2008) to a wide spectrum of challenging research questions. More information can be found on the SAGE website, <http://www.sagepub.com/books/Book234643?> ■

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The Association for Integrative Studies
Western Program
Miami University
501 E. High Street
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AIS NEWSLETTER

INTEGRATIVE PATHWAYS

SoITL Section Joins Resources on AIS Website

We would encourage all interdisciplinarians to take a look at the newest section of the AIS Website, a section devoted to SOITL or the Scholarship of Interdisciplinary Teaching and Learning. The section was created in response to a call from members of the AIS Board of Directors and members of the Association itself that we offer more support for this particular kind of scholarly endeavor.

We intend the new section of our website to be a resource for those interested in reading and perhaps doing (and sharing) research into the pedagogies and pedagogical theory associated with interdisciplinary and integrative studies. Contents include both succinct and developed versions of material

related to the Scholarship of Teaching and Learning in general and SOITL in particular, including listings of and linkings to websites and publications in both spheres. The new section can be found on the AIS Website, www.muohio.edu/ais using the vertical navigation bar on the homepage.

Individuals who would offer suggestions on this SOITL site should contact its editor, Gretchen Schulz, at gschulz@emory.edu. We would note, too, that those wishing to discuss SOITL-related subjects may do so through INTERDIS or Facebook, thereby helping to create a teaching commons for interdisciplinarians involved in this distinctive kind of scholarship. ■

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. 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.

ON THE WEB:

www.muohio.edu/ais

■ WHAT'S NEW

Find the latest news about the Association and integrative studies.

■ CONFERENCES

Link to the 2011 Conference Website and access the Call for Proposals.

■ PUBLICATIONS

Find current and past editions of *Integrative Pathways* (formerly the *AIS Newsletter*), *Issues in Integrative Studies*, and other publications.

■ RESOURCES

Resources include the new SOITL section, Peer-reviewed Syllabi, Interdisciplinary Assessment, and more.

■ MEMBERSHIPS

Renew your 2011 membership online.