Editors' Introduction

"Symposium" originally meant "drinking party" in ancient Greek, a "convivial gathering of the educated" – *syn*-"together" + *posis* "a drinking." The co-editors of *Issues* have come to think of this volume as a Symposium, a convivial gathering of the educated in interdisciplinary studies where you may consume knowledge along with the others in actual or virtual attendance. As you'll soon see, this party-on-paper has all the earmarks of a festive feast. A poetic opening whets the appetite for what's to come, course after course of offerings from charismatic speakers representing many regions of knowledge in natural sciences, social sciences, and humanities. By way of dessert, our final speakers gather the wisdom of lessons learned and impart guidance for the future. So consider this introduction your embossed invitation to a Symposium on Interdisciplinary Studies, AIS style.

The poetic opening comes from Jenny Sasser, the first of our speakers here–as she was the first of the speakers in last fall's AIS Conference (another decidedly "convivial gathering of the educated" if we do say so ourselves). We offer you Jenny's plenary address from that conference, "Our Research is Living, Our Data is Life: Toward a Transdisciplinary Gerontology." And we think you'll find "The Gero-Punk Manifesto" with which it begins–and the mix of the personal and academic, the keenly felt and deeply thought, that follows–will rouse your hunger for more from the other interdisciplinarians represented in this volume. As you hear what they have to contribute, each in his or her turn, we think you'll agree that all can claim just that kind of "punkishness" that Jenny celebrates in her piece–a "punkishness" we might all be proud to claim:

> To be a punk of any sort is to live experimentally, to live in love with emergence, with the unexpected, the chaotic, the improvisatory, to live with your arms wide open to complexity, guided by your own star, fueled by a good measure of playfulness and well-intentioned rebellion [and, in the process] to bravely and critically reflect upon, interrogate, and create new ways of thinking about and experiencing the [world–and new ways of acting in it that might help make it a better place].

The next speaker heard from is Wendell Kisner, with a most appropriate (dis)course to follow Jenny's aperitif and precede the hearty (and oh-so-philosophical) fare to come in that he actually serves up commentary on ways in which ideas derived from Plato's later dialogues might help interdisciplinarians integrate the "apparently disparate interdisciplinary approaches of the empirical sciences on the one hand and the humanities

and social sciences on the other," resolving the "tension . . . between construction and discovery" or "realism and Idealism." In his offering, "The Medial Character of Interdisciplinarity: Thinking in the Middle Voice," he, like Jenny, celebrates the value of the emergent, arguing that (as Plato well knew) "learning in general is an emergent phenomenon whose process can best be characterized in terms of a medial ontology" and that the process occurs "in an ambiguous 'middle ground' between active mastery and passive reception"–a "middle ground" interdisciplinarians know well, though we may never have considered it in these provocative terms before.

The third contributor to our conversation is Matthew (TwoTrees) Haar Farris, who also addresses ways in which ideas derived from a philosopher (in this case, the contemporary continental philosopher, Jacques Derrida) can help us think about interdisciplinarity. In "Disciplines and Interdisciplinarity as Relations-in-*différance*: A Derridean Account of Disciplinary Knowledge Differences," TwoTrees explains that, by their very nature as "discursive things," "disciplines are always already in a process of differing and deferring from 'themselves' and from one another. That is to say, disciplines are never merely themselves. They carry within them the traces of the other disciplines that give them their context." He argues that "Interdisciplinary [work] may be profitably thought of as an engagement with [such] disciplinary traces," discovering relationships that already exist or creating new ones. He acknowledges that while the process "may appear threatening to various disciplinary stabilities (including drives to maintain self-sameness), interdisciplinary work at its best is a positive affirmation of [such new or newly discovered] relationships," with useful knowledge emerging from such "hospitality [to] the other." *Vive la différance!*

Rick Szostak, who sets his fare upon our virtual table next, is also interested in "Stability, Instability, and Interdisciplinarity." As he sees it, "disciplines tend to theorize [and focus their study upon] systems of stability among the phenomena that they investigate." And they do so for good reason, since "these systems of stability appear to exist in the world as well as in the imaginations of disciplinary scholars." But "mechanisms of instability" are real-world phenomena, too. And though "[s]ome disciplines recognize de-stabilizing mechanisms," even those that do often opt to leave the study of such mechanisms to "others" with different disciplinary expertise. It is thus up to interdisciplinarians to show such "hospitality" to "the other" as TwoTrees also speaks of, engaging with all relevant disciplinary perspectives so as to move towards fuller understanding of the complex situations "de-stabilizing mechanisms" can create and towards solutions to the problems they may pose.

When James Welch IV joins our Symposium, we soon see that he is addressing "de-stabilizing mechanisms" too, in his case, "psycho-social mechanisms" operative *within* those involved in a collaborative interdisciplinary research process, mechanisms that can "problematize" the process and interfere with a team's attempts to solve "complex real-world problems." In his decidedly substantive addition to our menu of offerings, "All Too Human: Conflict and Common Ground in Interdisciplinary Research and Complex Problem Solving," James addresses not the "epistemological, theoretical, and conceptual conflicts" he and other interdisciplinarians have often addressed before, but the conflicts that can arise "when competing value systems clash among non-academics involved as stakeholders" in an ID project of some kind (as, for example, a project related to an issue as controversial as climate change). Not that all conflicts are necessarily bad. In fact, as James explains (and as Jenny and TwoTrees have themselves already suggested) "there is a sense in which conflict is a productive part of any problem-solving process: The tension of conflict can promote open-mindedness, exposure to diversity, and emergence of important insights and innovations that often arise from the clash of different ideas and viewpoints." And yet "the problem-solving process" will not be thus "productive" if participants' "all-too-human" tendencies to resist resolution of conflict should prevail. How good, then, that James has some "strategies of conflict resolution" to share.

Anyone whose appetite for more has been piqued by what James has offered on interdisciplinary collaboration–especially collaboration that involves non-academic stakeholders working on real-world projects–will be delighted by what we've got to offer next, namely a whole Special Section on exactly that subject, including not just one, not just two, but three (dis)courses, assembled and introduced by one of their authors, Machiel Keestra, the immediate past president of the Association for Interdisciplinary Studies. As a professor of philosophy well-versed in psychology, he has presented and published frequently on challenges facing those involved in collaborative work, challenges that might well be called "psycho-social." And he had no trouble recruiting others to address such challenges "with the help of insights from the psychological sciences" (and, not so incidentally, insights from philosophers who have contributed to "the psychological sciences," from Aristotle through Descartes and to the present day). In an introduction to the Special Section that itself constitutes a special contribution to our Symposium, Machiel discusses the "tight connection between psychology and the interdisciplinary process," not only when that process involves an individual scholar or researcher but also (and especially) when that process

involves such individuals working as members of a team. As he explains, the article he sets forth in the section-to-come and those his recruits set forth "all acknowledge how interdisciplinary understanding, or knowledge, emerges from a process that can be analyzed at different levels" from "the micro level of individual understanding, to the meso level of interpersonal understanding, . . . to the macro level of team or group understanding." *Vive le psychologie!*

In his article, up first, Machiel discusses the "Metacognition and Reflection by Interdisciplinary Experts" that must take place if members of interdisciplinary teams are to deal effectively with the pluralism that characterizes teamwork, bringing their own ways of thinking to the fullest possible consciousness and forging connections with those with other ways of thinking so that newer, better understandings of and solutions to the complex problems that plague our modern world might emerge. He agrees with those who argue that "philosophical reflection upon disciplinary assumptions" is necessary for anyone involved in interdisciplinary work, as an individual or as a team member, but it is not sufficient to ensure good work is done. Metacognition is necessary to that end. As he puts it in summarizing the well-supported conclusions of his article,

> First, individual experts must recognize and learn to regulate the manifold cognitive processes and representations that can contribute to but also impede their expert cognition and behavior…[And second,] interdisciplinary teams must engage in metacognition as teams in order to adjust their intra-personal and inter-personal representations. In so doing teams can improve the affective, cognitive, behavioral, and social processes that enable them to bring their projects to satisfactory fruition.

In his article on "Transdisciplinary Hermeneutics" Hans Dieleman begins by reviewing the thinking of Basarab Nicolescu, the founder of the Centre International de Recherches et études Transdisciplinaires (CIRET), a scientist whose understanding of quantum physics has turned him into a philosopher-cum-psychologist, too. His ideas have transformed the way many, like Hans, have come to understand and practice interdisciplinarity (and transdisciplinarity--defined not as the integration of disciplines in pursuit of solutions to real-world problems but as the going-beyond-disciplines for ends that encompass but transcend the solution of problems, ends that involve the endless pursuit of endlessly emerging knowledge in the decidedly open space of the beyond). Like Nicolescu, Hans urges us to eschew the either/or thinking of classical logic (with its "excluded middle") and challenge, or rather complement, the traditional scientific approach to

reality with an approach that also embraces other ways of knowing and being (including an "included middle"), an approach drawn from any and all disciplines and drawn from life itself (for after all, Hans would agree with Jenny, "Our research is living, our data is life"). He recommends that members of interdisciplinary teams allow for this expansion of approach– and the expansion of achievement that should follow–by developing and applying two competencies that themselves go well beyond those conventional among old-school academics (or old-school anybodies): mindfulness and dialogue.

In the final article of the Special Section devoted to collaborative interdisciplinary work (a section that is, we might note, itself the product of collaborative interdisciplinary work), four authors report on the results of an investigation they undertook in connection with a multi-year initiative funded by the State University of New York–an initiative intended to promote collaborations between academic and industry-based researchers. As participants in the initiative Whitney Lash-Marshall, Christopher Nomura, Kimberly Eck, and Paul Hirsch explain in "Facilitating Collaboration across Disciplinary and Sectoral Boundaries," they first identified potential barriers to the success of collaborative efforts that cut across such boundaries, then developed potential strategies for overcoming such barriers, and then tested those strategies as applied in the work of those involved in one of the SUNY-funded projects, that of the Green Composite Materials group that was trying to develop "green" materials that can be manufactured with lower consumption of energy. Among other things, our authors discovered that identifying barriers and developing strategies for overcoming those barriers are *themselves* actions that those involved in a collaborative project ought to undertake in the very earliest stages of the project. In fact, they argue, persuasively, that all four steps in the "four-step process of strategic intervention" that they vetted as effective in the operations of the Green Composite Materials group would be effective in other contexts in which people with very different backgrounds and beliefs are trying to work together towards a common goal.

Of course, tales from the trenches of real-world experiences of interdisciplinary endeavor *are* persuasive. But, as the next of the contributions to our conversation shows, such tales may well be cautionary rather than celebratory. And not least when the interdisciplinary endeavor involved occurs in the trenches of the academy itself, in the midst of the many battles ongoing in the educational systems of our time. Like the authors of the preceding article, authors Richard Wallace and Susan Clark identify "Barriers to Interdisciplinarity" and "strategies to address them." But the

barriers they speak of are those they (and too many others) have experienced "in the structure and function of American higher education [--barriers that] conspire to impede the success of interdisciplinary programs" like the programs in environmental studies with which they are most familiar. They "amalgamate" personal histories to present "A Case of Alarming Trends in Faculty and Programmatic Wellbeing" that "undermine" individual and collective goals, "resulting in lost opportunities for faculty, students, and curricula" and their institutions, as well. The article might be a bummer–except they offer substantial recommendations for changes in attitudes and behaviors that can help to alleviate the situation and improve the prospects for those who would fight the good fight–on behalf of interdisciplinary studies–and win.

How fitting that our Symposium should conclude with a "Report from the Field" in which three representatives of AIS who have proven particularly well able to fight the aforesaid good fight speak of doing just that at a workshop on "Interdisciplinary General Education" that they offered at a conference of the Association of American Colleges and Universities held in Phoenix at the start of this year. Tami Carmichael, Jennifer Dellner, and Rick Szostak (yes, Rick again–he gets around) both told *and showed* 80-plus conference attendees how possible it is for faculty–even faculty not trained in interdisciplinarity and not teaching in courses or curricula labeled interdisciplinary–to infuse interdisciplinary thinking and practice into their classrooms. How possible *and* how worthwhile. Tami provided an account of the outcomes of the Integrated Studies Program at the University of North Dakota, a program that *is* an interdisciplinary general education program, with wonderful outcomes, well-documented. And Jennifer provided an account of the similarly wonderful and well-documented outcomes of a course in Library Research Skills and Information Literacy at Ocean County College in New Jersey, a course that is *not* (at least is not *labeled* as) an interdisciplinary course. Their accounts did much to convince attendees that instructing students in identifying and integrating views derived from many different disciplines (and life experiences) is feasible and valuable. And so did the exercises in which attendees were invited to engage–exercises such as they might use themselves to foster their students' capacities to "draw on multiple sources of knowledge to build deep understanding" (Boix Mansilla, 2004, p. 2).

To bring their workshop to a close (as their article on the workshop brings this Symposium to a close) Rick shared insights into the complementarity of General Education and interdisciplinary education such as he has developed in the rich resource of the Interdisciplinary General Education website (that

can be found within the AIS website at http://oakland.edu/ais/). He referred workshop attendees who were clamoring for more ("Please, sir, could we have some more") to that remarkable store of useful materials. We would do the same for you who have attended this "convivial gathering of the educated in interdisciplinary studies." After all, as we think we'd all agree, we're never too old (or too educated and experienced) to learn–to open ourselves to the other and the new. And we can do so through dialogue with other interdisciplinarians in the virtual space of our online home as well as in the actual space that stretches between the covers of this journal. Party on.

Gretchen Schulz
Professor of English Emerita
Oxford College of Emory University

P. Sven Arvidson
Director and Associate Professor
Interdisciplinary Liberal Studies
Seattle University