

Editors' Introduction

“What we’ve got here is failure to communicate.” So says prison guard Strother Martin to prisoner Paul Newman in the 1967 movie *Cool Hand Luke*, a line the American Film Institute recently named as the 11th most memorable of the 100 best lines in movie history. No doubt its appeal reflects its relevance to situations we all encounter—often—in the course of our daily lives, both personal and professional. Misunderstandings are common. And, of course, they are commoner than we know, given that we may think we’ve achieved mutual understanding when we haven’t done so at all. This is as true in the realm of interdisciplinary studies as in any other—in spite of (and sometimes because of) decades of efforts by interdisciplinarians to clarify what interdisciplinarity entails. We’ve come a long way towards consensus on major matters, certainly, but just as certainly, we’ve still got a long way to go, not least because some of our claims of consensus disguise disagreements hidden behind terms that are understood quite differently by those using them as if clear communication were really taking place. Not to mention the sustained, and at time heated, discussions over the last thirty-three years in this journal and elsewhere concerning interdisciplinary terminologies, concepts, and practices. Add to failures in communication among interdisciplinarians the failures that accrue when interdisciplinarians and disciplinarians attempt to communicate both among themselves and with others in the world beyond the academy and the scope of the challenges is clear. Those challenges are HUGE (a word best said with a Trumpian intonation). But we, the co-editors of this, the 2015 volume of *Issues in Interdisciplinary Studies*, believe this collection of articles demonstrates that you, our colleagues, are up to the challenges—up to recognizing them, first of all, and up to doing, or at the very least seeing, what needs to be done to ensure better communication, and so, better outcomes, in the realms in which we interdisciplinarians work, both in the academy and in the “real world.”

Certainly the first of our articles, “Integration, Language, and Practice: Wittgenstein and Interdisciplinary Communication” by Zachary Piso, both shows recognition of problems that plague interdisciplinarians’ attempts to communicate and offers some solutions to those problems, making it a fine preface to the whole collection. He begins his discussion by reminding us that “the dominant account of interdisciplinary integration mobilizes linguistic metaphors such as bilingualism or the learning of new languages,” and he acknowledges that “there is something right about these linguistic metaphors,” a point he develops later in the piece. But he’s written the piece to “urge caution about confusions that can arise in the absence of careful scrutiny of

how our language relates to the world” and to explain how insights he has drawn from Wittgenstein suggest “therapies to treat [such] confusions.” Piso’s search of the literature has confirmed what we’ve all known in our bones, if not otherwise, that confusions about the all-important subject of integration are particularly problematical. He quotes William Newell’s lament from many years ago, that “No one I have talked to or read (including my own writings) has been able to explain clearly how to integrate disciplinary insights into a comprehensive understanding. We are not even clear on exactly what is *meant* by integration (2007, p. 18).” And he points out that a forthcoming publication by Michael O’Rourke and others laments that the same situation persists today—that in Piso’s summative words, “the importance and prominence of interdisciplinary integration in the interdisciplinary studies literature has produced neither clarity nor agreement about how integration is accomplished or even what integration is.” He quotes David Stone: “[T]he central barrier to effective interdisciplinary collaboration boils down to language, to our inability to communicate concepts, theories, and methods across disciplines in interdisciplinary contexts (2013, p. 87).” But Piso devotes the rest of the piece to the ways Wittgensteinian thinking can help remedy such “failure to communicate.” It’s a VERY impressive piece—and all the moreso in that it’s the work of a graduate student (in the Department of Philosophy at Michigan State University). If Piso is representative of the younger generation of interdisciplinarians soon to claim their degrees and assume positions in which they’ll be doing interdisciplinary work, we can indeed hope to be doing better with the HUGE challenges of interdisciplinary communication . . . soon.

We’d say that Yves Lenoir, the lead author of our second article, is representative of the older generation of interdisciplinarians, those who’ve been working in the trenches of this burgeoning field for many decades now, if it weren’t the case that he’s accomplished so much in his years of service to our cause that he’s got to be considered remarkable rather than merely representative. After all, he has published 24 books and more than 230 academic articles and book chapters in French, English, Spanish, Portuguese, etc. (and don’t you love that “etc.”), among them so much that’s been foundational to interdisciplinary studies that he has been honored with the Boulding Award for “major, long-term contributions to the conception or enactment of interdisciplinarity” by the AIS. With his co-authors, Abdelkrim Hasni, another (shall we say) mature interdisciplinarian with many decades of experience, and Alessandra Froelich, a graduate student like Zachary Piso, Lenoir has given us a wonderfully well-developed overview of the evolution of thinking on the subject of interdisciplinary education (and education itself), discussing how that evolution has resulted in thinking

that has been and still is quite different on the two sides of the Atlantic, in academic cultures he characterizes as “Anglo-Saxon and American,” on the one hand, and “French and European,” on the other. The fact that all three of these authors, doing their work in Quebec at the University of Sherbrooke, can claim an “unusual mix” of Anglophone and Francophone education and experience makes them well qualified to address the fact that “interdisciplinarity is not everywhere conceived and implemented the same way,” and to describe the Anglophone version with its pragmatic focus on curriculum and the Francophone version with its epistemological focus on didactics. By the time you're done reading “Curricular and Didactic Conceptions of Interdisciplinarity in the Field of Education. A Socio-Historical Perspective” you'll have a much fuller understanding of the difficulties interdisciplinarians sometimes have communicating and a much clearer understanding of how those difficulties might be overcome (and indeed are being overcome thanks to the increased internationalization of exchanges among our interdisciplinary selves).

In the third article, Rick Szostak of the University of Alberta, another distinguished long-time interdisciplinarian, offers us “Extensional Definition of Interdisciplinarity,” that is, “a definition that identifies the types of practices that are interdisciplinary,” “shift[ing] the focus from ‘what’ interdisciplinarity is,” a matter for intensional definition, “toward an analysis of ‘how’ it is performed.” He argues, persuasively, that complementing the intensional definitions that have emerged in the last couple of decades with an extensional definition will help clarify confusions that still plague interdisciplinarians and prevent clear communication. After discussing the former (which tend to deal with “instrumental” or “problem-oriented” interdisciplinarity rather than “conceptual” interdisciplinarity, such that Lenoir would call them Anglophone rather than Francophone), Szostak turns to the criteria by which we might determine “where along a continuum from interdisciplinarity to disciplinarity a particular field, course, or project lies.” Such criteria would help us to identify interdisciplinarity that's not yet fully-fledged, with the hoped for result that “[s]ome scholars or fields might then decide, and – importantly – know how, to become more [truly] interdisciplinary.” Readers of this journal (and the other literature of interdisciplinarity) won't be surprised by Szostak's assertion that “practices identified by Repko (2012) for various steps in the interdisciplinary research process . . . serve very well to distinguish” work that belongs at one end of the continuum from work that belongs at the other.

Sven Arvidson of Seattle University, the author of our fourth article, would agree that the steps in the interdisciplinary research process articulated by Repko and asserted as integral to extensional definition by Szostak are the

essence of interdisciplinarity. But he argues that “doing good work in the field” requires that the work be done with a certain set of attitudes, most importantly the one he identifies in his title, “The Virtue of Reverence in Interdisciplinary Studies.” Yes, he says, “It might seem odd to examine how a virtue activates good scholarship, and even stranger that this virtue is reverence.” But as he explains, the very complexity of the problems with which interdisciplinarians deal calls up a response that can be characterized as “reverential,” “a kind of awe for something beyond our knowledge and a feeling of respect for and trust in each other in trying to figure it out.” “[T]he interdisciplinarian must maintain an attitude of openness and Socratic wisdom (knowing that one does not know), equitably examining one’s own perspective and others’ perspectives in the face of the complexity of a problem.” “Articulating reverence in the research process [as Arvidson does in this piece] advances our understanding of interdisciplinary theories concerning complexity, perspective taking, common ground and integration” and, so, advances our capacity to communicate clearly when such theories—and attendant practices—are under discussion. “The result helps balance the cognitive emphasis in interdisciplinary studies with an account emphasizing emotion and character,” a result of particular interest to interdisciplinarians in the humanities and fine and performing arts, a provocative point Arvidson develops as his article concludes.

In the fifth of our articles, our trio of Quebecois authors return, with Abedelkrim Hasni taking the lead this time in discussing “Mandated Interdisciplinarity in Secondary School: The Case of Science, Technology, and Mathematics Teachers in Quebec.” At the start, they place their discussion in the context of “[n]ew curricular orientations in the secondary schools of many Western countries [and indeed in schools at all levels that] invite teachers of STEM school subjects (science, technology, engineering, and mathematics) to integrate these school subjects.” As they explain, “[i]n Quebec, such interdisciplinarity is not a mere recommendation, but an official component of the curriculum (a prescription). Teachers are expected to integrate the school subjects composing the STEM subjects, and to integrate this area with other school subjects.” While the authors see this interdisciplinary orientation as being ‘laudable,’ as most of us would surely agree, they thought it “important to discover how teachers whose training is disciplinary understand this mandated interdisciplinarity and apply it in their teaching practices.” Based on a survey of 245 secondary school teachers, “[their] study shows that the interdisciplinarity practiced and described by these teachers is a superficial one and is based on links that do not enable an integration of the contributions of the subjects concerned in order to solve complex problems or achieve unified knowledge,” as most now agree is

necessary for full-fledged interdisciplinarity. Although the teachers, like the figures in government and education responsible for this mandate, do manifest an attitude towards interdisciplinarity that might be considered “reverential,” or at least appreciative of its reported power to deal with problems of great complexity, neither the teachers nor those behind the mandate can claim thorough-going comprehension of what interdisciplinarity is (according to its intensional definition) or what interdisciplinarity entails (that is, how it is properly done, according to its extensional definition). From lack of comprehension comes lack of clarity. From lack of clarity comes problematical practice—full of interesting variations on traditional practice, true, but falling well short of the “laudable” goal. “What we’ve got here is failure to communicate.” And we’ve also got a cautionary tale whose relevance reaches well beyond the situation in the secondary schools of Quebec—to “all actors . . . concerned with interdisciplinarity in school programs at any level anywhere in the world”—in short, to all of us.

How good, then, that the sixth of our articles offers an inspirational tale rather than a cautionary one, telling the story of educational programming that demonstrates successful communication and successful outcomes in interdisciplinary studies and in interdisciplinary work-in-the-world, as well. Phillip Ryan, the lead author of the article, is the primary faculty member in a Union University program for undergraduates who are learning to teach English as a Second Language, hence, learning to be good communicators themselves and to teach the students they will eventually teach the same. In “Navigating Complexities: An Integrative Approach to English Language Teacher Education,” Ryan writes the first part of the article himself, explaining how the TESL program’s foundations in “interdisciplinarity, critical pedagogy, and teacher exploration” prepare students to become teachers who can deal with the very considerable challenges (one might even say HUGE challenges) of language teaching and learning. Then Ryan turns the article over to four of his one-time students, now teachers themselves (and seeking or holding further degrees), who report on the ways they’re applying what they’ve learned in a variety of secondary school situations, engaging their own students in learning experiences more fully interdisciplinary (and integrative) than those the students of Quebec are enjoying—even in a system that mandates interdisciplinarity (and integration). By the time you’re done reading, we think you’ll agree that Tyler Glodjo, Bethany Susan Hobbs, Victoria Stargel, and Thad Williams are managing “the uniquely complex nature of . . . English language teaching” wonderfully well, and they’re not bad at writing journal articles either, definitely *not* failures in the fine art of communication.

The seventh and final article in this collection, by Sierk Horn of the

Munich School of Management, Ludwig Maximilian University, has grown from his long-standing interest in and study of “the interplay of language, psychology, and business practices,” particularly among those in “the fields of East Asian business and international management” such as his area of specialization, “the economy of Japan.” In the article, “The Front End of Interdisciplinarity: An Acculturation Framework for Explaining Varieties of Engagement,” Horn offers an analysis of how “[s]cholars trained and credentialed in disciplines” respond when dealing with opportunities “to engage with others from other disciplinary backgrounds” in order to do interdisciplinary work. Arguing that disciplines are like cultures, as others have done before him, especially others who “mobilize linguistic metaphors” in discussing interdisciplinarity (we’re referring back to Piso’s opening article), Horn draws upon “acculturation theory” to characterize the “response options” he has documented among disciplinarians considering interdisciplinary endeavor. He labels the four primary categories of response as “assimilation, integration, separation, and marginalization,” and he explains why only some of these responses actually prompt the responders to undertake interdisciplinary work. In spite of widespread agreement that doing business well requires interdisciplinary skills (and training that develops those skills), academics in the European sphere where Horn and those he’s studying have had their education and experience as educators still find themselves in institutional (and more generally professional) situations that rather discourage than encourage interdisciplinarity. Horn writes in hopes that better understanding of the psychology behind disciplinarians’ responses to interdisciplinary opportunities will lead to more and better “interdisciplinary acculturation”—more willingness to undertake work beyond the boundaries of “home” cultures and more capacity to do so, and to do so knowledgeably.

And we editors would like to offer one more comment on Horn’s “Acculturation” article as we bring this introduction to its conclusion—namely, that the story of the submission and review and revision of this article is itself worth an article (or at least a mention here). There are enormous ironies involved when a non-native speaker of English who is a professed disciplinarian rather than an interdisciplinarian, and whose education and experience as an educator are European rather than American, decides to write an article *about acculturation* for an American readership of interdisciplinarians largely ignorant of the European academic scene (the one Lenoir characterizes as so very different than that on this side of the Atlantic). Talk about “culture shock.” Talk about “failure to communicate.” Upon first reading (and even second and third readings) there was much we

(and our peer reviewers) just didn't understand—though we could see that there was much worth understanding—and we are thankful that Sierk (as we have come to know him) hung in through a long series of exchanges in which we managed to clarify our confusions enough to clarify his confusions about our confusions so he could clarify the article. We're so pleased that the article is now a fine example of the quality work that can follow from the fusion of American and European academic cultures that Lenoir commends as desirable and sees as happening already and bound to happen more as the internationalization of our work proceeds. And we're pleased that it is also a fine example of success in overcoming our all-too-frequent "failure to communicate." If at first you don't succeed, try try again. Because, if you don't, it'll be "déjà vu all over again." And Paul Newman won't make it out of that prison camp alive.

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