AIS 2017 Conference Report from UMBC

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The University of Maryland, Baltimore County, hosted a successful 39th Annual Conference of the Association for Interdisciplinary Studies October 19-21, 2017. There were several venues for conference activities (plenaries, meetings, keynote speeches, meals, presentations, workshops and panels) including the White Oak Room of the Westin BWI for the plenary talk by Dr. Freeman Hrabowski, the University Center, the Commons, the Herbert Run Greenway, and the Fine Arts Building all on UMBC’s campus.

Venue and Logistics. The conference hotel was the Westin BWI, located a 7-minute drive from the campus conference venues. Shuttles were provided by UMBC to move conference attendees from the hotel to campus. The attractions of downtown Baltimore, Md., were located a short 15-minute drive from the hotel. On Friday, October 20, the host institution provided a shuttle for attendees who wished to visit Baltimore’s Inner Harbor. Dinner circles were arranged for a variety of restaurants in historic Ellicott City, Md., 15 minutes from UMBC’s campus. A shuttle was provided for attendees to go to the dinner circles. We wish we had been able to offer space for all of the sessions in one building on campus, but unfortunately that was not possible. We were, however, very pleased to offer attendees opportunities to see our beautiful campus during two tours (one each on Friday and Saturday) of the Herbert Run Greenway.

Planning Process. Planning for the 2017 conference began three years previously, shortly after Dr. Steven Freeland, Director of

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the Interdisciplinary Studies Program (INDS), began his tenure as head of the program. Early planning was spearheaded by Dr. Freeland and Samirah Hassan, the INDS administrative assistant at the time.

During the spring of 2016, Eric Brown, currently Program Coordinator for INDS, agreed to serve as Conference Coordinator, working closely with Ms. Hassan. Given that Mr. Brown served in this capacity in addition to his duties at INDS and teaching for the Department of History, we would highly recommend that future hosts look to find someone who can work at least half-time as conference coordinator for the 12 months leading up to the conference. The 2016 conference in Ottawa is a good example of this model.

Ms. Hassan served as liaison with the Westin BWI, the site of the opening dinner, and worked on space acquisition at UMBC. Assistant Director Carrie Sauter played a leading role in securing name tags and giveaways for the conference. She also organized the dozen student workers who volunteered to help with the event.

One particular difficulty at UMBC was arranging an online portal for accepting conference payments. It took Mr. Brown a calendar year to get a system in place. While some of the issues with getting the system together were peculiar to UMBC, it seems that it could be in the long-term logistical and financial interest of AIS to take over this function.

Staffing for the conference was severely hampered when Ms. Hassan left INDS in the late summer of 2017. A new administrative assistant, Holly Cudzilo, only joined INDS in the week before the conference. The impact of this staffing upset was devastating for INDS. During the six weeks INDS was without an administrative assistant, Ms. Keyia Ward from UMBC’s Student Support Services, pitched in to help with tasks during the crucial period just before the conference.

Funding for the conference subvention came exclusively from INDS program funds.

Proposals and Programming. We received a total of 115 proposals by the extended deadline of May 10. Proposals were received from 9 different countries: Australia, Canada, Denmark, Germany, Pakistan, Finland, the Netherlands, United Kingdom, and the United States of America.

The proposals were evaluated by the conference committee, both for quality and adherence to the conference theme and interdisciplinary foci. Of these, 103 were accepted. A number of these proposals were reorganized or combined in collaboration with the presenters to bring the number of presentations to 85. Three of these presentations were cancelled because of the devastating fires in Sonoma County, California, which resulted in nearly all of our friends from Sonoma State missing the conference.

The total number of presenters was 125 and some presentations

Our theme of “Beyond Talking Heads” allowed us to construct a conference focused on process instead of a particular area of interdisciplinary work. There were short 15-minute Hermes sessions for individual speakers, 75-minute Athena panels and Haephestus workshops, and longer 120-minute Odysseus experiences. We largely received positive feedback on the diversity of session types.

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had up to 5 co-presenters. In total, there were 187 conference attendees including not only paid registrations, but also staff and student volunteers (12), Keynote Speakers (1), guest panelists (7), INDS staff (6), and other UMBC supporters. Of the total of 187 participants, 6 came from Canada, 6 from the Netherlands, 4 from Denmark, and 1 each from the United Kingdom, Australia, Finland and Germany. The United States provided 167 people. Nine people participated in the two pre-conference workshops.

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There were some questions about the brevity of the Hermes sessions. This was of particular note because those sessions were inspired by an informal vote at the 2016 Ottawa closing session where the attendees expressed a keen interest in short talks (10 minutes or less). In all, we were impressed by the diversity of sessions presented. The AIS community exhibited remarkable creativity and energy around the theme.

The organizing committee focused on scheduling sessions in such a way to give participants space to connect and have impromptu discussions. We were inspired to experiment with this type of programmatic pacing by the Gordon Research Conferences that take place in Galveston, Texas, among other locations.

While there were positives in this scheduling, we could have done a better job of signaling the change of pace this engendered. The success of the format was also hindered by two significant logistical challenges: the lack of a single space on campus to hold all the concurrent sessions and the necessity for motor transportation between campus and the conference hotel. A strong recommendation for future hosts would be to have all current sessions in one location.

The opening keynote speech by the president of UMBC, Dr. Freeman Hrabowski, was inspiring and very well received by the attendees. Dr. Hrabowski discussed the role of an interdisciplinary approach in his life as both a researcher and educator and in the research, programs and initiatives at UMBC. He generously agreed to stay after his speech to meet attendees and autograph books. It was Dr. Hrabowski’s third speech of the day and preceded a two-hour drive that he made to a fourth engagement later that evening. There were no other keynote speeches in keeping with the theme “Beyond Talking Heads.”

Conference Coordinators and AIS board members enjoy some camaraderie and respite as the 2017 Annual Conference of the Association for Interdisciplinary Studies winds down. From left, they are Roz Schindler, Eric Brown, Stephen Freeland, Robin DeRosa, and Khadijah Miller. The conference drew 187 attendees from 9 countries and featured 125 presentations. The conference was held at the University of Maryland Baltimore Campus.
The AIS Board of Directors met Oct. 18-19, 2017, in a cozy UMBC classroom with a wonderful chart of the Interdisciplinary Research Process adorning the wall. Our beneficent hosts provided some coffee and snacks to fuel our deliberations. According to the Treasurer’s Report, supplied by Bill Newell, although dues from memberships are down somewhat for 2017 (the final year was not at that time complete), our finances are sound, and we are operating in the black. We discussed ways to do more outreach to potential institutional members. There were many suggestions to involve volunteers from the membership in these efforts.

Since we have been running a budget surplus for the past few years, the board discussed priorities for spending some of our cash reserves. Our overall spending philosophy has been quite conservative, and will continue to be so, but we agreed that some strategic investment could be in order. At the present time, the physical office of AIS is run out of Oakland University, where our Business Manager, Scott Crabill, is a faculty member, and we employ a part-time office assistant, Shaunda Mankowski. Our website is also hosted on Oakland’s servers. Although the office situation is currently working quite well, we continued our discussion of the pros and cons of keeping our website there. We agreed that it is time to find an independent service to host our website, so that we have complete control over its content and layout. This would be a good use of our funds. Our IT director, Jennifer Dellner, has been exploring possibilities and will report at the midyear meeting.

The Vice President of Relations (Tanya Augsburg and, now, Khadijah Miller) and IIS editor Gretchen Shulz, are currently working on revising the AIS brochure. We discussed the recurring subject of AIS sponsoring regional conferences and other events, in which there is an interdisciplinary focus, sometimes in conjunction with other organizations. A formal policy will be developed on this. In preparation for the Wayne State conference centered on the conference theme — Inter/diversities — the VP-Relations has formed an Outreach Committee, which will explore ways to foster relationships with other organizations and increase AIS involvement with issues of diversity, both inside and outside of the association.

Our publications committee has been working to enhance the printing and distribution of our journal. Thanks to the efforts of our VP-Development, Jennifer Dellner, we have finalized our contract with ERIC and are beginning the process of contracting with EBSCO to index *Issues in Interdisciplinary Studies*. The committee is also researching various University Presses to print and electronically distribute our journal. Sven Arvidsen and Gretchen Shulz have formed a good working partnership as co-editors of *IIS* and reported on the state of submissions for the next issue. The board had a rather philosophical discussion over how strict or broad our interpretation and representation of interdisciplinarity should be in accepting material.

By James Welch IV
AIS President 2017-18

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for our publications. We agreed that there should be a degree of reflexivity, awareness, metacognition about interdisciplinarity, but we should not be too exclusive about the many possible ways this could be conceived. At-large member Heidi Upton suggested we be more inclusive of voices from other realms—like from the arts—that have commonality with interdisciplinary studies. The board continued its debate over how accessible articles in IIS should be to audiences outside of AIS members. We discussed Integrative Pathways, including more material from the sections and the possibility of bi-lingual content.

The board reviewed that successes and challenges involving the Sections initiative, and ways to facilitate sections through website visibility and discussion/file sharing forums. Our past president, Machiel Keestra, gave a report on the International Transdisciplinary conference at Leuphana University, which has been chronicled in recent newsletter reports. He reported on an initiative taken during that conference for an international network of interdisciplinary and transdisciplinary organizations and projects around the world. Opportunities for further networking will be built into the 2019 conference in Amsterdam.

Our conference liaison, Roz Schindler, facilitated reports on upcoming conferences, including Wayne State in 2018. In 2019, the conference in Amsterdam will explore Interdisciplinarity in global contexts. Other preliminary goals and ideas include integrating science with interdisciplinary theory and approaches, and how we can develop more of a web of relationships across borders. In 2020, Sonoma State in California will host the AIS conference, and in 2021 Southern Utah University will host our annual conference.

As always, you can always contact me for more information on anything we are working on. I would be happy to address your ideas, comments, questions or concerns. Also, as I hope this report conveys, we have many projects and initiatives in the works, and we could use all the help we can get. If you’d like to assist us, please contact me and we’ll get you involved!

Thanks!
James Welch IV

Conference attendees tune in to a presentation during the 2017 annual conference of the Association for Interdisciplinary Studies.
Rick Szostak Receives Prestigious Boulding Award

Dr. Rick Szostak was named winner of the prestigious Boulding Award October 20, 2017, at the 39th Annual Conference of the Association for Interdisciplinary Studies.

The Boulding Award honors Kenneth E. Boulding, an economist who rose to the top of his discipline while carrying out pioneering interdisciplinary research. A nominee for the Nobel Prize in both peace and economics, Boulding received the John Bates Clark Medal, awarded to the American economist under forty who made the most significant contribution to economic thought and knowledge.

Boulding’s seminal interdisciplinary research helped establish the fields of integrated social science, peace studies, conflict resolution, general systems, future studies, philanthropy studies, and evolutionary social science. In 1979 he gave the keynote address at the national conference where the Association for Integrative Studies (AIS) was founded. His inspiration continues to shape the mission of AIS, and in 1990 the AIS Board of Directors established the Boulding Award in his honor, naming Boulding himself the first recipient.

Recipients of the award are distinguished by their major long-term contributions to interdisciplinary studies, whether by clarifying and deepening the conception of interdisciplinary or by promoting scholarly or public understanding. Because the Boulding Award celebrates outstanding records of accomplishments, it is conferred only occasionally.

As recipient of the Boulding Award, Dr. Szostak was recognized for his work, which has deepened understandings of interdisciplinary, and effected wider visibility of interdisciplinary studies that has both intellectual and social merits. The scope of his scholarship also traverses economic history, methodology, history of technology, ethics, science studies, information science, and world history, as well as the theory and practice of interdisciplinary.

His prolific body of scholarship encompasses articles, essays and reviews in AIS publications, co-authored and co-edited books on interdisciplinary studies, and innumerable presentations and panel discussions at national and international conferences. The multiple threads of this framework are interrelated and include fundamental aspects of one of his emerging central questions—the nature of complexity.

Szostak has contributed significantly to establishing rigorous definition of interdisciplinary studies as a legitimate academic enterprise, a powerful approach to knowledge production, and a potent strategy for complex problem solving and policy development that establishes a bridge between theory and application. He has been a strong voice for defining best practices for interdisciplinary knowledge production, seeking to balance strengths and weaknesses of structured disciplinary approaches with more heterodox intuitive methods, while grounding them in practical problem solving.

He continues to clarify what it means to be interdisciplinary across knowledge domains by sharpening definitions of the field while advocating a more structured approach to research and education, and entering the debate between structural and post-structural approaches by proposing a “middle way” conceptualization of interdisciplinarity that balances strengths and weaknesses of both approaches.

In short, Rick Szostak has contributed significantly to maturing the field of interdisciplinary studies and research. He has not only assimilated foundational works of previous interdisciplinary scholarship but also built thoughtfully on them by incisively refining and expanding their contributions. In the process, he has modeled how to approach complex intellectual questions and societal problems. In doing so, Szostak has also advanced the visibility and importance of establishing interdisciplinarity, in the United States and around the world, as a legitimate academic enterprise and an effective approach to knowledge production. Through his publications and speaking engagements, Szostak has brought scholarship of interdisciplinary theory and practice to a global audience, thus not only meeting but exceeding requirements for the Boulding Award.
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Book Review

Szostak, Gnoli, López-Huertas argue no boundaries for interdisciplinary research


By Michael O’Rourke
Michigan State University

Imagine, if you will, a philosopher who in the course of studying how interdisciplinary knowledge is created “discovers” the knowledge management literature in business and organizational science, happening upon it accidentally in the course of a library search for works related to collective knowledge. A discipline unknown to the researcher reveals itself and changes the course of their thinking about their project.

I suspect that most of us who do interdisciplinary work have had something like this happen – our research landscapes have been expanded fortuitously by the random winds of good fortune. But this type of revelation can also be unnerving; in fact, it might even lead you to resign yourself to the conclusion that as an interdisciplinary researcher you will always work on projects in ignorance of relevant literatures, unknown knowns that could strengthen your work if only you knew about them.

But this depressing epistemic situation is not inevitable, or so argue Rick Szostak, Claudio Gnoli, and María López-Huertas in their book, Interdisciplinary Knowledge Organization. Interdisciplinarity is a difficult and demanding mode of scholarly activity, whether pursued individually or in teams. One significant challenge is locating existing scholarship that is relevant to one’s project, scholarship that could be strewn across the intellectual landscape without any regard for disciplinary boundaries. This challenge is exacerbated by the fact that different concepts can go by the same term in different disciplines or the same concept can go by different terms.

In this dense and detailed work, the authors argue that a comprehensive knowledge organization system (KOS) organized around phenomena, rather than a more traditional, domain-specific KOSs organized around disciplines, would enable interdisciplinary researchers to locate relevant sources from across the full range of what we know. Phenomena-based searches will punch through disciplinary boundaries and enable the researcher to find works that would remain hidden if knowledge were organized into domain-specific KOSs that preserved those boundaries.

Written primarily for information scientists who have an interest in knowledge organization, the main goal of the book is to establish the importance of rethinking KOSs in light of the knowledge needs of interdisciplinary researchers.

The book begins with two chapters that describe interdisciplinarity and the knowledge needs of interdisciplinary researchers. Given the growing importance of interdisciplinary research, the authors argue that it is time to rethink how we organize our knowledge so that the interdisciplinary researcher can be well-served. The key is developing a KOS that facilitates integration of insights ranging across potentially quite disparate disciplines. That this can be done without undermining the knowledge needs of the disciplinary researcher—since, after all, disciplines are themselves phenomena and so will correspond to classes in a phenomena-based system—makes this approach to knowledge organization seem clearly superior to existing, more traditional alternatives.

The problem, though, is that it isn’t clear to everyone that a comprehensive, phenomena-based KOS is possible. For example, Birger Hjørland and colleagues have argued in a series of works that, because of the ubiquity and irremediable nature of terminological ambiguity and the theory-bound nature of concepts, “it is best to classify documents only within particular domains employing terms as scholars within the community in question are found to understand these” (p. 69). Much of the book is devoted to countering this view from several angles.

After introducing the reader to the nature of KOSs and developing the phenomenon-based classification system in contrast with the

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The type of [Knowledge Organization System] the authors envision is comprehensive in the sense that it is not limited in its focus to knowledge within domains, e.g., disciplines. Comprehension is supported by a commitment to maximally broad foundational categories—viz., phenomena and relationships among them—as the basic organizational units.

Finding research-relevant information across the full map of knowledge is a very real problem for interdisciplinarians, and the authors argue compellingly that a comprehensive, phenomena-based KOS can address it.
Latin America Section

Interdisciplinary and Transdisciplinary Institutions, Cultures, and Communities in Latin America

By Bianca Vienni Baptista
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Introduction

In 2016, the Association for Interdisciplinary Studies presented a special section on Latin American interdisciplinarity in its journal (Volume 34, 2016). The collection of articles from across the continent was a first step in understanding related themes and reflections on interdisciplinarity, with the aim of promoting a more interdisciplinary scientific practice. It was based on the premise of reflecting about the challenges faced by interdisciplinary knowledge production, focusing on the institutionalization processes, cultural transformations and characteristics of the communities emerging from these processes.

In the same way, the collection was a response to the renewed interest on interdisciplinary issues in some countries and universities in Latin America, as evidenced by the recent discussion of research methods and dissemination activities that critically engage theory and practice (Vienni, 2016). But it is also constituted a means for reflection by building from our differences (Vilsmaier, personal comm.) and the lessons learned in each continent.

The special section left out other initiatives and experiences from groups and institutions from different Latin American countries. As a second step towards actualizing this significant goal, the Integrative Pathways Newsletter inaugurates a new section to integrate other voices in the discussion of how to foster and improve interdisciplinary education, teaching and research. This section is a compendium of contributions from various Latin American countries revolving around three lynchpins: institutions, cultures and communities constructed around interdisciplinary knowledge production. Reflec-

En introducción

En 2016, la Association of Interdisciplinary Studies presentó una sección especial en su revista sobre la interdisciplina en América Latina (Volumen 34, 2016). La colección de artículos de todo el continente fue un primer paso para comprender las relaciones y reflexiones sobre interdisciplina, con el objetivo de promover una práctica científica más interdisciplinaria. Se basó en la premisa de repensar los desafíos que enfrenta la producción de conocimiento interdisciplinario, centrándose en los procesos de institucionalización, las transformaciones culturales y las características de las comunidades que emergen de estos procesos.

De la misma manera, la colección fue una respuesta al renovado interés en temas interdisciplinarios en algunos países y universidades en América Latina, como lo demuestra la reciente discusión sobre métodos de investigación y actividades de difusión que involucran criticamente la teoría y la práctica (Vienni, 2016). Pero también se constituye en un medio de reflexión construyendo a partir de nuestras diferencias (Vilsmaier, comunicación personal) y las lecciones aprendidas en cada continente.

El volumen en la revista del año 2016, tuvo que seleccionar algunas iniciativas y experiencias de grupos e instituciones de diferentes países de América Latina, lo que dejó por fuera a muchas otras de gran interés. Como un segundo paso hacia la realización de este importante objetivo, el presente boletín, titulado Pathways Newsletter, inaugura una sección para integrar otras voces en la discusión sobre cómo fomentar y mejorar la educación interdisciplinaria, la docencia y la investigación. Esta

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tion about these practices constitutes an effort to position the interdisciplinary realm, with an understanding that the local cultural contexts are the foundation upon which to create dialogue.

The different texts that will be presented in this section bring up the need to build an intercontinental dialogue based on interdisciplinary experiences that have been unfolding in different countries and regions for more than five decades (Simini and Vienni, 2017). This history requires a framework with which to reflect about and analyze them in light of certain issues that are currently being imposed on researchers (Vienni, 2016). I hereby suggest naming this emerging field “Studies on Inter- and Transdisciplinarity” (Estudios sobre Interdisciplinaria y Transdisciplinaria, ESIT for its acronym in Spanish) (Vienni, 2016). This does not constitute an attempt to build another field of study different from what other authors have already proposed (Darbellay, 2015). Instead, it seems reasonable to think about certain questions that are currently being asked of Latin American researchers (Vienni, 2016).

Some questions were addressed as a standpoint for the contributions from Latin American colleagues, namely:

• What are the main features of interdisciplinary research and teaching in Latin America?
• What lessons can be systematized from those experiences in Latin American universities and academic contexts?
• Which national policies encourage and discourage interdisciplinary programs across Latin America, respecting both crosscutting and locally situated imperatives?
• What impact does interdisciplinary have on cultural processes in Latin America?
• What traditions shape interdisciplinary teaching in undergraduate and postgraduate programs?
• How can learning processes for inter- and disciplinary training be constructed that are appropriate to local and hemisphere contexts?

The relevance of these issues lies in their theoretical contributions to interdisciplinarity. The contributions hereby compiled share general goals including: (i) to make the characteristics of interdisciplinary work in Latin America visible to other interdisciplinary communities; (ii) to promote a dialogue between researchers from different countries who face the challenges and opportunities of interdisciplinary and transdisciplinary approaches; and

section se constituye como un compendio de contribuciones de varios países latinoamericanos que se articulan en torno a tres ejes: instituciones, culturas y comunidades construidas en torno a la producción de conocimiento interdisciplinario. La reflexión sobre estas prácticas constituye un esfuerzo por posicionar el ámbito interdisciplinario, entendiendo que los contextos culturales locales son la base sobre la cual se puede crear el diálogo.

Los diferentes textos que iremos presentando en este boletín plantean la necesidad de construir un diálogo intercontinental basado en experiencias interdisciplinarias que se han desarrollado en diferentes países y regiones durante más de cinco décadas (Simini y Vienni, 2017). Esta historia requiere un marco para reflexionar sobre ellos y analizarlos a la luz de ciertos problemas que actualmente se imponen a los investigadores (Vienni, 2016). Sugiero nombrar este campo emergente “Estudios sobre Interdisciplinaria y Transdisciplinaria” (ESIT) (Vienni, 2016). Esto no constituye un intento de construir otro campo de estudio diferente de lo que otros autores ya han propuesto (Darbellay, 2015). En cambio, parece razonable pensar en ciertas preguntas que se están imponiendo actualmente a los investigadores latinoamericanos (Vienni, 2016). Algunas de ellas fueron abordadas para las contribuciones de colegas latinoamericanos en esta nueva sección del boletín, a saber:

• ¿Cuáles son las principales características de la investigación y la enseñanza interdisciplinarias en América Latina?
• ¿Qué lecciones se pueden sistematizar a partir de esas experiencias en universidades y contextos académicos latinoamericanos?
• ¿Qué políticas nacionales fomentan y/o desalientan los programas interdisciplinarios en América Latina, teniendo en cuenta los imperativos transversales y localmente situados?
• ¿Qué impacto tiene la interdisciplina en los procesos culturales en América Latina?
• ¿Qué tradiciones dan forma a la enseñanza interdisciplinaria en los programas de pregrado y postgrado?
• ¿Cómo se pueden construir procesos de aprendizaje para la formación interdisciplinaria y transdisciplinaria que sean apropiados para los contextos locales y regionales?

La relevancia de estos temas radica en su contribución a la discusión teórica para la interdisciplina. Las
(iii) to construct a common understanding.

Articles in this section utilize diversity as a criterion to illustrate the current development of interdisciplinary research, teaching and outreach in different institutions and organizations in the Latin American continent.

**Studies on Interdisciplinarity and Transdisciplinarity**

The substantial goal of Studies on Inter- and Transdisciplinarity (ESIT) (Vienni, 2016) is to systematize research into the scope of inter- and transdisciplinary work, and propose developments for the strengthening of these practices in Latin American contexts.

It thus aims to contribute toward the well-founded design of instruments to promote and evaluate knowledge production within the framework of interdisciplinarity and transdisciplinarity in institutions, as well as between universities and other institutions and stakeholders. Likewise, this field can substantially contribute toward the promotion of interdisciplinary studies.

The approach guiding this proposal is based on the field of Science, Technology and Society (Albornoz et al., 1996; González García et al., 1996; Iranzo and Blanco, 1999; López Cerezo and Sánchez Ron, 2001; Pérez Bustos and Lozano Borda, 2011; to mention a few), and Development (Arocena, 2003; Arocena and Sutz, 2001; Arocena et al., 2015).

The consolidation of a field such as the ESIT requires the creation of a platform in which to debate and promote interdisciplinary and transdisciplinary research and teaching. The core of this proposal is: (i) to move forward in the construction of a cognitive analysis of inter- and transdisciplinarity as knowledge producing spaces; (ii) to generate knowledge on inter- and transdisciplinarity; (iii) to enable the emergence of interdisciplinary approaches in different fields (academia, institutions, etc.); and, (iv) to design dynamics to promote interdisciplinarity and transdisciplinarity in different contexts.

In order to define these objectives, it is relevant to conduct research on inter- and transdisciplinary theories and practices, and carry out an exploration of the interdisciplinary nature of certain methodological approaches and how they create and shape research fields and disciplines in particular (Strathern, 2004).

Let’s reflect about interdisciplinary practices, the time and the resources they require (Lyall et al. 2010), and the institutional investment needed to construct them. Is it reasonable to think that an effort like interdisciplinary work, which implies institutional, cultural, political, and...
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educational changes, can be linked to the goal of solving the problems faced by underdevelopment.

Examples of this are provided in this issue with the contribution from NGO 360 in Chile. The authors recognize the importance of establishing flexible organizational designs that may allow for the development of a participative community and encourage an appropriate appreciation and promotion of transdisciplinary research from a pluralist perspective. The creation of bridges among actors and different types of knowledges are two distinctive features of the work conducted by NGO 360.

References
Given the challenges and problems that arise in the 21st century, it is difficult to imagine an education that remains traditional or static, without seeking an innovative way to train its students and prepare them for what is to come. Because of that, we think it’s essential to discuss the experiences towards interdisciplinary education, in this case we present the program of a Master’s Degree in Social Sciences from the University of Sonora. This program approaches interdisciplinary research and has the support of the National Council of Science and Technology (CONACYT), who pushes and strengthens the scientific development in Higher Education in Mexico.

Students that are part of this postgraduate are individuals that have studied careers such as communication, psychology, law, social work, architecture, amongst others. That is to say, each one received a disciplinary education in university. However, and although the careers differ considerably from one another, these students have a common interest for research and getting out of their “comfort zone,” while studying a specific problem from different disciplines and searching for the integration of knowledge.

One of the objectives of the program is to train researchers capable of developing interdisciplinary research projects in the Social Sciences. For that, the postgraduate offers three different research lines: 1) Globalization and sustainability, 2) Social problems emerging in culture and ethno development, and 3) Social development and educational processes. Students have the freedom of choosing which of the topics is amongst their interest and they are asked to work on a thesis about it for a period of two years.

In this learning environment, it can be observed how different disciplines coexist and are used to find more explanatory solutions to social phenomena. Students are trained in research methods, collecting of data and interpreting results, as well as strategies that allow them to integrate the information.

The Master’s program has a duration of four semesters and a total of 120 credits. Amongst the subjects we can find Social Theories, Social Research Methodology
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I and II, Integrative Thinking I and II, Topics of Social Research and Degree Seminar I and II, and lastly, two optional subjects. It must be noted that the academic faculty in the postgraduate is made-up of professors from different disciplines that are as well research-oriented.

With the purpose of promoting the bases of interdisciplinary research, it’s necessary to course the subject of “Integrative Thinking,” where the book by Repko and Szostak, *Interdisciplinary Research*, as well as publications from the Association for Interdisciplinary Studies (AIS), are of big use for the students. It’s through this material that they know the potentials and benefits of said perspective, as well as a series of steps that guide and facilitate the process.

After concluding their postgraduate education, the student will have certain essential knowledge for the workplace: knowing the theoretical foundations of multidisciplinary and interdisciplinary research, intervening in situations/problems that demand interdisciplinary strategies and apply strategies as well as solutions from different disciplinary fields.

Although it’s been said on numerous occasions that the traditional school “has been left behind,” the truth is that there are still a considerable number of educational instances in Mexico that carry pedagogies of this kind, where the student is expected to simply remember the information. However, we have to acknowledge the efforts that are being made by investing in knowledge, research and interdisciplinarity.

It’s through a cognitive-empirical development in the student, that we can put in practice a more critical thinking, using creativity to synthetize knowledge and create something new. We live in a society with a huge amount of problems that are increasingly more complex, demanding in the individual new ways of confronting adversities.

While a successful interdisciplinary education encourages research, it also requires the right selection of an academic faculty, a curriculum and appropriate educational objectives (this is not an easy task), ultimately it’s an effort worth taking for the students, their cognitive development and development in the professional work field.
their “internal essence or function” (monothetic), and does so precisely enough that the resulting classifications do not overlap (exclusive).

Finding research-relevant information across the full map of knowledge is a very real problem for interdisciplinarians, and the authors argue compellingly that a comprehensive, phenomena-based KOS can address it. But there are a number of questions about the approach that remain open. I will consider two. First, if ontology is to ground the KOS, then a specific ontological viewpoint must be privileged; in this case, it is a realist view that endorses levels of reality. To the extent that this scientific ontology is inconsistent with other ontologies—e.g., postmodern conceptions that privilege human construction, or indigenous conceptions that conform to a very different structural geometry—it enforces a hegemonic stamp on knowledge that marginalizes them and makes it more difficult for them to influence interdisciplinary research.

Second, there appears to be an overemphasis on causal linkages, understood broadly in terms of influence, since many of the relationships of interest to interdisciplinarians will be structural (e.g., logical relationships). These structural connections are a critical part of the business of relating different perspectives on the same thing and should not be underplayed in organizing knowledge for use by interdisciplinary researchers. To be sure, the authors accommodate all manner of relationships in their overall view (see Ch. 7), but it is not clear how these will be organized relative to the more fundamental causal relationships.

These two questions are philosophical, and as the authors point out, information science has different priorities and different standards than philosophy; nevertheless, by committing to a comprehensive, phenomena-based KOS, the authors would be taking a stand, intentionally, that knowledge can best be ordered this way, and this would have both epistemic and political implications.

I came to this book without much knowledge of information science, and I leave it with a much better appreciation for the range of issues and debates that exercise classificationists.

As a philosopher, I appreciate the authors’ sensitivity to issues that range across the philosophical spectrum. As an interdisciplinarian, I am grateful for the attention to the difficulties that beset integrative research. The questions I raised above notwithstanding, this is an informative and thought-provoking book that points to what could be an easier future for interdisciplinary research.

Latin America Section

Interdisciplinary Education and Research in Mexico

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Frontiers in Public Health: A Case Study of an Interdisciplinary Course

By Ruth Childs and Dena Levy
The College at Brockport • State University of New York

Introduction
This essay provides a brief case study of a new interdisciplinary course taught at the College at Brockport, State University of New York. Five faculty from four different disciplines developed a course, “The New Frontiers in Public Health,” that examined vaccinations.
Like many contemporary issues, public health and vaccinations are complex and studying them through the lens of a single discipline is inadequate. An interdisciplinary course allows for a better understanding of the complexity and multi-faceted realities surrounding the issues.
Indeed, over the time period of developing the class to offering it, three separate crises related to vaccinations and immunizations occurred: the Ebola crisis, the outbreak of measles in the US, and then the Zika virus. While Ebola and Zika are more tangentially relevant, the increase in the number of measles cases in Southern California is a direct consequence of the growth in the anti-vaccination movement. Solutions to all three of these health issues are beyond the scope of just one discipline and students were able to appreciate how real world problems have real world implications.

Course Overview
The Frontiers in Public Health course is an example of an adapted interactive team model of interdisciplinary teaching (Easterby-Smith and Olve, 1984). While one team member, Dr. Susan Orr took the lead in the administration of the class, all teaching faculty shared equally in the development of the structure of the course and teaching responsibilities. There were five partners teaching the course: Dr. Joseph Balog, Public Health, Dr Craig Lending, Biology, Dr. Robert Mejia, Communications, Dr. Susan Orr, Political Science, and Dr. Adam Rich, Biology.
The groups rotated every two weeks among the five faculty thereby focusing on vaccines from each of the different disciplines. Within each unit, students were responsible for writing a two-page paper that was focused on the particular disciplinary lessons. The course concluded with a two-week simulation project creating synthesis across the different disciplines. This synthesis assignment is a critical element of an interdisciplinary course. Without it, students are not able to process the interconnectedness of all of the disciplines on the issue of vaccinations.

Public Health Unit
Dr. Joseph Balog used his first two classes to introduce students to the history and justification for public health. The second half of Dr. Balog’s unit then examined specific cases of immunization programs. The paper assignment for this section required students to apply moral reasoning to an ethical issue related to the themes of mandatory or voluntary vaccinations.

Biology I Unit
In the Biology I section, taught by Dr. Craig Lending, students began with a history of vaccines. Students then moved to a more complex discussion of immunity explaining the difference between innate and adaptive immunity. Dr. Lending concluded with a discussion of the current state of vaccine development and clinical trials.
The paper for this unit asked students to write in the voice of a senate staffer preparing a US senator to introduce legislation to remove the philosophical and religious exemptions for mandatory childhood vaccinations. Students provided an overview for the senator about the scientific background on vaccinations (how and why vaccines confer immunity), and a balanced view on safety and risks involved in a mandatory vaccination program.

To be truly interdisciplinary a course must synthesize the material from the different disciplines. While students rotated through the different disciplines to understand the issues surrounding mandatory vaccinations, it was in a final project that they pulled everything together for the broader perspective fundamental to interdisciplinary studies.

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Communications Unit

Dr. Mejia from the Communications Department provided students with an understanding of a communications model of flow and influence. Students learned about how the public attains information, and how those information sources influence us. Dr. Mejia concluded by focusing on the particular challenge of mass communication about scientific issues. Students in this unit conducted research about a vaccine of their choice and then wrote a paper explaining their position.

Public Policy Unit

In the unit taught by Dr. Susan Orr, students learned about the policy making process – what makes some policies successful, while others fail. Dr. Orr then moved to the specific case of enacting public policy for vaccinations, discussing both governmental actors that have been integral to the process as well as nongovernmental actors.

In this section students were asked to imagine they were director of an advocacy organization working in the area of vaccine policy. In their policy analysis paper they described at least one strength and weakness of the nation’s current vaccine policy as well some actions the group could take to further the group’s policy proposals.

Biology II Unit

The second biology section was a hands-on lab taught by Dr. Adam Rich. Students learned how a clinical test can determine if a person has responded to an infectious agent. Students had the opportunity to perform laboratory tests to determine if a patient’s blood showed evidence of an immune response using a standard laboratory test called enzyme-linked immunosorbent assay, or ELISA. Students in this unit wrote a paper describing the ELISA assay, showed results, and discussed the interpretation of the results.

Course Synthesis

To be truly interdisciplinary a course must synthesize the material from the different disciplines. While students rotated through the different disciplines to understand the issues surrounding mandatory vaccinations, it was in a final project that they pulled everything together for the broader perspective fundamental to interdisciplinary studies.

Tasks that involve shared governance (such as our interdisciplinary teaching project), ... require time, commitment of team members, tolerance for messy and disorganized planning, and respect for divergent views and voices. If faculty who want to develop an interdisciplinary course are open to experiencing these types of possibilities and practices, then I believe they will increase their chances of successfully developing an interdisciplinary team and a final product.

— Joe Balog

This course achieved that synthesis through a two-week simulation project. Students took part in a mock public forum where a public policy proposal over the elimination of religious exemptions to mandatory vaccinations in public school was debated. Students worked in groups to prepare for the forum with each group assigned a “role.”

Roles for the forum included: Pediatrician; Parents opposed to Vaccines; Parents of immunosuppressed children; Public Health official; Clergyman; Libertarian citizens; Parents of Autistic Children (opposed to Vaccines); Parent of Autistic Children (supportive of Vaccines); School Board Official; Vaccine Skeptic Scientist.

At the forum, one student from each group delivered a statement outlining the groups’ position and arguments. All other students engaged in a question and answer/open discussion session once all groups delivered their prepared statements. External judges selected the most persuasive group.

Summary Writing Assignment

Part of the preparation for the simulation was requiring students to write about a mandatory vaccination program integrating viewpoints from at least two disciplines. Students were able to select the format of their writing project from the following: Press Release, Letter to the Editor, or Public Education Pamphlet.

Regardless of the specific format selected students were asked to synthesize material from at least two sections of the course into a concise statement. For example, if students chose to write a letter to the editor, they might formulate an argument in favor of mandatory vaccination policy providing support for their position with scientific evidence.
Frontiers in Public Health

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(biology) and moral arguments (public health). Alternatively, they might write a press release for a group opposed to mandatory vaccination policies and use constitutional law arguments (political science) and scientific studies (biology) as the bases for their case.

Both sets of assignments – simulation and essay – were designed to ensure that students realized that understanding the nuances of the arguments surrounding vaccination policy requires integration. Simply having knowledge from the scientific literature fails to address why some policies are enacted and others are not. It is only through the integration of the disciplines that students were able to pull together the strands of learning that provides a rich understanding of the issue at hand.

**Student Feedback**

At the conclusion of the course, students were provided with a brief exit survey asking them for feedback about the course. This is particularly important given that it was the first time the class was taught. As is the case with any newly piloted course, this one was not without its bumps.

Initial results indicate that the majority (64.3%) were sufficiently pleased with the course to recommend it to a friend and just over half (54.5%) indicated they would be interested in taking another interdisciplinary course in the future.

Table 1 provides responses based on asking students what they believed to be the advantages of taking the course. 75% of students identified gaining a deeper understanding of the issue as the main advantage of the class while 62.5% selected experiencing multiple teaching styles and 61.6% selected making connections within the teams (see Table 1).

**Table 2**

Disadvantages of Frontiers Course

The exit survey provided an opportunity for students to offer their own perspectives and many were quite positive:

“This was one of my favorite classes I’ve taken at Brockport. It was a good course and great experience.”

“I felt that I learned a lot and without all of the different perspectives I would not have gained such a well-rounded experience”
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“It’s like inventing something for the 1st time - it’s a prototype but you can see the potential of a course like this. Fix a few things - organize a little better and then this will be the perfect course.”

“I enjoyed how all of the teachers seemed really interested and excited for each class.”

Faculty Feedback
At the end of the semester we asked the teaching faculty to provide us with insight into what they liked, didn’t like and would change after having taught the class. Faculty all agreed they gained considerably from spending time with other colleagues across different disciplines.

However, while all the faculty involved felt the course was worthwhile, they agreed that there were unique challenges to teaching this type of class. Most difficulties stem from the mechanics of connecting different faculty, different students and different disciplines. The faculty recognize this as a “pilot” project and feel that they learned some valuable lessons for future interdisciplinary endeavors.

Perhaps summing it up best was the reflection below of one team member, Joe Balog: Tasks that involve shared governance (such as our interdisciplinary teaching project), … require time, commitment of team members, tolerance for messy and disorganized planning, and respect for divergent views and voices. If faculty who want to develop an interdisciplinary course are open to experiencing these types of possibilities and practices, then I believe they will increase their chances of successfully developing an interdisciplinary team and a final product.

Future Plans
There is interest in teaching the course again, however one of the team members has left Brockport for a new position. In some respects, this may prove to be an advantage because it would allow for a deeper exploration within each discipline. However, the faculty have not made a final decision about when to teach the course again, nor what format to use.

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INTEGRATIVE PATHWAYS

40th AIS Annual Conference Set For Wayne State in Detroit Oct. 11-13, 2018

Theme:
‘Inter/diversities’: Intersecting Race, Gender, Class, Abilities, Theories, and Disciplines

Conference Hotel
Crowne Plaza • Downtown Detroit

Conference Coordinator:
Roslyn Schindler
(rozschind@aol.com)

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