

## **Intuition and animism as bridging concepts to Indigenous knowledges in environmental decision-making**

**M. J. Barrett, Brad Wuetherick, University of Saskatchewan**

### **Authors' Contact Information**

*M.J. Barrett, (Assistant Professor, School of Environment and Sustainability and College of Education, University of Saskatchewan)  
Kirk Hall 3333, 28 Campus Dr., Saskatoon, SK. S7N 0X1  
Phone: 306-966-7633  
Email: [mj.barrett@usask.ca](mailto:mj.barrett@usask.ca)*

*Brad Wuetherick, (Program Director, Gwenna Moss Centre for Teaching Effectiveness, University of Saskatchewan)*

### **Abstract:**

*This study reports on student responses to ENVS 811: Multiple ways of knowing in environmental decision-making, a graduate level course which focuses on helping students come to some understandings of the connections between their own knowing and Indigenous ways of coming to know as they prepare for both professional and research careers in the environmental field. Although the inclusion of Indigenous knowledges into resource management decision-making processes is increasingly being recognized as important, effective application remains elusive. Lack of understanding, or acceptance, of the broad scope of Indigenous knowledges continues to make it difficult, if not impossible, for those trained in Eurocentric, or Western educational programs to include anything more than empirical observations by Indigenous peoples into environmental decision-making. In the context of this course, intuition and animism are used as useful bridging concepts to enable a fuller understanding, and valuing, of multiple ways of coming to know. Based on in-person interviews and responses to a brief email questionnaire, six key themes emerged. These included concerns about the role of the course within the larger program; connection to students' personal research and professional practice; and the impacts of: the particular course instructor, guest speakers, assigned course readings, and the structure of the course and individual classes.*

### **Key Words:**

Environmental Education, Multiple Ways of Knowing, Aboriginal Education, Indigenous Education, Transrational Knowing, Intuition, Animism, Resource Management, Consciousness.

## Introduction

*To teach ethically it is essential to “open up spaces for alternate perspectives to come forth and embrace dissonant views”  
(Wane et al., 2004, p. 506).*

There is an increasing awareness, highlighted in the International Convention of Biodiversity, of the critical need for Indigenous knowledges (IK) to achieve environmental sustainability. Although recognized as important, effective application remains elusive (IPBES, 2011). One of the key reasons for this difficulty is the epistemological framing of resource management problems within Western management systems and understandings of the world (Houde, 2007; McGregor, 2000; Nadasdy, 2003, 2007). For instance, although conventionally-framed resource management approaches are able to contend with factual observations, past and current land uses, and some traditional land management systems, they do not effectively grapple with issues of cosmology (Houde, 2007). Although continuing progress is being made, lack of understanding and rejection of the spiritual nature of IK continues to make it difficult, if not impossible, for those trained in Eurocentric, or “Western” educational programs to include Indigenous knowledges in environmental decision-making. This is in part an educational problem that is being taken up in the School of Environment and Sustainability (SENS), University of Saskatchewan.

The authors of this paper are of mixed identities. The course instructor, M.J. Barrett, is female, white, and an interdisciplinary scholar who identifies as an animist. She grew up in Beaver Bank, Nova Scotia, is highly intuitive, and lives in active reciprocal relations with an animate earth (see Barrett, 2009, 2011b). Both her teaching and research reflect this relational orientation. Barrett is cross-appointed in SENS and the College of Education, University of Saskatchewan. The co-author, Brad Wuetherick, is Métis, with ancestry going back through Lac La Biche, Alberta in the 1880s to the Red River Settlement in Manitoba in the 1820s, to Quebec in the 1640s. He was raised in contemporary Canadian culture, and is just beginning to explore what it means to be Métis in the context of his academic role as program director of the Gwenna Moss Centre for Teaching Effectiveness. Barrett designed the course with input from many individuals on and off campus; Wuetherick provided consultation in the design process and facilitated the gathering and synthesis of the data. Both authors were involved in data analysis.

## COURSE

ENVS 811: Multiple Ways of Knowing in Environmental Decision-Making is set in the context of an interdisciplinary graduate program in environment and sustainability at University of Saskatchewan. SENS provides masters and doctoral level programs that emphasize the integrative nature of environmental challenges, the benefit of interdisciplinary understandings, and how sustainability is conceptualized and made operational. ENVS 811 is one of seven restricted elective courses. It involves critical examination of human-nature relations with particular emphasis on epistemology. Students are asked to analyze their own decision-making beliefs and practices in the context of multiple understandings of the world. Course objectives include developing an understanding that there are multiple ways of knowing, all which are valuable to

environmental decision-making; understanding that some knowledge systems are given higher status than others, and this higher status has had significant (often negative) social, economic, and environmental effects. Students are also expected to become familiar with a range of explanations for transrational knowing, and appreciate the significance of multiple ways of knowing to make high quality decisions and meet the constitutional “duty to consult” with Aboriginal peoples. The one-semester course takes a decolonizing approach, and recognizes that not only Indigenous peoples, but non-Indigenous peoples as well, have been colonized through long-term exposure to narrowly framed understandings of how one can come to know (see Bai, 2009; Donald, 2010; Greenwood, 2009). A final course objective is for students to practice integrating multiple ways of knowing into their own personal and professional decision-making. To do so, students are challenged to move beyond what are often deeply rooted assumptions about what counts as knowledge and knowing (Meyer, 2008).

## PROFESSIONAL BLIND SPOTS AND INDIGENOUS KNOWLEDGES

In their paper that argues the need for multiple knowledge forms to enable healthy human/nature relationships, Wilkinson et al. (2007) highlight the importance of attending to one’s own blind spots – the “unseen, unquestioned, and unexamined” when working to resolve complex environmental problems. They explain that “lack of awareness of ingrained professional ‘blind spots’ has had and is having profound negative impacts on the effectiveness of conservation and sustainability efforts” (p. 5). It is these professional blind spots vis-à-vis knowledge, Indigenous knowledges in particular, that the course addresses. Unfortunately, much of post-secondary education fails to be inclusive of IK while continuing to privilege Eurocentric epistemologies and the identities that go with them. This combination makes it very difficult for university-educated resource managers to be inclusive of a wide range of epistemologies in decision-making processes. As Houde (2007) identified, conventionally-framed resource management approaches more easily support inclusion of factual observations, past and current land uses, and some traditional land management systems. They have much more difficulty understanding and being inclusive of the ethics and values, culture and identity, and cosmologies of Indigenous peoples. As student responses to ENV5 811 reveal, a very helpful way of bridging aspects of this gap at the level of epistemology is an exploration of intuition and animism as ways of knowing.

Indigenous ways of knowing are holistic, acknowledging the “interconnectedness of physical, mental, emotional, and spiritual aspects of individuals with all living things and with the earth, the star world, and the universe” (Lavallée, 2009, p. 23). Marlene Castellano (2000), Mohawk Professor Emeritus at Trent University and past co-director of research for the Royal Commission on Aboriginal Peoples in Canada, describes three main sources of Indigenous Knowledge:

*Traditional knowledge* [which] has been handed down more or less intact from previous generations ... *Empirical knowledge* [which] is gained through careful observations ... *Revealed knowledge* [which] is acquired through dreams, visions, and intuitions that are understood to be spiritual in origin. (Castellano, 2000, pp. 23–24 [italics in original]).

Indigenous knowledges include all of the above and more<sup>1</sup> (e.g. Battiste & Henderson, 2000; Kwagley, 1995). In order to help students see the links between their own ways of knowing and IK, the course focuses on transrational forms of intuition and animism as bridging concepts. These concepts extend student understandings of what constitutes accepted epistemologies in environmental decision-making. These ways of knowing are new to some students. For others (some Indigenous, some not), they are familiar and forgotten, and the course provides opportunities to remember ways of knowing that used to be familiar, but have been dismissed or ignored in fields where scientific knowledge is privileged (Barrett et al., forthcoming; see also Conn & Conn, 2009; Fawcett et al., 2001).

Intuition, particularly in its transrational form, refers to knowing without knowing how you came to know (Bernstein, 2005; see also Barrett, in press). It goes beyond patterned understandings based on experience (for example, those small intuitive leaps an experienced practitioner might make when encountering a new problem to solve) to include insights that in some cases transcend time (McCraty et al, 2004) and physical location (e.g. a mother who knows her child is hurt even when he may be in another country). To distinguish this kind of intuition from intuition based primarily on experience, we use the term transrational intuition throughout the rest of this paper. Such transrational intuitions may come through dreams, visions, gut feelings, a sudden word or phrase that pops into one's head, a 'felt sense' or an unexplainable awareness of the 'right' answer, or way to proceed. Transrational forms of intuition are the result of an expanded consciousness, and are accessible to all humans regardless of cultural background. They are also in alignment with many of the spiritual aspects of Indigenous knowledges. However, since they "fall outside the pale of what professional cultures are willing to accept" they are often dismissed (e.g. Claxton, 2000, p. 34; Burk & Sadler-Smith, 2011). This dismissal is not dissimilar to the dismissal of the spiritual aspects of Indigenous knowledges in many resource management contexts (Berkes, 1999/2008; Simpson, 2001).

Transrational forms of intuition and animism are linked. The word animism is a construct of Western anthropology, and generally describes the relational ontology that is common to traditional Indigenous cultures (Hallowell, 1960; Morrison, 2000). Its more recent theoretical development (e.g. Harvey, 2006a, 2006b, in press; Stuckey, 2010) provides a particularly valuable starting point for discussions of Indigenous knowledges for those who are not Indigenous. An animist ontology supports a relational interaction with those who are not human, and acknowledges that plants, animals, and spirits exist in communicative relationship with humans. Insights received often take the form of dreams, visions, a felt sense, and so forth – ways of knowing which in Eurocentric traditions, are generally attributed to a brilliant human mind (Snyder, cited by Taylor, 2005), a pathology (Vaughn & Walsh, 2000), or a higher power (e.g. Abell, 1994). From an animist perspective, these insights are contributed from non-human "persons" with whom one is in relation (Harvey, 2006a; Stuckey, 2010) and are offered to humans who have the ability, and are open, to receiving them.

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<sup>1</sup> A complete discussion of IK is beyond the scope of this paper, as its focus is on issues of course design.

Animism can be considered a form of ‘forgotten knowing.’ There are some cultures which are animist and others where one can be an animist even though the culture itself is not an animist one (Harvey, 2006a, 2006b). Although animist knowing is sometimes supported in the context of outdoor experiential learning, and intuition has a place in all subject areas, the dominant focus on empirical data, rationality and critical analysis in academia combined with the historical denigration of both animism and spirituality as legitimate forms of knowing means that animist engagement and transrational intuition are seldom focal points for educators in the field of resource management.

## PEDAGOGY

The desire to educate in ways that support epistemological difference is not new (e.g. Dei, 2000). Teaching for epistemological difference in the environmental field can be particularly challenging however, given the value placed on empirical data as a dominant form of knowledge and rationality as a privileged form of knowing (Berkes, 1999/2008). A number of key teaching strategies found to be effective include: (1) exposing students to alternative epistemologies through readings and video lectures; (2) a carefully designed natural history journal assignment which provides opportunities for students to explore their own relational engagement with self and the natural world (Barrett et al., forthcoming; see also Conn & Conn, 2009). (3) multiple guest presenters who simultaneously embody and talk about transrational intuitive or animist epistemologies (e.g. Aboriginal scholars, an Elder, Elder’s helper or Oskapius, and a non-Aboriginal artist/mystic); and (4) making explicit the process of teaching *through*, rather than simply *about* different ways of knowing. Teaching *through* transrational and animist knowing disrupts dominant discourses about the nature of knowing (epistemology) and what often counts as legitimate lesson planning and delivery. In practice, this enactment includes frequent acts of “meditating on stage” which (for this course instructor) activates transrational intuition and animist knowing. Other effective strategies include: (5) provision of in-class experiences that support ways of knowing and being introduced in course readings and class lectures (e.g. Lipsett, 2011); (6) creation of a safe-enough classroom space to support discussion and exploration of complex and sometimes sensitive ideas; (6) helping students learn to identify the ways in which everyday speech, action and physical spaces limit epistemological diversity (Barrett, 2011a); and (7) acknowledging that epistemological diversity is represented in many different bodies, including white ones. This last point is represented in the embodied presence of an instructor who occasionally makes explicit her multiple and often conflicting identities as white scholar and animist. Together with guest speakers, her presence addresses Wane *et al.*’s (2004) critical question: “how can we provide an alternative pedagogy or multiple ways of knowing when you don’t have the diverse bodies to embody those diverse knowledges?” (p. 502).

The Association of Canadian Deans of Education Accord on Indigenous Education (2010) makes it clear that “new ways of engagement are required in order to address the negative impacts of Eurocentric education on Aboriginal peoples. The time is right for a concerted and cooperative effort that creates transformational education by rejecting the ‘status quo,’ moving beyond ‘closing the gap’ discourse, and contributing to the well-being of Indigenous peoples and their communities” (p. 2). Mi’kmaq scholar Battiste (2010) suggests that an educational transformation is necessary. The

transformation, she claims, “does not invite us to do something easy, on the contrary, it summons us to do something difficult” (p. 32). We suggest that diverse bodies are necessary, and that teaching through, rather than simply teaching about, multiple ways of knowing is essential to this transformation. So is attention to discourses and the ways in which they create, and often maintain in both thought and action, professional blind spots. As South African environmental educator Lotz-Sisitka (2002) reminds us, it is important to “ask questions about what we have not thought to think, about what is most densely invested in our discourses and practice, and about what has been muted or repressed and gone unheard in representations of our practice” (p. 118).

## THE STUDY

To inquire into the impact the course had on the students, and on their understandings of Aboriginal peoples and their perspectives, we designed two sets of questions which were posed to the students in the course (n=6). Students were both non-Aboriginal and self-identified Aboriginal from a traditional background. Four out of the six students in the course provided email feedback and participated in a brief one-on-one interview. Of those who participated, two of the students were taking the course for credit; two of the students were auditing the course. The auditors had completed all their required credits but were particularly interested in the topic.

This data comes from the first iteration of the course. Data from the third iteration (fall 2011) has been collected and is currently in the analysis stage. Our framework for analysis was interpretive, identifying main themes that emerged from student data. The following questions were asked of the students by email, and were explored further in conversational interviews:

- How has the course developed your understanding of Aboriginal perspectives in ways that will be helpful to you in your life and chosen profession?
- How has the course developed your thinking and ability to explain Aboriginal perspectives to non-Aboriginal Peoples?
- What specific changes would you suggest to course readings or overall course design?

The following summary represents the six key themes that emerged out of the student comments, supported by quotations from student email responses. Data was collected and compiled by Wuetherick independent of consultation with the course instructor, with the exception of our collective identification of the three guiding questions above.

## RESULTS AND DISCUSSION

The themes identified are: concerns about the role of the course within SENS and University more broadly; the impact of the particular course instructor; challenges with the course readings; the role of guest speakers; the structure of the course and individual classes; and connections to students' research and professional practice. We have chosen to identify and discuss each theme in turn, then focus on points for consideration in future iterations of the course.

**Role of the course in the program, and university.** Based student feedback, there was no doubt that the students participating in the course felt that it was a very important contribution to the program, and it provided them with a unique and practical learning experience. For example, one student commented:

I think the knowledge of First Nation peoples is undervalued by our society, and by association academia. Talking openly about these issues, as well as beliefs that we might not consider our own, allowed us to understand other perspectives and therefore become more empathetic to not only First Nation peoples, but all peoples. (Student 1)

All four students stated that, regardless of other concerns or perspectives, a course of this nature is critical in the broader program, and that they are hopeful that students and faculty will embrace this course in the future. There were concerns about whether or not the other faculty in the program are ready for this course, or whether this course will be an isolated experience for students that is unrelated to their overall program. The students who raised this concern also acknowledged that they were generalizing to the program as a whole, and that there are likely some faculty more ready than others to embrace multiple ways of knowing.

Still, students raised concerns about taking readings or ideas from this course and directly applying them in future coursework and personal research because they were uncertain whether faculty and/or supervisors would be willing (ready?) to let them do so. There was an underpinning concern that Indigenous knowledge systems and transrational ways of knowing are still not considered the equivalent of more traditional, particularly scientific ways of knowing that they are expected to demonstrate in other courses. Students also commented about their uncertainty of the reception they would receive from peers if they were to apply what they learned in the course to their future coursework and their personal research. That said, as mentioned above, in several cases students discussed the transformative nature of the course, and the impact that it had on opening their eyes to multiple ways of knowing and the legitimacy of different knowledge systems.

**Discussion.** Based on the students' comments, it might be important to explore how the curriculum in SENS might be structured to make sure this course is not a one-time experience in the program. In SENS, what kinds of knowledges have high status? Which have low status? (Bowers, 1997). And what are the impacts of this on how environmental concerns are addressed? How might a much wider range of ways of knowing, including Aboriginal ways of knowing, be supported in the program? How do students deepen their understanding of this material beyond a single course offering? As Battiste (2010) suggests, to effectively engage with Aboriginal students, those who deliver educational programs must be willing to go beyond small revisions and engage transformational changes. The challenge will be how to support such knowledges in an academic institution built upon and within Eurocentric structures.

**Impact of the Particular Course Instructor.** A few students spoke about the importance of having an instructor who has struggled with many of the issues students were running up against (see porosity.ca). The two students who indicated this made it clear that they thought of the instructor as a role model:

I consider MJ to be one of the most progressive, interesting, challenging and accessible professors in the SENS program, and by extension, my entire academic experience. I enjoy learning from her, she brings a level of comfort and ease when she talks about things that are perhaps not mainstream or not the dominant discourse, and because of this, allows me to do the same when I'm talking to people who haven't been exposed to these other ways of knowing/thinking. (Student 1)

One comment was made that this course might have been more difficult had the faculty member been visibly Aboriginal. In that particular student's mind the experience was made easier by the fact that the instructor 'looked' more like them. Another student expressed a sincere respect for the instructor's individual journey exploring the role of transrational cognition and Indigenous knowledges in her research and professional practice, and was highly complementary of the course and its role in the program.

I have sincere respect for MJ's journey with these issues. I think it helps having a professor who has grappled with some of these same issues of coming to know this material as a graduate student and faculty member. (Student 2)

This comment was balanced by the stated importance of Aboriginal faculty, elders, and traditional knowledge keepers visiting the class as guests, which will be addressed below.

**Discussion.** Central to this discussion are questions about the performance of identity, and what identities can be safely performed within the academy, by either instructor or student. One might ask how the instructor might use her personal narrative as someone who has grappled deeply with these issues in both intellectual and embodied ways, to help students on their own journey with the ideas, concepts, and material. If identities are constituted through available discourses (Butler, 1990), what kinds of identities do the discourses presented in a class like this support? Are they available to students – both Aboriginal and non-Aboriginal – in other courses and programs? Educational programs, and processes of decision-making themselves need to be able to reflect and support identities and individuals for whom intuitive, transrational, animist, and Indigenous knowledges are central. Students in the field of natural resource management need to be given access to a wide range of available discourses and identities in order to assist them in working effectively across cultural and epistemological difference. Although there has been some change in recent years, “Western systems of thought” are accorded the most value while “Indigenous knowledges and multiple ways of knowing” are devalued in academe (Wane, Shahjahan & Wagner, 2004, p. 500; Kuokkanen, 2007).

**Assigned Course Readings.** There were conflicting comments about the assigned course readings, reflecting the balancing act of instructing in an interdisciplinary program. Two students commented about the overall accessibility of the readings. These students expressed a genuine excitement at reading articles that they would not have otherwise been exposed to and the ideas contained therein. This is exemplified by one student's comment:

The course material gave me more insight into Aboriginal understandings, and the material was also extremely accessible, which I like. I mean that we read very



open-ended articles that invited discussion, and therefore an increased collective awareness of what is going on with First Nations/environmental issues.

(Student 1)

Other students indicated that they struggled with the readings. One of the biggest barriers to accessing the literature was the language used in the articles. Jargon-laden readings from disciplines some students were unfamiliar with (e.g. intuition and consciousness studies), or readings with language or concepts that were completely new, seemed to be a concern for these students. Another concern raised, albeit from just one student, was that some of the readings were not directly related to the environment. While understanding why they were chosen, the student struggled with the readings because, in addition to being about multiple ways of knowing, some of the disciplinary ideas were foreign to them:

I found some of the readings difficult because I felt like they didn't really have to do with environmental studies. I get that they were trying to help us come to a better understanding of Aboriginal ways of knowing, but sometimes I felt they were too different from my academic background. (Student 2)

**Discussion.** The variability in students' cultural and disciplinary backgrounds and knowledge has long been identified as a challenge in teaching. Davies and Develin (2007) write directly about the challenges of exposing students in an interdisciplinary program to disciplinary knowledge with which they are unfamiliar. In the context of this course, the focus on intuitive and animistic ways of knowing provided what Davies and Devlin (2007) describe as "idea dominance" (p. 5) in an area of study that can be overwhelming in its variations. Student comments raise questions about what else is required to effectively introduce students to readings that are significantly different than the literature they are used to reading, and how instructors might support students who in turn might want to use these readings/course material in other courses (or their own research) where other instructors' and student colleagues may either unfamiliar or uncomfortable with that material.

Gabriel (2008) argues for learner-centred educational approaches to be employed in these situations to meet the learner where they are and to ensure that students feel that the instructor and program values the diversity of their backgrounds and that they are welcome in the class and program. Davies and Devlin (2007) argue that instructors, in interdisciplinary environments, need to help learners develop cognitive maps they would develop when inducted into disciplinary ways of thinking and knowing, as well as to help the students learn the disciplinary language. In order for students to navigate the complexity of divergent disciplinary language, Woods (2006) argues that students need to develop skills with interdisciplinary communicative competence through eight components. These are: conceptual competence, competence in negotiating meaning, competence in interdisciplinary text production, knowledge of one's own discipline and ways of knowing, skills of interpreting and relating, skills of discovery and interaction, attitudes of curiosity and openness, and critical disciplinary awareness (Woods, 2006). Ensuring students have some of these skills prior to coming into such a course could be one approach to address some of the challenges students encountered, while providing cognitive maps would be another. To be successful in providing bridges to understanding and appreciating IK, however, any approach would have to make visible

the epistemological and ontological assumptions of the different disciplines in ways that provide insight into, rather than barriers to, Indigenous knowledges.

**Guest Speakers.** Guests were an important way to ensure first person representation of Indigenous perspectives in the course. All four students spoke of both the advantages and disadvantages of the inclusion of several guest speakers. All of them mentioned how insightful it was to have Aboriginal Elders, faculty and community members share their stories, experiences and research with them, and stressed the importance of these personal connections to their meaningful learning experiences. There were three major areas of concern, however. First, the fact that different guest speakers came and left at various points of each class depending on their availability and the role they were playing in that particular session often meant that the flow of that class was broken up. As a result, it was hard to engage in conversations either with the speaker or with each other related to the rest of the course material. In several cases students expressed a desire to have more time to engage with the individual guest speakers and, in particular, to have time to ask more questions of the speakers as well as to engage in discussion about the rest of the course materials with the speakers:

I wish we had more time to engage with a few of the guest speakers. It would have been great to have time to ask more questions ... and perhaps to engage in a discussion about the rest of the course materials with them. (Student 4)

Finally, two students expressed some concern that having guest speakers who seemed to be unaware of previous speakers or the rest of the course materials led to a feeling that the course was a bit disjointed.

**Discussion.** Student comments highlight the importance of personal engagement with Elders/traditional knowledge keepers and Aboriginal faculty members in students' learning. In an ideal world, all, or a significant portion of the class, would be taught in tandem with an Aboriginal co-instructor, thus increasing students' meaningful interaction with Aboriginal people/experts as part of their learning experience. Relatively little research has been conducted into the pros and cons of bringing guest speakers into the higher education classroom, but a few writers have articulated four key features for the successful integration of guest speakers into a class (Mullins, 2001; Davis, 2009). These are: preparing the speaker by giving them the context of the course and students in terms of interests and preparedness; preparing the students by explaining the connection to course's goals and by setting clear expectations for the students; actively moderating the discussion and discussing the presentation with the students after the speaker departs to ensure that the conversation stays on target and the speaker's contributions are contextualized with learning objectives. Of particular concern for this type of course, however, is the high level of demands placed on Aboriginal faculty and Elders to meet requests for guest presentations, which often makes it difficult to ensure their sustained involvement (Kovach, 2009). Without such continuity, the risk of such presentations appearing as token is always present. Another concern is that as Elders age, fewer of them are available to offer teachings.

**Structure of the Course (and Individual Classes).** Comments from students expressed sincere appreciation about instructors' ability to create a safe space within

the class that allowed for the exploration of these new and challenging topics. For example, one student states:

This course provided a safe place to engage with ideas that I have always wanted to explore more in depth, but have never felt was appropriate in my previous education. I really appreciated that more than I expected to, or perhaps conveyed during the class. (Student 4)

Two students, however, made a point of discussing how they found the free flowing nature of the course (whether guest speakers were coming or not, how class discussions would unfold, or how they engaged with the readings) troubling. It appeared as though they were articulating a desire for a more traditionally structured course with a clearly laid-out schedule:

At times...I felt that the class was a bit all over the map in terms of how each day flowed. This took some getting used to (and I am not sure I am yet used to it). (Student 3)

One of the students acknowledged that in making these comments he realized that this may be counter-productive to the purpose and nature of the course, but still found it very important to say that consistent structure and organization was important to him:

I sometimes wish the course had a more logical flow, but when I think that I also realize that the free flowing nature of the course may be part of the point. (Student 2)

**Discussion.** Teaching through, rather than about transrational, animist knowing, demands significant fluidity in class structure and scheduling. Students, and often circumstances, change daily, and what was planned weeks, or sometimes even months, before the class began, may or may not be relevant or meet student needs as the course, and student understanding, evolves. The fluid process of teaching through rather than just about animism and transrational intuition provides the opportunity to role-model examples of what it might look like to engage these ways of knowing in a day-to-day context, and at least three of the four students interviewed recognized this intent. One even explicitly recognized its value to them as learners, even though the same student simultaneously struggled with it.

A parallel approach was modelled by Vuntut Gwitch'in Elder Randall Tetlich, who, in 2012, spent three weeks at SENS as a Northern Elder-in-Residence. As was made explicit by the visiting Elder, he did not pre-determine what was to be taught in a class. After a general briefing on the focus for the class he was to teach, Randall taught what he felt was needed by the audience that was there at the time – whether these needs were expressly requested or known through some other means (Tetlich, personal communication, October, 2011). The intermingling of learned knowledge with other forms of knowing reflects the existence of a realm of knowledge and knowing well beyond conscious thought – an idea which is well accepted in many knowledge traditions (Meyer, 2008). Recent theorizing in the areas of, human consciousness, quantum entanglement, spiritual knowing and intuition (e.g. Bradley, 2007; Hart et al., 2000; Sinclair, 2011) is deepening understandings of forms of knowing that are not fully premised on rational analysis and observable phenomena. The integration of multiple

knowledge forms is required to establish congruence between content and pedagogical approaches in a course like ENVS 811. This requires an ongoing dance between intuitive knowing and a structured syllabus. It also requires being cognizant of different learning styles as well as the power of historically constituted student and institutional expectations that the syllabus include a pre-set schedule of class activities.

**Personal Connections and Professional Practice.** The area that the students identified as most likely to influence their future professional practice, relates to the duty to consult with Aboriginal populations. As one student noted:

I think this course has definitely deepened my awareness and understanding of aboriginal perspectives (though it has highlighted just how much I don't know), and in particular has made me much more aware of issues, including 'duty to consult', that may be very important in my professional practice. (Student 2)

Every student felt that the course would make them significantly more comfortable with any future consultations they may need to have with Aboriginal communities. Three students directly discussed the personal impact that the course had in their own development and practice. They expressed the transformational nature of this particular learning experience, particularly as related to their introduction to transrational intuition and Indigenous ways of knowing. The students, however, continued to struggle with the question about how the course (material, concepts, ideas, etc.) might influence their future learning, research, and professional practice, and expressed further uncertainty about whether or not they were willing to explore these ideas in the context of their research, for some of the reasons noted in the first section. All of the students still expressed a reluctance to definitively state how they do their work as environmental professionals would change on a day-to-day basis (i.e. they might not change how they engage in their work in the field, their data collection, the reports they wrote, etc.). Another student stated that this was one of their first educational experiences that let them embrace their personal cultural perspective and ways of knowing, and articulated how liberating and freeing that was to their own professional practice and ongoing educational development.

This was one of my first experiences in university (or school in general) that encouraged me to embrace my cultural perspective and ways of knowing. I am not sure how to exactly articulate this, but I felt that this course was in some senses liberating. I still wonder exactly how others (professors in the program, or people I might work with) will understand or accept this. Indeed I am sceptical that I will easily carry what I experienced in this course into other courses, my own research, or even professional practice. (Student 4)

**Discussion:** Most educational programming in the field of Environmental resource management is based on colonial frameworks, and as a result, continues to reproduce professionals who, despite best intentions and often a deepened respect for IK, still struggle to comprehend their scope – particularly knowledge that is, as Castellano (2000) points out, understood “to be spiritual in origin” (p. 29). Through course readings and connections to their own personal experiences, the non-Indigenous students in the class grappled with epistemologies beyond conventional Western forms of rationality and as a result, expressed significantly increased comfort when considering

consultations with Aboriginal peoples.<sup>2</sup> Yet they still expressed hesitancy to incorporate transrational intuitive or animist ways of knowing into their professional and/or research practices. In contrast, for the Indigenous student who participated in this study, the course reflected many familiar ways of knowing, and provided a range of languages and theoretical frameworks which were helpful in articulating aspects of Indigenous epistemologies that are often confusing to those who are not Indigenous.

The challenge of getting students and environmental professionals to 'do environmental studies/management differently' as an outcome of learning experiences in a course like this remains a challenge that goes beyond an individual course or program, and must be met by the profession as a whole. If Indigenous knowledges and diverse ways of knowing are to be taken seriously in both the academy and resource management decisions, students, faculty, and resource managers in the field must all grapple with epistemologies that, as noted earlier, are too often positioned "outside of what professional cultures are willing to accept" (Claxton, 2000, p. 34). Similar challenges can be found across the professions as doctors, nurses, lawyers, teachers and other professions begin to respond to the challenge of respecting and welcoming "other" more intuitive transrational and/or animistic ways of knowing such as those used in complementary and alternative medicine, and entrepreneurship.

## CONCLUSION AND NEXT STEPS

Effectively incorporating transrational intuitive, animist, and Indigenous knowledges into environmental decision-making requires addressing innumerable assumptions, dominant discourses, and misunderstandings, as well as developing skills in engaging multiple epistemologies. Unquestionably, IK belongs to Indigenous peoples and appropriation, misuse, or misinterpretation has unfortunately been, and continues to be, part of a colonial history both in Canada and internationally (Battiste & Henderson, 2000; Tuhiwai-Smith, 1999). Furthermore, understanding of transrational intuitive or animist knowing does not imply complete understanding of Indigenous knowledges, which are complex, holistic, grounded in particular places, languages and cultures (Battiste & Henderson, 2000). However, theoretical and practical engagement with transrational intuitive and animist ways of knowing – which are accessible to all students regardless of one's particular cultural background – provides an important bridge to understanding Indigenous knowledges and the multiple ways in which humans can come to know. As is increasingly being recognized, knowledge systems which privilege empirical data and rationality are not enough to resolve complex environmental problems. In this context, programming for resource management and other professionals needs to develop student capacity to both respect and engage ways of knowing which are inclusive of, but also extend beyond, Western forms of rationality.

As this paper goes to press, ENVS 811 is now into its fourth offering. Many of the named issues have been resolved, while others, such as some students' discomfort with the fluid nature of the course schedule, and finding opportunities for concrete application in a field still dominated by Western science, have yet to be resolved. Given their historical place as marginalized epistemologies in academic settings generally and

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<sup>2</sup> This is not about appropriating Indigenous knowledges (see Stuckey, 2010), but rather, expands student understandings of epistemologies that have often not been supported or taught in colonized academic contexts.

the environmental field in particular, continued exploration of how to effectively teach transrational intuitive and animist ways of knowing and their relationship to Indigenous knowledges needs to remain a priority.

### References

- Abell, A. (1955/1994). *Talks with great composers: Candid conversations with Brahms, Puccini, Strauss, and others*. Secaucus, NJ: Carol Publishing Group.
- Bai, H. (2009). Re-animating the universe: Environmental education and philosophical animism. In M. McKenzie, H. Bai, P. Hart & B. Jickling (Eds.), *Fields of green: Restorying culture, environment, and education* (pp. 135-151). Cresskill, NJ: Hampton Press.
- Barrett, M.J. (2007). Homework and fieldwork: Investigations into the rhetoric-reality gap in environmental research and pedagogy. *Environmental Education Research*, 13(2), 209-223.
- Barrett, M.J. (2009). *Beyond human-nature-spirit boundaries: Researching with animate EARTH*. Retrieved from: [www.porosity.ca](http://www.porosity.ca)
- Barrett, M.J. (2011a). Decentering norms: Teaching multiple ways of knowing in environmental decision-making. *Collected Essays on Learning and Teaching*.
- Barrett, M.J. (2011b). Doing animist research in academia: A methodological framework. *Canadian Journal of Environmental Education*. 16, pp. 123-141.
- Barrett, M.J. (in press). A hybrid space: Indigenous knowledges and transrational knowing in socio-ecological problem-solving. *Policy Sciences*.
- Barrett, M.J., Patterson, M., Flowers, M., Bors, K. (forthcoming). What students think: An analysis of student experiences in ENVS 811: Multiple Ways of Knowing in Environmental Decision-Making.
- Battiste, M. (2010). Indigenous knowledge and Indigenous peoples' education. In S. Subramanian & B. Pisupati (Eds.), *Traditional knowledge in policy and practice: Approaches to development and human well-being* (pp. 31-51). New York: United Nations University Press.
- Battiste, M., & Henderson, J. (2000). *Protecting Indigenous knowledge and heritage: A global challenge*. Saskatoon, SK: Purich.
- Berkes, F. (1999/2008). *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Taylor & Francis: London.
- Bernstein, P. (2005). Intuition: What science says (so far) about how and why intuition works. In R. Buecheri et. al., *Endophysics, time, quantum and the subjective* (pp. 1-18). Singapore: World Scientific Publishing.
- Bowers, C. A. (1997). *The culture of denial: Why the environmental movement needs a strategy for reforming universities and public schools*. Albany: SUNY.
- Bradley, R. (2007). The psychophysiology of intuition: A quantum-holographic theory of nonlocal communication. *World Futures*, 63, 1-97.
- Burk, L. & Sadler-Smith, E. (2011). Integrating intuition into higher education: A perspective from business management. In M. Sinclair *Handbook of intuition research*. Northampton, MA: Edward Elgar.
- Butler, J. (1990). *Gender trouble*. New York: Routledge.
- Castellano, M. (2000). Updating Aboriginal traditions of knowledge. In J. Dei, B. Hall, & D. Rosenberg (Eds.), *Indigenous knowledges in global contexts: Multiple readings of our world* (pp. 21-36). Toronto, ON: University of Toronto Press.

- Claxton, G. (2000). The anatomy of intuition. In T. Atkinson & G. Claxton (pp. 32-54). *The intuitive practitioner: On the value of not knowing what you are doing*. Philadelphia: Open University Press.
- Conn, L. & Conn, S. (2009). Opening to the other. In L. Buzzell & C. Chalquist, *Ecotherapy: Healing with nature in mind* (pp. 111-115). San Francisco: Sierra Club Books.
- Davis, B. G. (2009). *Tools for Teaching (2nd Edition)*. San Francisco: Jossey-Bass.
- Davies, M. & Devlin, M. (2007). *Interdisciplinary higher education: Implications for teaching and learning*. Melbourne, Australia: Centre for the Study of Higher Education, University of Melbourne.
- Dei, J., Hall, B. & Rosenberg, D. (Eds.) (2000) *Indigenous knowledges in global contexts: Multiple readings of our world*. Toronto, ON: University of Toronto Press.
- Donald, D. (2010) On what terms can we speak? Lethbridge, AB: University of Lethbridge Faculty of Education. Friday Sept. 24, 2010. Retrieved May 10, 2012 from: <http://vimeo.com/15264558>
- Fawcett, L., Bell, A., & Russell, C. (2001). Guiding our environmental praxis: Teaching and learning for social and environmental justice. In W. Filho (Ed.), *Teaching sustainability at universities* (pp. 223-238). New York: Peter Lang.
- Gabriel, K. (2008). *Teaching Unprepared Students*. Sterling, Virginia: Stylus Publishing.
- Greenwood, D. A. (2009). Place , survivance , and white remembrance : A decolonizing challenge to rural education in mobile modernity. *America*, 24(10), 1-6.
- Hallowell, I. (1960). Ojibwa ontology, behavior, and world view. In S. Diamond (Ed.), *Culture in history: Essays in honor of Paul Radin* (pp. 19-52). New York: Columbia University Press.
- Hart, T., Nelson, P., Puhakka, K. (Eds). (2000). *Transpersonal knowing: Exploring the horizon of consciousness*. New York: SUNY Press.
- Harvey, G. (2006a). *Animism: Respecting the living world*. New York: Columbia University Press.
- Harvey, G. (2006b). Animals, animists, and academics. *Zygon*, 41(1), 9-20.
- Harvey, G. (Ed.). (in press). *Handbook of contemporary animism*. Sheffield, UK: Equinox Publishing.
- Houde, N. (2007). The six faces of traditional ecological knowledge: Challenges and opportunities for Canadian co-management arrangements. *Ecology and Society* 12(2), 34.
- Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services, (IPBES) (2011). *Potential and pitfall in exchange of knowledge systems in cross-scale ecosystem assessment*. Meeting report, International Indigenous Forum on Biodiversity. Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services, IPBES. Jokkmokk June 21-22.
- Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations, and contexts*. Toronto: University of Toronto Press.
- Kuokkanen, R. (2007). *Reshaping the university: Responsibility, Indigenous epistemes, and the logic of the gift*. Vancouver: UBC Press.
- Kwagley, A. O. (1995). *A Yupiaq worldview: A pathway to ecology and spirit*. Prospect Heights, IL: Waveland Press.



- Lavallée, L. (2009). Practical application of an Indigenous research framework and two qualitative Indigenous research methods: Sharing circles and Anishnaabe symbol-based reflection. *International Journal of Qualitative Methods*, 8(1), pp. 21-40.
- Lipsett, L. (2011). Transformation is in our hands: A creative process for deepening our connection to nature. *Green Teacher*, (91), pp. 35-39.
- Lotz-Sisitka, H. (2002). Weaving cloths. *Canadian Journal of Environmental Education*, 7(2), 101-124.
- McCraty, R., Atkinson, M., Bradley, T. (2004). Electrophysical evidence of intuition: Part 2. A system-wide process? *The journal of alternative and complementary medicine*. 10(2), 325-336.
- McGregor, D. (2000). The state of traditional ecological knowledge research in Canada: A critique of current thought and practice. In F. Laliberte, P. Settee, J. Waldram, R. Innis, B. MacDougall, L. McBain, & F. L. Barron, *Expressions in Canadian native studies* (pp. 437-456). Saskatoon, SK: University of Saskatchewan Extension Press.
- Meyer, M. (2008). Indigenous and authentic: Hawaiian epistemology and the triangulation of meaning. In N. Denzin, Y. Lincoln & L. Smith (Eds.). *Handbook of critical and indigenous methodologies*. Los Angeles: Sage.
- Morrison, K. (2000). The cosmos as intersubjective: Native American other-than-human persons. In G. Harvey (Ed.), *Indigenous religions: A companion* (pp. 23-36). London: Cassell.
- Mullins, P. (2001). Using outside speakers in the classroom. *APS Observer* 14(8) URL: [http://www.apsobserver.org/14\(8\)/mullins.htm](http://www.apsobserver.org/14(8)/mullins.htm)
- Nadasdy, P. (2003). Re-evaluating the co-management success story. *Arctic*. 56(4) 367-380.
- Nadasdy, P. (2007). The gift of the animal: The ontology of hunting and human-animal sociality. *American Ethnologist*, 34 (1), 25-43.
- Simpson, L. (2001). Aboriginal peoples and knowledge: Decolonizing our processes. *Canadian Journal of Native Studies*, 21(1), 137-148.
- Sinclair, M. (Ed.) (2011). *Handbook of intuition research*. Northampton, MA: Edward Elgar Publishing.
- Stuckey, P. (2010). Being known by a birch tree: Animist refigurings of Western epistemology. *Journal for the Study of Religion, Nature and Culture*. 4(3), 182-205.
- Taylor, B. (2005). Snyder, Gary (1930-) – and the invention of bioregional spirituality and politics. In B. Taylor (Ed.). *Encyclopedia of religion and nature* (pp. 1567-1567). London: Continuum Books.
- Tuhiwai-Smith, L. (1999). *Decolonizing methodologies: Research and Indigenous peoples*. New York: Zed Books.
- Vaughn, F. & Walsh, R. (2000). Transpersonal Psychology. In A. Kazdin (Ed.) *Encyclopedia of Psychology*. Oxford: Oxford University Press.
- Wane, N., Shahjahan, R., & Wagner, A. (2004). Walking the talk: Decolonizing the politics of equity of knowledge and charting the course for an inclusive curriculum in higher education. *Canadian Journal of Development Studies*, 25(3), 499-510.
- Wilkinson, K.M., Clark, S.G. & Burch, W.R. (2007). *Other voices, other ways, better practices: Bridging local and professional environmental knowledge*. Yale School of Forestry & Environmental Studies, Report No. 14. Retrieved from: <http://environment.yale.edu/publication-14/>



[series/environmental\\_politics\\_and\\_management/5335/other-voices-other-ways-better-practices/](#)

Woods, C. (2007). Researching and developing interdisciplinary teaching: Towards a conceptual framework for classroom communication. *Higher Education*, 54, 853-866.