RESEARCH PROGRAM of CHERYL BARTLETT,
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www.integrativescience.ca

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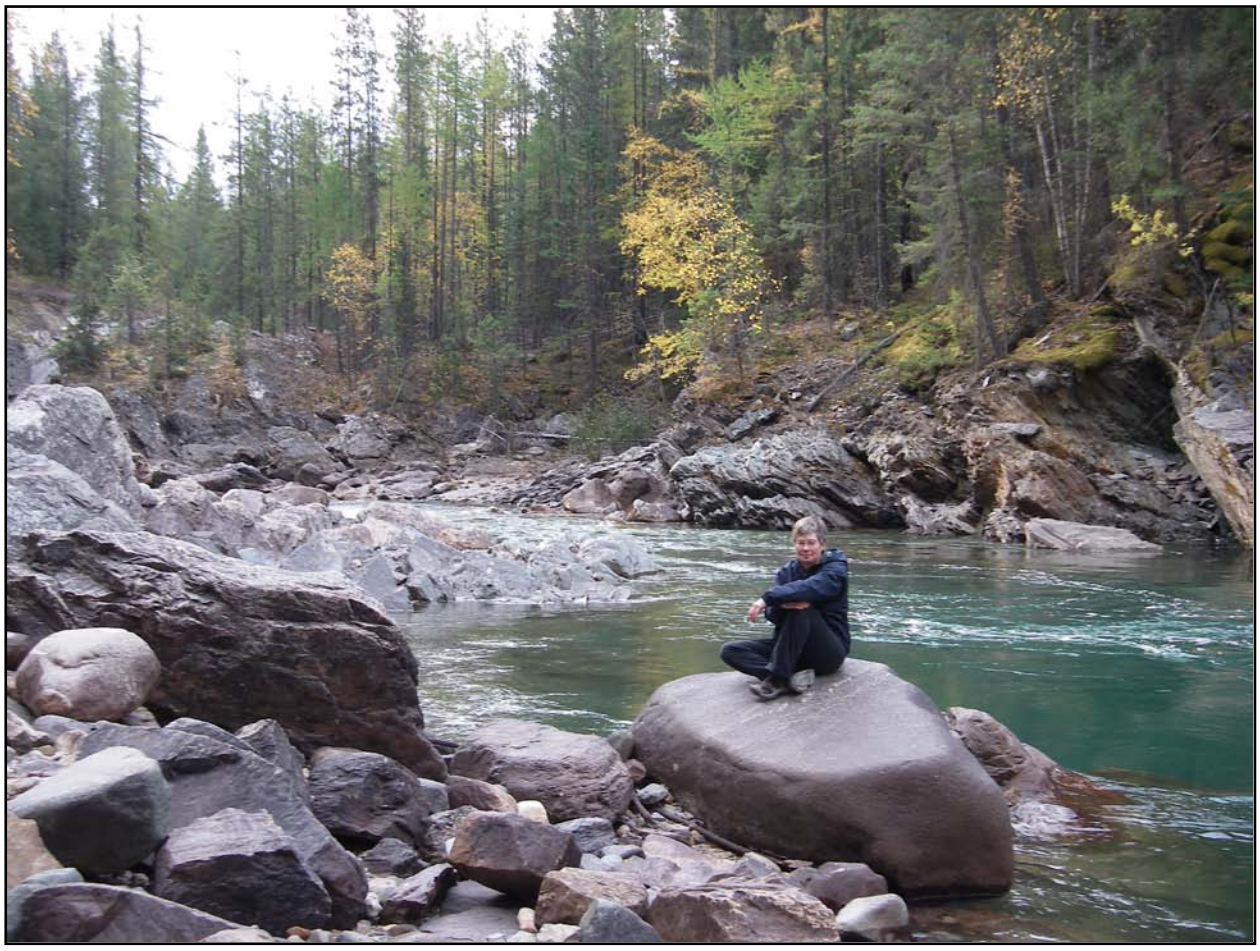

TWO-FOLD, LONG TERM GOAL: As a Tier 1 Canada Research Chair, Cheryl Bartlett has created a research program of activities that serve an overall, two-fold, long term goal: to help Aboriginal individuals and Indigenous knowledges become increasingly and actively involved in science in the 21st century AND to help mainstream science better engage with Indigenous knowledges and ways of knowing. Bartlett defines "Integrative Science" as "bringing together knowledges and ways of knowing from Indigenous and Western scientific world views for the purposes of science education, research, applications, and outreach to Aboriginal youth and community". In many ways, her research addresses the "cultural mismatch" that the Canadian Council on Learning identified as the major barrier for Aboriginal peoples' participation in science and technology education (CCL 2007), a barrier that manifests in the shocking under-representation of Aboriginal people in science-based and science-related sectors of the

Canadian workforce, as well as in policy and planning efforts wherein science is a player. As a non-aboriginal, Bartlett's research attempts to enact a walking and talking together of Indigenous and Western peoples and worldviews and it takes many forms, all within the intent of "with, by and for" Aboriginal peoples and communities, as encouraged by SSHRC for non-aboriginal researchers in Aboriginal research (McNaughton and Rock 2003).

THEORETICAL FRAMEWORK: The theoretical framework for Integrative Science research is based in pattern recognition and employs the view of science as "dynamic pattern-based knowledge about our interactions with and within nature". Many Integrative Science projects are praxis-based wherein "praxis" is understood to mean "the translating of an idea into action" following Freire (1970) who holds that reflection and action upon the world must occur in order to transform it. Integrative Science research is "integrative" in that it draws upon at least two major epistemic communities and a "co-learning" journey is used.

COMMON GROUP LEARNING: Bartlett refers to the overall approach within her Integrative Science research program of activities as "co-learning". This approach is congruent with "common group learning" which Pohl et al. (2008) identify as one of the three basic ways transdisciplinary research teams organize collaboration in order to reach integration (the other two being deliberation among experts, and via a subgroup or individual). With respect to transdisciplinary research, Pohl and Hadorn (2008) and Wiesmann et al. (2008), respectfully, emphasize common understandings of core terms and insightful propositions to enhance the research process. The latter authors also indicate that the "debate is still fairly young and the processes still being developed." Yet transdisciplinary research is much advanced in comparison to transcultural work such as Integrative Science and other efforts to reconcile worldviews, as in "the Indigenous-West encounter", to use the words of Ermine (2007).

GUIDING PRINCIPLE OF "TWO-EYED SEEING": The Integrative Science co-learning journey is guided by the principle of "Two-Eyed Seeing" as brought forward by Mi'kmaw Elder Albert Marshall of Eskasoni First Nation. The principle emphasizes learning to see from one eye with the strengths in Indigenous knowledges and ways of knowing, and learning to see from the other eye with the strengths in Western (Eurocentric, mainstream) knowledges and approaches … and, furthermore, to learning to use these two eyes together for the benefit of all peoples.

RESEARCH STRATEGIES: Integrative Science research strategies draw upon participatory, action, community-based, and integrative approaches.

RESEARCH PARTNERS: Research partners for Integrative Science projects generally include Aboriginal elders and educators, plus students when possible. CRC Bartlett is a member of various national, regional, and local research networks and/or collaborative groups. More information on Integrative Science is available at www.integrativescience.ca.

REFERENCES:

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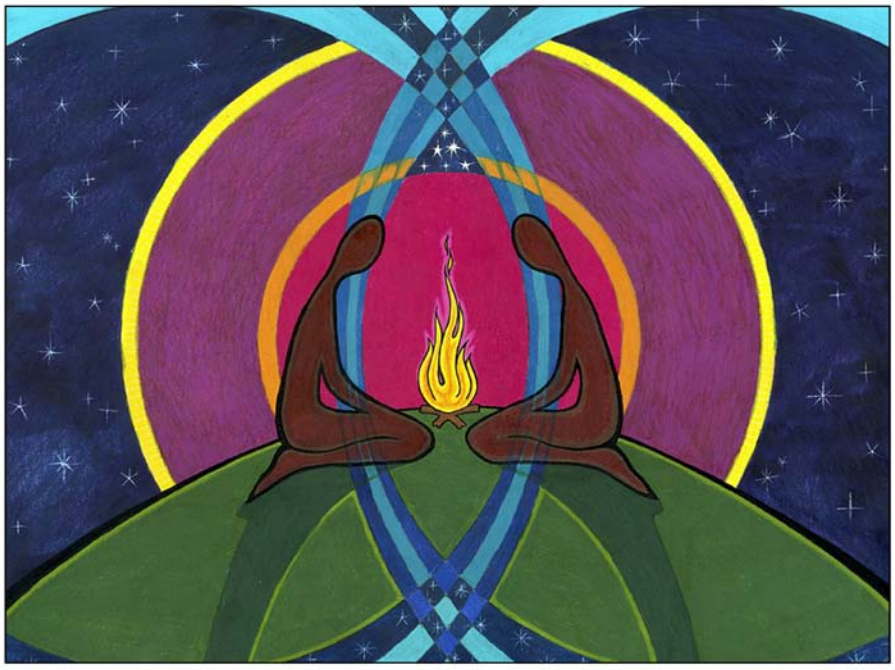

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