

CREATIVITY IN THE ARTS AND SCIENCES – invited participation in the national millennial symposium in Edmonton, Alberta

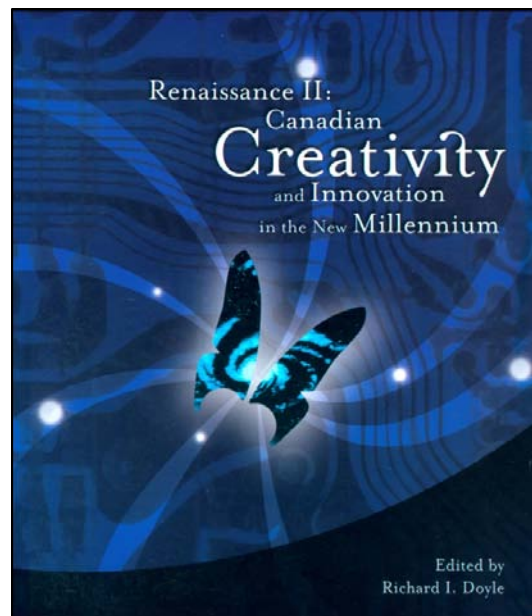
- 2000
 - professional enrichment and educational outreach
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In the millennial year 2000, Artist Basma Kavanagh and Professor Cheryl Bartlett participated, by invitation, in the “Symposium on Creativity in the Arts and Sciences” held in May in Edmonton, AB, as organized by NRC (National Research Council) within the annual Congress of the Social Sciences and Humanities.

The symposium, in conjunction with a later one held in Ottawa, resulted in the book “Renaissance II, Canadian Creativity and Innovation in the New Millennium”, 2001, edited by Richard Doyle and published by NRC Research Press (<http://pubs.nrc-cnrc.gc.ca/eng/books/books/9780660183978.html>).

Cheryl was an invited speaker at the Edmonton symposium and she presented on the unconventional experiences and unusual insights she had while conducting parasitology research that led to re-shaping epizootiological understandings about avian filarioid nematodes.



above: cover of Richard Doyle’s book on the millennial creativity symposia held in Canada in 2000

At the Edmonton symposium, Basma encouraged the audience to consider the importance of inspiring environments in artistic and other creative processes. She also emphasized that a creative product should be understood as embedding the artist’s spirit and energy. Later, Basma imaged some of her thoughts about creative thinking in the form of an educational handout for the Integrative Science academic and outreach programs. Basma’s visual is featured on the last page of this document.

The public release of the report on the millennial creativity symposia suggested the urgent need for new emphasis on creative thinking skills in science education, including especially

pattern making, breaking, and transformation. This was a key influence behind the Integrative Science research team seeking to develop meaningful ways to embed creative thinking skills within the new Integrative Science curricula in the early 2000s.

In addition, two quotes (see below) from scientists and as found in Doyle's book have been used frequently by Canada Research Chair in Integrative Science Cheryl Bartlett when seeking to encourage new thinking within science education and among scientists.

below: quotes from scientists in Doyle's book on the millennial creativity symposia

**A profound realization is that
Canada's most significant natural
resource is human creativity.**

(Peter Hackett, CEO and President of Alberta Ingenuity)

**As a scientist, I want my imagination
rekindled. I want to be shown how to
look at things in new ways; I believe my
capacity for innovation and creativity in
my own discipline will grow as a result.**

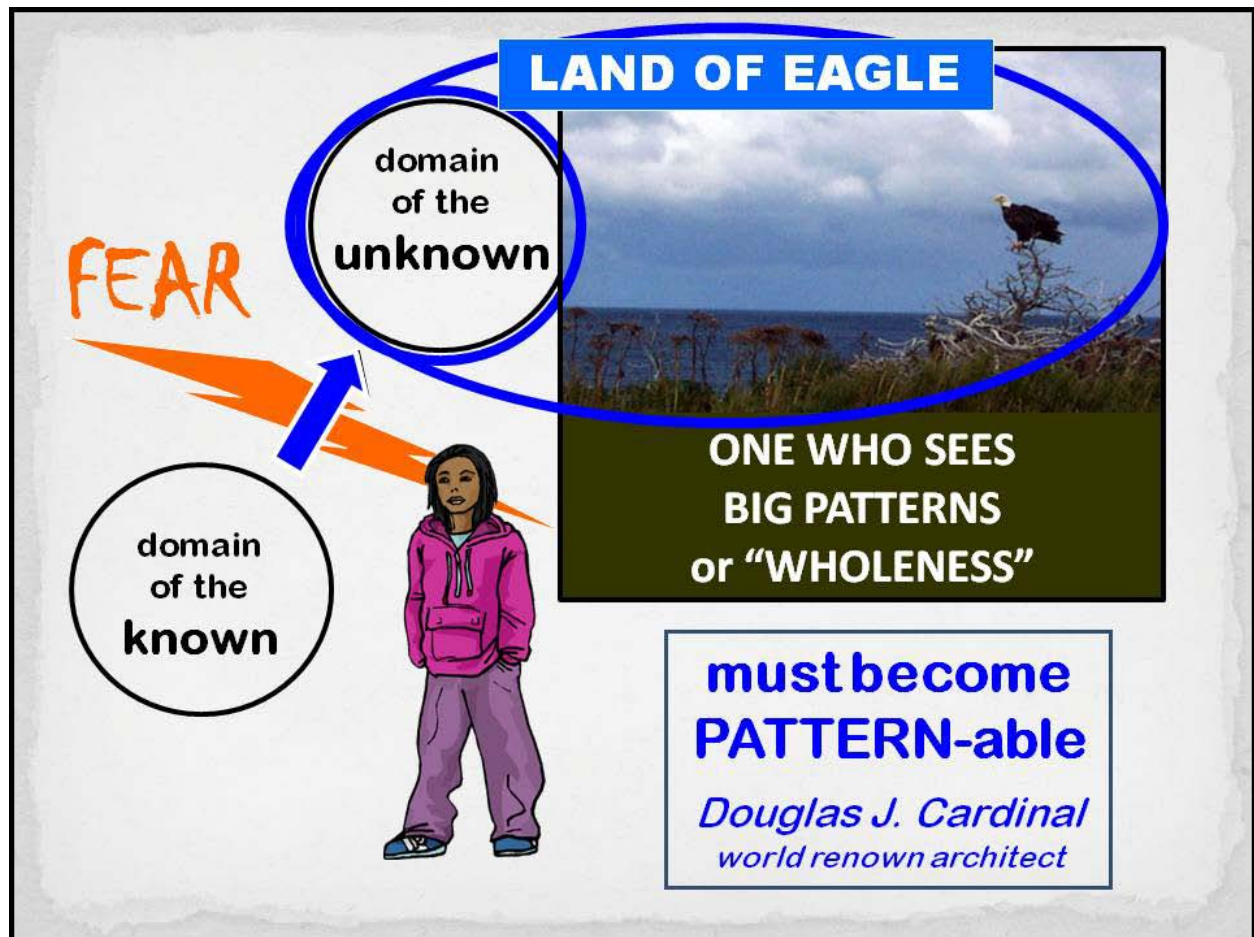
(Arthur J. Carty, National Science Advisor to PM)

The millennial creativity symposia and its resultant book have also greatly influenced Integrative Science in that "pattern" was chosen as Cheryl Bartlett's research focus in her proposal entitled "Pattern recognition: enriching the 'common ground' of bringing Aboriginal and Western scientific knowledges together" that was submitted to SSHRC. In Spring 2004, Cheryl was awarded \$249,000 in funding from SSHRC for this research.

The millennial creativity symposia also helped foster the broadened view of science that Integrative Science has developed and adopted, namely science as "dynamic, pattern-based knowledge shared through stories about our interactions with and within nature".

Integrative Science draws upon many sources of support and inspiration for its broadened view of science. One of these is Douglas J. Cardinal, one of the world's foremost architects who grew up in Alberta, Canada, and who draws insights from both his Blackfoot First Nation and European ancestry. Cardinal participated in the millennial creativity symposia and he is featured in Doyle's book as indicating that he believes a sensibility to the patterns of other creatures and the environments in which they lived was essential in the great challenge of survival for the Aboriginal hunters and gatherers on the Great Plains of North America.

In Doyle's book, Cardinal is also attributed with saying that the Aboriginal "Spiritual Warrior" has to render his/her spirit pattern-less in order to be receptive to these patterns. Integrative Science refers to this receptivity as being "pattern-able" and has developed a key visual (see below) around this understanding. The 1999 book by Jordan B. Peterson entitled "Maps of Meaning: The Architecture of Belief" (published by Routledge) is also a key resource in regards some of the understandings depicted in the visual.



above: visual used within Integrative Science to encourage the skill of becoming "pattern-able"



above: visual created for Integrative Science by artist Basma Kavanagh to encourage creative thinking skills within science