What makes kids happy?

UBC researchers surprised at the role spirituality plays

What makes you happy?

Spirituality typically accounts for four or five per cent of an adult’s happiness, but new research has found a much stronger influence of spirituality in children.

Mark Holder, Assoc. Prof. of Psychology at UBC Okanagan, and graduate student Judi Wallace recently tested 315 children aged nine to 12, measuring spirituality and other factors such as temperament and social relations that can affect an individual’s sense of happiness.

“Our goal was to see whether there’s a relation between spirituality and happiness,” Holder says. “We knew going in that there was such a relation in adults, so we took multiple measures of spirituality and happiness in children.”

The results were a surprise – 6.5 to 16.5 per cent of children’s happiness can be accounted for by spirituality.

“From our perspective, it’s a whopping big effect,” says Holder. “I expected it to be much less – I thought their spirituality would be too immature to account for their well-being.”

“Spirituality is easiest to describe as having an inner belief system,” Wallace notes. Although the terms are sometimes used interchangeably, she cautions that “spirituality is not religiosity, which is often more organized, and may be church-based.” To describe their daily spiritual experiences, private religious practices, and whether they think of themselves as religious or spiritual, children in the study rated statements such as “I feel the presence of a higher power’s presence,” and answered questions including “how often do you pray or meditate privately outside of church or other places of worship?” Parents were also asked to describe each child’s apparent happiness and spirituality, and teachers rated each child’s happiness level.

While the connection between spirituality and happiness in adults has been established, Holder says relatively little is known about the connection between spirituality and happiness in children.

Factors such as gender or money contribute very little to happiness, says Holder. “In fact, the contribution of money to happiness explains less than one per cent.” They found that whether children attend public or private school has virtually no impact on their happiness.

There are lots of new questions to explore – such as how to improve the well-being of children by applying new understanding of what contributes to happiness.

“This research represents the first steps in that direction,” Holder says. With funding from UBC Okanagan and the continued on page 3

Conquering AIDS — if we have a HAART

One of the world’s leading researchers in HIV/AIDS, Dr. Julio Montaner, believes it is possible to completely eliminate the transmission of HIV in Canada, starting in British Columbia.

“We have come a long way in two decades of treating HIV/AIDS,” says Montaner, Director of the B.C. Centre for Excellence in HIV/AIDS. “I really believe by expanding HAART (highly active anti-retroviral therapy), a therapy proven to work, we can finally control this epidemic.”

There are 12,000 people in British Columbia who are HIV positive. The B.C. Centre for Excellence in HIV/AIDS estimates that 2,000 are not receiving treatment even though most have access to free therapy. HAART treats HIV with a combination of drugs (anti-retrovirals) that blocks HIV replication at different stages of its life cycle. As a result, HAART dramatically reduces the amount of HIV in the blood, known as viral load, and this in turn helps to decrease the risk of HIV transmission.

“We have proven that among those who engage in care, 90 per cent show a vast improvement and transmission almost disappears,” says Montaner. “But this benefit is restricted to those who initiate and adhere to HAART treatment.”

The benefits of HAART are major and long lasting – life expectancy increases and quality of life improves. Further, transmission is greatly reduced. This means that HIV-infected women can give birth without transmitting the virus to their babies, as long as they are on HAART.

“The reality for the more vulnerable members of our community is that seeking treatment for HIV does not rank high enough to make it a priority,” says Montaner. “This creates completely unnecessary pain and suffering for people and generates futile health care expenses.”

Most Canadians, if given a HIV-positive verdict, would seek treatment without delay. This is not the case, however, for many people who are homeless, mentally ill, substance abusers or all of the above.

Montaner believes that it’s possible to improve the situation. He believes that it requires rethinking the current passive approach to treatment and creating a more aggressive method of providing care for HIV sufferers in helpless situations. Montaner calls this approach “seek and treat.”

“It is not unlike what we did for tuberculosis in the past,” says Montaner. “We need to go out there, find the cases, and engage them in comprehensive education, prevention and care programs. We need a dynamic outreach program that will allow continued on page 6

Dr. Julio Montaner: more aggressive AIDS treatment needed for those in helpless situations.
UBC Astronomer Produces First Detailed Map of Dark Matter in a Supercluster. UBC astronomer Catherine Heymans has created the most detailed map yet of dark matter, the mysterious substance that fills space between galaxies. Heymans and her colleagues used the Hubble Space Telescope to map dark matter at a better resolution than has ever been achieved before.

Heymans is a postdoctoral fellow in the Dept. of Physics and Astronomy, USA Today, BBC and Canadian Press reported her findings.

Popular Osteoporosis Drugs Triple Risk of Bone Necrosis. A UBC study has found that popular osteoporosis drugs nearly triple the risk of developing bone necrosis, a condition that can lead to disfigurement and incapacitating pain.

The research, reported by United Press International, Globe and Mail, Toronto Star, CTV and CBC’s “The National,” is the largest epidemiological study of bone necrosis and bisphosphonates, a class of drugs used by millions of women worldwide to help prevent bone fractures due to osteoporosis.

“Given the widespread use of these drugs, it is important that women and their doctors know the risks,” said principal investigator Mahyar Etminan of the Centre for Clinical Epidemiology and Evaluation at UBC and Vancouver Coastal Health Research Institute.

CLARIFICATION

The Dec. UBC Reports described the late Dr. Frank Calder as “the first Status Indian elected to Canada’s Parliament.” In fact, Calder – who became a B.C. MLA in 1949 – was the first Aboriginal MP to be elected to any parliament in Canada. The nation’s first Aboriginal MP was the Hon. Leonard Marchand, Sr., who served in the House of Commons from 1968 to 1979 and later as a senator from 1984 to 1998. Both Calder and Marchand are UBC alumni.

IN THE NEWS

Highlights of UBC media coverage in January 2008. Compiled by Basil Waugh

UBC Reports welcomes submissions. For upcoming UBC Reports submission guidelines: www.publicaffairs.ubc.ca/ubcreports/about.html. Opinions and advertising published in UBC Reports do not necessarily reflect official university policy. Material may be reprinted in whole or in part with appropriate credit to UBC Reports. Letters (500 words or less) must be signed and include an address and phone number for verification. Submit letters to: The Editor, UBC Reports UBC Public Affairs Office (address above); by fax to 604.822.2684; or by e-mail to randy.schmidt@ubc.ca or call 604 UBC NEWS (604.822.6397).

Printed on 30% post consumer paper.

UBC Reports is printed by Tolken Print Inc. which is FSC (Forest Stewardship Council) Certified. FSC Certification is a code of practices developed by the environmental movement to ensure that the nations university presses that regulate logging, paper making, inaction. These environmentally sound practices have been taken out to the industry, adopted where possible and consequently there in FSC Certified paper available today.

Companies operating in all these aspects of the industry have a distinct advantage over those that don’t benefit FSC Certification is a “claim of sustainability,” process that involves the virgin fibre from the forest to the finished paper product. The real value of FSC Certification lies in this ability to track the fibre from the source and also all the industrial processes used from the tree to paper and then finally to finish the finished printed product with the appropriate FSC logos.

UBC astronomer Catherine Heymans mapped dark matter in Supercluster Abell 901/902.

Victoria Bell
Your University Area Specialist

My real estate goal is to build integrity based relationships backed with an extremely high commitment to professionalism and accountability. I offer 25 years of success and experience. Please call me for any university real estate information, current evaluation of your property or any real estate assistance that you may require.

Dexter Associates Realty
604.228.9339

www.victoriabell.ca

Call cell 604.209.1382

IN THE NEWS

IN THE NEWS
Death by degrees

UBC fish researcher uses treadmill to test optimum temperatures for salmon

BY LORRAINE CHAN

Just how hot is too hot for fish?

To find out, UBC researcher Erika Eliason is using a "fish treadmill" to put salmon through their paces. At a research lab in Cultus Lake, Eliason has fish swim through a white tunnel that measures 15’ long, 8’ high and about 9” wide. She tests different stocks using variables of water speed and temperature, from 15ºC to 22ºC.

Her study probes possible links between climate change and the increasing number of fish deaths in the Fraser River, which in some years have been as high as 70 per cent for some stocks.

“This is the first study of its kind to look at the optimum temperatures for the swimming and cardiovascular performance of Pacific sockeye salmon,” says Eliason, a PhD candidate in the Dept. of Zoology.

Eliason monitors how hard fish hearts are working using a flow cuff around the heart. She tests the oxygen levels in the blood using catheters. She also records oxygen levels in the water to measure metabolism, all within variables of temperature and speed.

“This way, I'm hoping to learn at the mechanism of the collapse in addition to characterizing the thresholds and optimums for swimming and cardiovascular performance.”

Eliason’s preliminary results show that swimming and cardiovascular performance is hindered above 18ºC. At 20ºC– 22ºC, the fish are visibly flagging.

“We think that fish’s heart is no longer able to cope with the high temperature and oxygen becomes limited. The high temperature makes it harder for the fish to get oxygen to the muscles.”

Her research encompasses salmon physiology, ecology, evolution and conservation and is carried out jointly with the Dept. of Fisheries and Oceans (DFO), the Pacific Salmon Forum and UBC colleagues working with Tony Farrell, a professor in the Dept. of Zoology and Faculty of Land and Food Systems.

The Fraser River is a critical watershed that supports more than 100 distinct sockeye species. Records show that since the 1950s, temperatures in some areas of the Fraser River have exceeded 19ºC.

“In 2004, an especially hot year, the in-river mortality was more than 70 per cent for some stocks.”

Eliason says under normal circumstances, about 20-30 per cent of adult salmon will die before making it back to their spawning grounds “due to disease, fishing, seals, insufficient energy stores and just plain exhaustion.”

And given that some species migrate as far as 1,000 km upstream, higher temperatures could be a factor in their decreased resistance to disease and their ability to make it through difficult conditions upstream.

Eliason says DFO telemetry shows that a percentage of adult fish are entering the mouth of the Fraser River, but they don’t make it to the spawning ground. Each time, spikes in the Fraser River’s temperatures coincide with missing fish.

“A whole bunch of fish aren’t showing up at DFO monitoring check points after Mission.”

The B.C. coast has about 100 Pacific salmon stocks, whose life spans about four years. On average, they spend three years in the ocean. Once they successfully reproduce, their hatchlings remain in the river or nearby lakes, which act as a nursery during their first year of life.

Eliason’s preliminary findings support previous research that suggests salmon perform best in temperatures that are closest to the average found in their natal spawning ground.

Eriason’s preliminary findings show that salmon perform best at temperature closest to those in their spawning grounds.

“While that may seem like a minor change, it can make a big difference to salmon,” says Eliason, explaining that unlike mammals, fish cannot regulate their body temperature.

“If the water is 15ºC, the fish is 15ºC. If the water is 20ºC, the fish is 20ºC.”

During the past five years, the mean temperatures in some areas of the Fraser River have exceeded 19ºC.

Eliason monitors how hard fish hearts are working using a flow cuff around the heart. She tests the oxygen levels in the blood using catheters. She also records oxygen levels in the water to measure metabolism, all within variables of temperature and speed.

“This way, I'm hoping to learn at the mechanism of the collapse in addition to characterizing the thresholds and optimums for swimming and cardiovascular performance.”

Eliason’s preliminary results show that swimming and cardiovascular performance is hindered above 18ºC. At 20ºC– 22ºC, the fish are visibly flagging.

“We think that fish’s heart is no longer able to cope with the high temperature and oxygen becomes limited. The high temperature makes it harder for the fish to get oxygen to the muscles.”

Her research encompasses salmon physiology, ecology, evolution and conservation and is carried out jointly with the Dept. of Fisheries and Oceans (DFO), the Pacific Salmon Forum and UBC colleagues working with Tony Farrell, a professor in the Dept. of Zoology and Faculty of Land and Food Systems.

The Fraser River is a critical watershed that supports more than 100 distinct sockeye species. Records show that since the 1950s, temperatures in some areas of the Fraser River have exceeded 19ºC.

“In 2004, an especially hot year, the in-river mortality was more than 70 per cent for some stocks.”

Eliason says under normal circumstances, about 20-30 per cent of adult salmon will die before making it back to their spawning grounds “due to disease, fishing, seals, insufficient energy stores and just plain exhaustion.”

And given that some species migrate as far as 1,000 km upstream, higher temperatures could be a factor in their decreased resistance to disease and their ability to make it through difficult conditions upstream.

Eliason says DFO telemetry shows that a percentage of adult fish are entering the mouth of the Fraser River, but they don’t make it to the spawning ground. Each time, spikes in the Fraser River’s temperatures coincide with missing fish.

“A whole bunch of fish aren’t showing up at DFO monitoring check points after Mission.”

The B.C. coast has about 100 Pacific salmon stocks, whose life spans about four years. On average, they spend three years in the ocean. Once they successfully reproduce, their hatchlings remain in the river or nearby lakes, which act as a nursery during their first year of life.

Eliason’s preliminary findings support previous research that suggests salmon perform best in temperatures that are closest to the average found in their natal spawning ground.
St. John’s College extends an invitation to visitors to UBC to stay in our quiet, comfortable, and well-appointed guest rooms. Available year-round, guest rooms are furnished with a double or queen bed, private washroom, telephone, television, coffee maker, bar fridge and internet connection.

Dining with College residents in our spacious Dining Hall is an integral part of the life of the College, and meals are included in the guest room fees.

For further information or to make a reservation, contact us by phone at 604-822-6522, or by e-mail: sjc.reception@ubc.ca

www.stjohns.ubc.ca

Drugs Policy Forum
Public Health or Criminal Justice Issue?

Join other interested citizens in learning more about issues affecting our community. This three-part public forum presents a wide range of perspectives and research on the drug problem and considers possible solutions.

February 13
Where Should Public Health End and Criminal Justice Begin?

February 20
What Do We Tell the Kids?

February 27
How Should Public Money Be Spent?
How information gets to be free

BY GLENN DREXHAGE

Scholarly publishing is starting to come full circle at UBC thanks to the development of an online storehouse known as an institutional repository (IR). Dubbed cIRcle (circle.ubc.ca), the site is designed to help store the vast array of UBC's research output. It's currently in pilot mode but an official launch is planned for spring 2008.

"It's a digital archive of a university's intellectual output," including peer-reviewed research, teaching and learning materials, and administrative items, explains Hilde Colenbrander, UBC Library's IR Coordinator. "I think it increases UBC's contribution to the public sphere of knowledge, to a greater openness of knowledge, both locally and globally," adds John Willinsky from UBC's Department of Language and Literacy Education (he also has an appointment at Stanford University).

Dean Giustini, a Reference Librarian at UBC Library's Biomedical Branch, has a similar view. "It means that UBC can begin to build its own free digital resources that reflect research excellence," he says. cIRcle is based on an open access model, which means the site's contents are freely available to users anywhere. Embargoes may need to be placed on certain types of material depending on aspects such as publication dates and publisher permissions, but access for all remains a crucial underlying concept. Indeed, many studies have shown that open access articles are cited more frequently than those in restricted journals. Also, by making their work openly accessible, authors contribute to the world's knowledge without copyright or financial restrictions. Nor do cIRcle contributors assign their copyright to the IR. Instead, they give cIRcle a non-exclusive licence to make their work openly available. Authors retain the moral rights in their works, so they may be properly attributed and cited when used by others.

Close to 1,000 IRs from around the world are registered with the Registry of Open Access Repositories. The U.S. leads with 222, Canada features 42. Yet as IRs have become more prevalent in recent years, so too have debates about access. For years, open access advocates have been talking to publishers about the possibility of an open access approach, and worry that IBs will erode the quality of scholarly publishing. Willinsky acknowledges such issues, but notes that during the past decade, publishers whose content has been heavily archived in IRs have not seen a corresponding decline in journal subscriptions. However, he does have other concerns, such as the difficulty of convincing faculty members to submit peer-reviewed material to an IR. "They're so focused on publishing, they think their job is done when the work gets in the journal," Willinsky says.

Colenbrander explains Hilde Colenbrander: institutional repository increases UBC's contribution to the public sphere of knowledge.

More than two decades ago, technology sage Stewart Brand wrote: "Information wants to be free. Information also wants to be expensive." Today, these competing interests are defining publishing and other media sectors that have been transformed by the Internet. Subscriptions to costs of scholarly journals have surged, and so have efforts to distribute such information in more accessible, affordable ways. Some critics question the economic feasibility of the open access approach, and worry that IBs will erode the quality of scholarly publishing.

In the meantime, Willinsky and Giustini – both long-time advocates of using technology to further education and research – plan on submitting materials to cIRcle.
HAART continued from page 1
us to find, through trial and error, effective ways to engage these hard to reach populations in care. Only then will we be able to stop HIV in BC.”

As Professor of Medicine and Chair of the AIDS Research Division at UBC and also President-Elect of the International AIDS Society, Dr. Montaner has worked on treating HIV/AIDS since 1981. He was the lead investigator of a seminal clinical trial that demonstrated that non-nucleoside reverse transcriptase inhibitor (NNRTI) – based HAART could render HIV plasma levels undetectable and lead to full remission of the disease. Montaner unveiled this groundbreaking research at the International AIDS Conference held in Vancouver in 1996. “Clearly HIV is readily preventable,” says Montaner. Still, HIV/AIDS is ranked on top the Top 20 Causes of Death Worldwide list created by the World Health Organization. Traditional prevention strategies (including safer sex, harm reduction, etc.) are the number one priority. But when prevention fails, treatment can become feasible.

When HAART was introduced as a treatment, the incidence of HIV was reduced by 50 per cent. But since 1998 these figures have reached a plateau,” explains Montaner. “When you put all the facts together a new model for prevention and treatment is required.”
Community research gets a prison perspective

BY LORRAINE CHAN

As a family physician to women prisoners, Ruth Martin says she longed to find a way to improve health outcomes. Since 1994, Martin has been making weekly house calls to her patients in a B.C. correctional centre for women.

In 2005, she had a brainwave: why not ask women in prison to conduct health research by and for themselves? The results have pointed to the enormous potential these women have to make change within themselves and around them, says Martin, a clinical professor in the Dept. of Family Practice, Faculty of Medicine. “We had up to 15 women in prison sign up for the research team each day. They each wrote a paragraph of passion, whatever they wanted to research and why.”

The Alouette Correctional Centre for Women (ACCW) is the province’s main facility for women serving sentences of less than two years. Located in Maple Ridge, ACCW houses 140 prisoners, 25 per cent of whom are Aboriginal.

“The women generated useful policy recommendations such as the need to improve first and second stage housing for prison leavers, says Martin. Their data showed that 78 per cent of their survey respondents reported that homelessness contributed to their return to crime.

Another major finding was the gap in resources for women exiting prison. Without stable housing or job training, many are thrown back into the chaos and environment that led to drug use or prostitution, says Martin. Overall, the participants found that peer research boosted their self-esteem while honing their life and job skills.

“Many reported that it increased their hopes of integrating into society,” says Martin, adding, “As far as I know, this is the only women’s prison research project of its kind in the world.”

Although few had computer skills at the start, by the end many had gained enough proficiency to discuss their findings using PowerPoint. Others gained confidence and public speaking skills since their forums often included prison administrators, funders, academics and provincial health authorities.

“We’ve seen amazing transformations,” says Martin. “I feel very honoured and privileged to be a witness and a part of that in a small way.”

For Jennifer McMillan, the ACCW research project gave her, “a hardcore addict for 15 years,” the strength and courage to get off drugs and stay clean. McMillan has been in and out of prison “eight to 11 times – I can’t remember exactly how many.”

“Dr. Martin helped us break the code of silence that’s in the prison and on the street,” says McMillan. “When you’re just released from prison, you’re terrified.”

Women are given the clothing they were arrested in, a bus ticket, and “a couple hundred dollars welfare cheque if you’re lucky,” says McMillan. “You feel hopeless and helpless, that you’ll just end up doing what you were before. But if you see other women doing well, it really helps.”

Intent on community development, McMillan distributes clothing and information about education and housing to former inmates and friends in Vancouver’s Downtown Eastside.

And although the prison no longer runs participatory research, McMillan, along with 45 alumnae, maintains frequent, if not daily, contact. Their network spans the Lower Mainland, northern and interior B.C. and Vancouver Island. A core group has set up an office in Vancouver. They recently launched a website, stating nine goals that include safe and secure housing, education, job skills, support from family, friends and community and contributing to society.

Martin is currently applying for funding from the Canadian Institute for Health Research to follow the cohort of women who designed the survey and interview for the prison research. She says the funding will allow her to pay the women for their work instead of relying on them to do volunteer hours.

For more information, visit: www.accwalumniresearch.org

WE’RE OPEN

Accommodations to match our spectacular setting!
Warm, welcoming suites. Kitchens, flat panel TV and wireless internet. Natural wood and stone, king beds with luxury linens, conveniently located on campus.
All new. Right here.

Peter Wall Institute for Advanced Studies

MAY 9, 2008
APPLICATION DEADLINE

2009 Distinguished Scholars in Residence

This year, up to six senior, tenure-track UBC faculty members with distinguished research records and commitment to interdisciplinarity will be chosen as Peter Wall Distinguished Scholars in Residence. Beginning with this cohort, appointments run April 1 until March 31.

For more information, please visit our website at www.pwias.ubc.ca or call us at (604) 822-4782.

For more information visit www.supplymanagement.ubc.ca/tradeshow
Brought to you by UBC Supply Management
SERVING UBC FACULTY MEMBERS FOR OVER 30 YEARS

For over 30 years, UBC Faculty Members have been maximizing their retirement income by Retiring On Us.

It works by integrating diverse investment assets and pension entitlements, like OAS, CPP and your UBC Pension, into one coherent plan. Call Clay Gillespie or David Chalmers now to define the retirement you deserve. The sooner you begin to plan, the sooner you can make it a reality.

Clay Gillespie, BBA, CIM, CFP, FCSI
Vice President & Portfolio Manager
cgillespie@rogersgroup.com

David Chalmers, BA, FLMI, CLU, CFP, RFP, CHFC
Financial Advisor
dchalmers@rogersgroup.com

604.732.6551 www.rogersgroup.com

Rogers Group Financial
Strategic Thinking. Independent Advice.

Rogers Group Financial Advisors Ltd
Rogers Group Investment Advisors Ltd. Member CIP