



OTAGO
POLYTECHNIC
Te Kura Matatini ki Otago

Rakahau-ā- mahi hou

New Applied Research

Issue 7, December 2011

Introduction

Dr Robin Day

Welcome to Otago Polytechnic's Rakahau-ā-mahi hou: New Applied Research, Issue 7.



Here at Otago Polytechnic we recognise the dual professional role of our academic staff, as both industry experts and excellent teachers. In addition, the polytechnic sector is increasingly being asked to take a role in the direct transfer of knowledge and technologies to industry and commerce as one of our contributions to improving the nation's productivity. In this issue of *Rakahau-ā-mahi hou: New Applied Research* we focus on some examples of applied research undertaken by staff that have direct applications to health, social and cultural wellbeing and sustainable practice.

For more information on the degrees available at Otago Polytechnic please see our website www.otagopolytechnic.ac.nz



Dr Robin Day
Director of Research

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Research Office Contact:

Jenny Aimers
Research Coordinator
Jenny.Aimers@op.ac.nz

Photography:

Danielle Caddy

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Nicola Mutch, Emma Lumb and Katie Wise

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Hopeful Thinking

Kate Richardson

Occasionally, when nursing gravely ill patients, one encounters a person who maintains extraordinary – even irrational – reservoirs of hope.



Otago Polytechnic senior lecturer in Nursing Kate Richardson, who researched the experiences of people facing terminal illnesses for her master's degree, says the theme of "hope" is highly pervasive.

Much is made, she says, of whether a patient has, or has lost, hope. And hope can mean different things to different people: "Patients may know they are going to die, but just hope to stay a bit longer, even if it's just a week."

Hope was a concept, believed Richardson, that needed to be better explored. "What is behind this commitment to hope? If a patient pays – such as mortgaging their home to fund treatment – does this make them more hopeful? And if hope is significant in terms of patients' experiences of their illnesses, what do clinicians think of hope?"

Researching these questions for her PhD was an eye-opening experience, Richardson says. "I came to understand just how challenging caring for dying patients is for doctors, but they are often not well trained for this. Of the 10 doctors I interviewed, all but one believed hope was important."

Among patients, Richardson found complicated attitudes towards hope, including a sense of duty to maintain a positive mindset, "for the sake of their families".

"They described family members telling them off for talking about death, as though they must not entertain such thoughts. But this could become a very great burden, making it harder to move towards becoming more accepting of facing their death."

Now, Richardson calls for nurses and other clinicians to avoid using 'hope' prescriptively – as though it were something it is possible to demand of patients. Instead, she recommends giving patients space to express and validate their own feelings.

"In nursing, we are often advised to put ourselves in our patients' positions, to treat them as we would wish to be treated. But when people are dying, we cannot know what their experience is like. Instead, we are well to follow the advice of German phenomenologist Edith Stein, for whom care is not about walking in someone else's shoes, but walking alongside them."

Richardson, K., MacLeod, R.D. & Kent, B. (2011). A Steinian Approach to an Empathic Understanding of Hope Among Patients and Clinicians Within the Culture of Palliative Care. *Journal of Advanced Nursing*.

Sustainability We Know and Love

Chris Fersterer

Mention the words “sustainable” and “architecture” and people instantly envisage sustainably managed timber or environmentally friendly paint. But for Chris Fersterer, it is much more than that.

For him, we can appreciate much about sustainability by considering places that are etched deeply into our hearts. And to help embrace a “sustainability ethic”, he suggests taking a holiday – to the bach.

The bach is deeply embedded in the New Zealand psyche as a cultural icon, believes Fersterer. It employs “traditional elements of simplicity that closely align with sustainable principles”.

Now, Fersterer’s research into these favourite destinations, loved by generations of New Zealanders, has enabled him to contribute to the ongoing debate surrounding globalisation and the search for a sustainable future. At an International Conference held in China, *‘The Tao of Sustainability’*, the Academic Leader (Interiors) invoked the words of Gaylord Nelson who suggested that “the most important environmental issue... is the lack of a conservation ethic in our culture”.

Fersterer believes this issue is where the primary focuses of sustainability, design and design education need to be centred. “Cultural practices that support sustainability provide a logical platform for the development of a conservation ethic.”

Due to the “deepening ecological crisis”, the conference was a call for sustainable design practices and Fersterer presented his latest research into ‘The Role of Place Attachment in Fostering Sustainability Ethics’ as one possible solution.

“Place attachment and identity are clearly linked,” he says.

“Vernacular architecture and landscape reside within both a sense of identity and a sense of place.” And with this may come a greater appreciation of environmental responsibility, he says.

“The connection to our natural surroundings forms a strong part of our identity, and the original bach integrates peacefully into the environment. Its small scale and use of local, often recycled, materials to shape its design make it a model for compact, low impact living.”

It also strengthens communal connections which Fersterer believes are integral to creating a conservation ethic.

“Architecture focuses too heavily on the technological aspect of design,” he says. “We need to also be thinking about how to influence social factors, to change the way people think about living space.”

And by turning the lens on the Kiwi bach, Fersterer was able to introduce a very New Zealand slant to this global debate: “This belonging to ‘place’ and the links with society’s norms makes the bach a useful tool to introduce concepts of sustainability.”

Fersterer, C (2011). The Role of Place Attachment in Fostering Sustainability Ethics: A New Zealand Perspective. *An International Conference on Sustainable Design Strategies in a Globalization Context: ‘The Tao of Sustainability’*, Beijing, China 27-29 October 2011. Academy of Arts and Design, Tsinghua University, China and School of Art and Design, Aalto University, Finland: www.conference.lens-china.org





Flow On Effects

Dr Karole Hogarth

Talk to a man over 50, and he may or may not be willing to share the uncomfortable fact that the simple act of urinating can be, for some, an experience fraught with frustration, anxiety and pain.

“Benign prostate disease occurs in every man as he ages,” says Senior Lecturer and Curriculum Leader at the Otago Polytechnic School of Nursing, Dr Karole Hogarth. Given our ageing population, findings on the causes of prostate enlargement, which can obstruct urine flow, are becoming increasingly significant on a broad scale.

Now, Hogarth’s recent research on benign prostatic hyperplasia (BPH) has contributed to an ongoing international 20-year project investigating prostate disease.

Hogarth’s doctoral studies at the University of Otago explored oxytocin in the increase of human prostate cells and in cell metabolism. “Oxytocin is a hormone that causes smooth muscles to contract, most often associated with women in labour,” Hogarth explains. Previously it was thought that oxytocin was only made in the hypothalamus and stored in the posterior pituitary; it has since been found that oxytocin is also produced in the prostate gland.

But does oxytocin cause the prostate cells to increase? Hogarth’s findings varied for the different types of cell: stromal cells grown in isolation do increase; epithelial cells grown in isolation do not increase. However, when grown together (as in the natural environment), at high levels of oxytocin epithelial cells increase substantially.

Significantly, epithelial cells are where prostate cancer occurs, so understanding more about their proliferation may have further implications.

Hogarth’s thoughts are that it’s not oxytocin alone that triggers the increase: “The growth happens when the male hormone dihydrotestosterone (converted from testosterone) is present, so I suspect the trigger is something further on in the metabolic process and is augmented by the presence of growth factors,” she says.

The difference in rates of urinary symptoms of BPH between Japanese men who live in Japan and those who live in the West – a jump from very few to a staggering 37 percent – suggests diet may also be a cause. In New Zealand men (aged between 40-79), 22 percent have urinary symptoms, which generally present when men are in their 60s.

Hogarth’s PhD research has been acknowledged with a Te Amorangi National Māori Academic Excellence Award. While Māori men have marginally lower rates of BPH than the population as a whole, Hogarth’s work is set to benefit medical researchers and practitioners internationally with significant contributions that may, one day, help more men experience true relief.

Hogarth, K (2010). *A Role for Oxytocin in Human Prostate Cell Proliferation and Cell Metabolism: A Model for Benign Prostatic Hyperplasia*, PhD Thesis, University of Otago.

Out of Africa

Victoria Bell

Just as thousands of tourists do every year as part of “Western consumer culture”, Victoria Bell travelled to Kenya in the late 1990s to get a taste of the “exotic”.

However, her romantic visions as a 23 year old of “wandering the Savannah in a floaty frock” were put in stark opposition with reality as they never left the safe “bubble” of the vehicle.

Now, her experience has become the inspiration behind her research project and resulting Master of Fine Arts solo exhibition, ‘Resisting Africa’.

“The idea that we construct our conception of another place based upon our own cultural and personal experience is a premise of my exhibition,” she says.

The artist realised that her “inherent consumption” of Africa as “primitive” and “exotic” were actually tropes. The notion of African Man as a ‘noble savage’ contributes to the construction of Africa as ‘other’ and stems from a Victorian mindset, believes Bell, yet it “continues to circulate around contemporary thought”.

Her work explores these cultural conceptions of Africa by recalling the colonial desire to display animal ‘trophies’ in Victorian drawing rooms, and the “deployment of British campaign furniture” to Africa.

In doing so, she considers how a Western-centric audience accepts ‘exotic’ animal ‘trophies’ as “tangible souvenirs” of the ‘other’ and decorative “objects” due to a simple linguistic shift; “an animal (subject) is referred to as a furnishing item (object)... with the linguistic shift neatly abstracting their necessary death”.

It’s a theme, she says, that resonates in the 21st century where it is possible to order a “lion skin online for US \$10,000”, enabling the buyer to dismiss “the horror implicit in their collection”.

Bell wanted to produce an exhibition that resisted that distancing. “By re-ordering the accepted shift from animal to object through ‘wrong’ configurations of furniture and covering, these works disrupt the viewer’s easy consumption of the ‘exotic’”, she says. “The drawing room and safari collide.”

Her use of lush red velvet and sumptuous materials not only echoes colonial interiors but also lessens the distance between the viewer and the artwork, physically as well as psychologically. “Textile has an innate sensuality,” she says. “The tactility of material draws people towards it. It maintains further engagement from the audience, and opens a dialogue.”

“... we construct our conception of another place based upon our own cultural and personal experience...”

Bell, V. (2011). *Resisting Africa*. Temple Gallery, 29 Moray Place, Dunedin. 12 August - 3 September.



Artworks: *I Dreamed of Africa* (Baboon) and *Heart of Darkness* (Zebra)



A Useful Exercise

Kevin Tattersall

Be it playing the clarinet or getting a good night's sleep, a fundamental principle of occupational therapy is to understand what activities are meaningful to individuals, and to help them to pursue these within whatever physical or psychological constraints they may have.

So the common practice of a patient leaving a medical clinic clutching a 'prescription' for exercise to address a particular health concern got Otago Polytechnic Occupational Therapy lecturer Kevin Tattersall to wondering. "Did anyone ever ask the patient what physical outcomes were important to them? Or question whether the advice was likely to be effective?"

Tattersall's concerns were shared with colleague Phil Handcock from the University of Otago's School of Physical Education, where he runs an exercise prescription clinic. He had seen first-hand the frustration of patients pursuing unrealistic, uncomfortable and even unattainable medical goals.

In fact, says Tattersall, "There is a very real possibility that physical activity guidelines can even become a hindrance towards achieving medical goals."

Now, in "Occupational Therapists Beware: Physical Activity Guidelines have Limitations, an opinion piece for the *British Journal of Occupational Therapy*, the pair call for a critical eye to be cast over exercise advice patients may receive.

In the past two decades, they argue, the case for increased physical activity has been strenuously made across all health disciplines. While this may be welcomed for many reasons, Handcock and Tattersall believe it has led to a belief that "anyone can prescribe exercise". Exercise is treated like medicine, administered in doses and measured in medical outcomes.

It's not that targets such as weight loss, lower cholesterol or lower blood pressure are not important, says Tattersall. "But for many they just seem like distant goals that they'll never reach. It may be more motivating to go for more immediate rewards, like better mood or energy levels or improved self-esteem."

No exercise programme can ever be generically produced to encompass the wide range of individuals' abilities and goals, they believe. And giving people a list of exercises is unlikely to produce long-term change: more important is supporting people to initiate exercise, adjust to the commitment it requires, stick with it, and allow their physical activities to evolve over time.

Occupational therapists, they believe, may play an especially important role in helping incorporate exercise usefully into people's overall health programmes. "Their training focuses on the link between behaviour and activity, and they are well positioned to work with qualified exercise professionals to create programmes that actually make a difference to their clients' lives."

Handcock, P.J. & Tattersall, K. (2011). Occupational Therapists Beware: Physical Activity Guidelines have Limitations, *British Journal of Occupational Therapy*. Special Issue: Promoting Physical Activity to Enhance Quality of Life, In press.



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POLYTECHNIC

Te Kura Matatini ki Otago

NEW ZEALAND

Forth Street, Private Bag 1910
Dunedin 9054, New Zealand
Telephone + 64 3 477 3014
Facsimile + 64 3 471 6870
Freephone 0800 762 786

www.otagopolytechnic.ac.nz