

INTERDISCIPLINARY JOURNAL OF ACADEMIC ACTIVITY

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TE IARERE WAVELENGTH



Te Kura Matatini o Taranaki

WITT

WESTERN INSTITUTE
OF TECHNOLOGY
AT TARANAKI

TE IARERE WAVELENGTH

Communication across distance, people and disciplines. A pulse across Taranaki, the energy province.

The Māori equivalent of Wavelength is "Iarere." From a Māori perspective, "Te Iarere" is a positive way of communicating over vast distances.



Cover: *Te Herenga Waka* by Nathan Bryers

The challenge to create a functional yet creative bike rack inspired engineering technician Nathan Bryers to collaboratively design and construct *Te Herenga Waka*. Blessed on September 20th (World Car Free Day) it is located under the mezzanine floor of the WITT cafeteria.

Te Iarere Wavelength

As the Interdisciplinary Journal of Academic Activity at WITT, *Te Iarere Wavelength* provides a forum for the publication of scholarly articles, points of view and creative works from all academic disciplines and subjects of general interest. Submission Guidelines are found on the following page. *Te Iarere Wavelength* is published annually by WITT, Private Bag 2030, New Plymouth, www.witt.ac.nz, ph (06) 757 3100.

Editorial/Review Team

Vanessa Henley, Zanetta Hinton, Bridget Knuckey, Lesley Pitt, Margaret Smith, Christine Fenton and Ian Clothier.

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Disclaimer

All articles and creative works published in *Te Iarere Wavelength* are reviewed for accuracy of information (where applicable) and consistency of style and presentation. The views and creative philosophies expressed in this journal, however, are those of the author(s) and artist(s), and should not be taken to represent or reflect any aspect of institutional policy.



SUBMISSION GUIDELINES

Aim

Te Iarere Wavelength provides a forum for the publication of academic articles, points of view and creative works by current WITT staff members. Co-authored articles, in which one or more of the authors is either a WITT student or a non-WITT employee, will also be considered for publication.

Submissions are not limited to research or scholarly activity that relates directly or indirectly to WITT programmes of study. Any subject of general interest on which sensible and well-informed opinions may be expressed, and creative works e.g. short stories and graphic images, will be considered for publication.

Readership

It is intended that *Te Iarere Wavelength* is published in hard copy at least once a year. Copies will be distributed internally to all WITT faculties, interested staff, divisions, service areas, and nationally to other institutions.

Editorial Committee

An editorial committee drawn mainly from Research Committee members will receive and review each article or creative work submitted for publication. The editorial committee may seek specialist opinion outside its membership where this is deemed to be helpful or necessary.

The editorial committee reserves the right to accept, edit or decline any piece of work submitted for consideration, and to make suggestions for - or seek - clarification of meaning where appropriate. A call for submissions is made approximately three months prior to publication dates.

Articles (including print based creative works)

Academic articles and scholarly views are expected to be formally structured with adherence to academic standards and should aim to be up to 2,500 words (longer ones will be considered). Points of View articles are informal and can vary in length. All submissions selected for publication will be subject to editing.

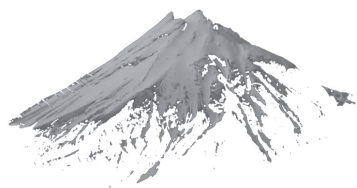
All articles should be submitted electronically as a Word document. Articles should be presented in single-line spacing in 10pt Verdana font. Headings should be printed in bold type, in 10pt Verdana font. Any footnotes and references should follow the American Psychological Association (APA) format. Copies of the WITT APA Referencing Guide are available in hard copy at the Learning Centre.

Articles should not normally be submitted if they have been published elsewhere. In the case of prior publication, permission must be sought and obtained from the original publisher before the article is submitted to the editorial committee. Articles should be submitted to the Research Administrator (research@witt.ac.nz).

Graphics

Any written text accompanying graphics should follow the same guidelines as per the section "Articles (including print based creative works)", above. Graphic images should be supplied in JPG or TIF format at no less than 300dpi.





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IN THIS ISSUE

In search of the perfect curve by Philippa Berry Smith

Specialising in web and graphic design, Philippa teaches students the principles of graphic design, the web process, and to fall in love with typography. She runs her own freelance web design business, and enjoys the way teaching feeds back into her practice.

Ethical tensions within research in an early years setting by Kathleen Moriarty

Kathleen writes about her own personal journey as an emerging researcher while completing her Massey Post-Graduate Diploma in Education. This article highlights the ethical tensions between theoretical understandings and the reality of practising research in a Playcentre [New Zealand early years setting]. Kathleen is currently Programme Co-Ordinator/tutor at WITT in Early Childhood Education.

The human qualities continuum by Margaret Smith

Margaret is interested in how people construct identities in their interactions with themselves, each other and the cultural matrix they negotiate. The human qualities continuum has emerged from her hope to empower people through counselling to understand and construct identities that move away from debilitating negative self-talk towards identities that express peoples' full human potential. Margaret has provided student counselling services at WITT since 2008.

A reflective learning journey through constructive alignment by John Hudson

John is a hospitality tutor with a specialist area in catering. He has a Masters Degree in Adult Education. John became involved in teaching in his 20s and developed a passion for lifelong learning while teaching in this industry.

Cultural bridging, art-science and Aotearoa New Zealand by Ian M. Clothier

Ian is a senior academic at WITT. Ian's projects have been selected for exhibition both nationally and internationally. Thematically projects involve notions around non-linearity and cultural hybridity, united within notions of integrated systems. Ian has work published in many journals and he has been selected for, and given, many conference presentations.

A journey in search of an appropriate referencing management tool: Zotero by Barbara Morris

Barbara came to WITT in 1990 and developed a centre for learning skills. Her role as a learning skills tutor involves working with students as they adjust to an academic life and learn the skills necessary to successfully participate in their mainstream programmes.

Tuatara and monarch images by Vicki Catlow

When creating these images Vicki is obsessive about replicating them as accurately as possible but on occasion has had to deviate from reality. This understanding of the intricacies of botanical art has left Vicki questioning just how truly accurate her predecessors, such as Charles Darwin and Joseph Banks, actually were.



**Vanessa Henley**

Theory is a term that often requires demystification. Many shy away from theory or the theoretical concepts – as if theory is somehow divorced from the reality of everyday life. Theories however provide an explanatory framework from which bodies of knowledge can develop. Theory is viewed rather differently in the sciences than it is in the arts and humanities. In science, theory is a well-confirmed explanation of a measurable phenomenon and is often considered more reliable or robust as it is consistent with the scientific method. This is in some contrast to the more general view of theory as contestable, tentative or unproven and describing ideas that may not be specifically measurable. The diversity of disciplines and professions at WITT will be reflected in the diversity of theoretical understandings.

One of the objectives in the WITT academic strategy is to focus on professional practices that are successful, needed and proven. This includes using research and scholarly activity to inform our practice and the practice of others. To do this we are informed by the theories that guide aspects of the tertiary education landscape, for example, economic, political and education theories. Within our subject or professional areas, we are also guided or informed by theories; several notable ones being visual arts, sociology, psychology, biology and engineering to name but a few.

Within our tertiary education institution staff, both general and academic, are applying theories into our practices. This year the journal is diverse in its offerings. Our contributors have all reflected on aspects of their practice and by doing so, either implicitly or explicitly, revealed aspects of their relevant disciplines' or professions' theoretical underpinnings.

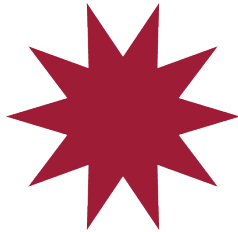
We see for example in Philippa Berry Smith's piece, theoretical foundations are not explicit. However, visual arts theories are clearly evident; for example, aesthetics, art education, perspective, geometry and composition. Vicki Catlow's images also reflect these art theories, more specifically botanical art. Barbara Morris's reflection on the search for an appropriate

referencing management tool is grounded in literary theory; academic referencing and conventions is a sub-branch of this and founded on concepts of upholding intellectual honesty. Applying this into practice is an integral part of higher education.

Theories as an explanatory framework provide a foundation from which to develop bodies of knowledge – be that in our own subject or professional area, or across these. Ian Clothier’s work makes theory explicit – to the point of positing a position of interconnectivity that connects divergent worldviews or philosophical understandings; art, science and culture. Margaret Smith and Kathleen Moriarty both discuss theoretical aspects of the disciplines of counselling and early childhood education and research. John Hudson reflects on a teaching strategy that has evolved from education theories.

Let us then continue to challenge or prove theories by sound research, or develop existing knowledge by contributing to academic debate or activity. Let us celebrate the theory that is in our practice.





Philippa Berry Smith

Introduction

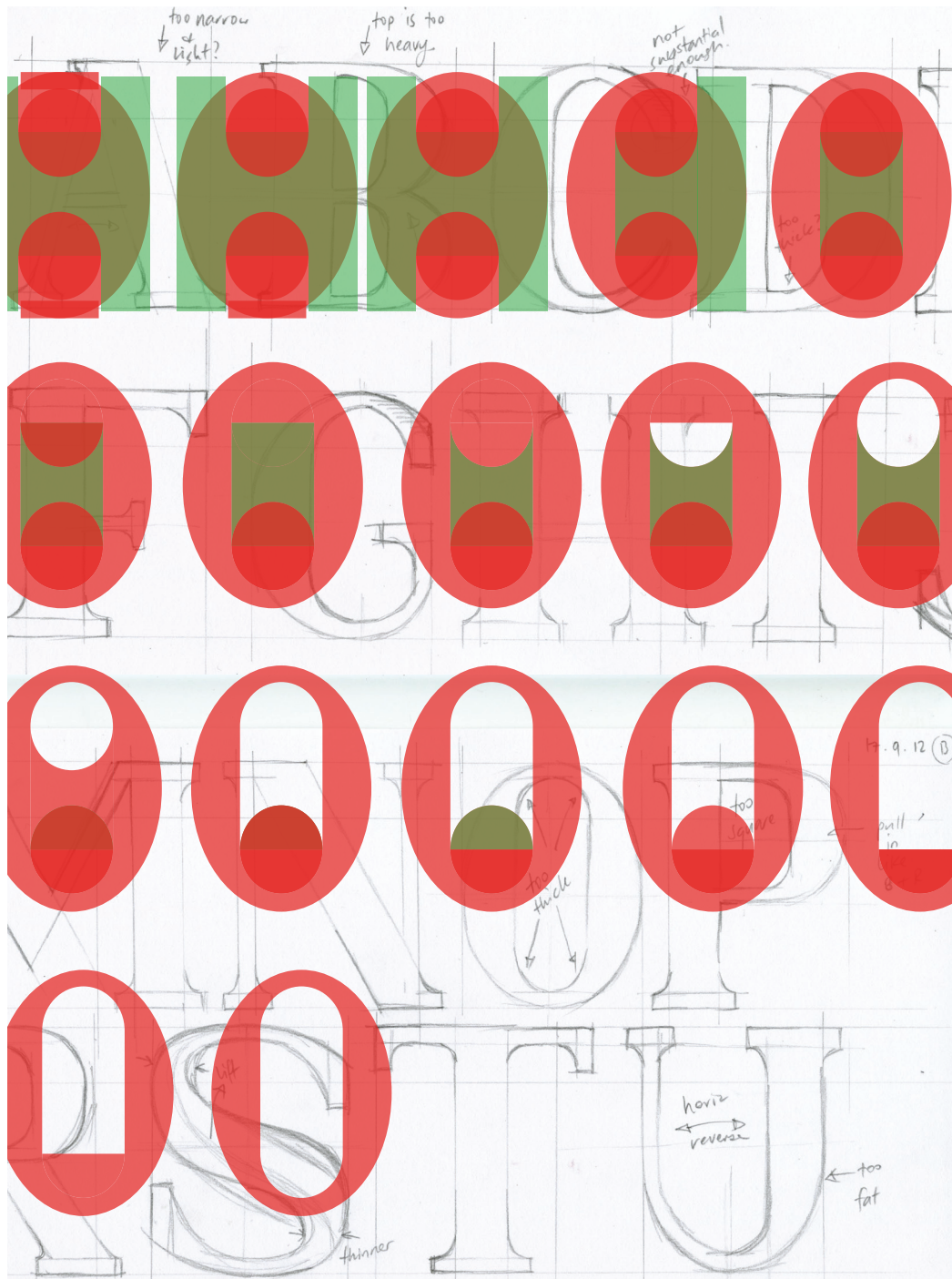
Why would someone spend months obsessively creating shapes? Letters, to be exact. What is it that drives someone to devote so much time and energy into developing a new typeface design, when there are already thousands in existence? This is the story of how I came to find myself in the middle of an absorbing project focused on designing a font.

My font-creation process

What started out as an idea to create a modern slab-serif¹ turned into a sketch one afternoon; just a couple of letters. No big deal. From there it was only rational to expand and add to the initial set of four letters and see if I could challenge myself in creating an entire alphabet of 26 shapes – a further several weeks of refinement and modification. About this time I realised I was well and truly in the grip of this typeface. It wouldn't let me free until I had created the whole thing.

The lowercase was drawn by hand. It looked different to the uppercase I had originally drawn; so different that the uppercase had to be redrawn. Then numerals, punctuation, symbols, and ligatures arrived. It was not so much a planned exercise, more like an idea would appear and demand to be drawn. And always these inspirations occurred at the most inconvenient moments for sketching e.g. whilst in conversation with someone, or during the night. Shapes would appear in my mind and suddenly I could understand how to solve a specific visual problem.

Problem glyphs (the name of the artwork assigned to a character), such as the ampersand '&', took weeks to discipline. Each time I drew one, it seemed to come from a font completely alien to the one I was attempting to build. They came with their own character: sometimes pretty, or curvy or brush-like, but not yet adhering to the set of visual rules that had been locked down by the lower and uppercase.



Typeface Philippa Berry Smith. Geometric construction of the letter O, plus preliminary sketch underneath.



The process went from sketches, and scans to vector-digitisation² with many rounds of modification involved to ensure consistency and elegance across all letters. I would say this process of iteration is somewhat analogous to the feeling you get when trying to solve a slider-puzzle. What works effortlessly for one letter must be forced and coerced to succeed in another.

My students often hear me say how the poor type designer is consigned to suffer by setting beautiful rules for the visual style of their letters, and then having to wrestle with the fact that to make all the letters look cohesive some rules have to be broken or compromised. The designer is successful when this struggle is no longer apparent in the end result.

Consider the nature of serifs (those little end-caps on the strokes of each letter) – on a straight letter like an 'E' they are simple and natural. But how do you solve that problem on the letter 'C' without it appearing too much like a letter 'G'? Even simpler decisions, made quite early on, affected the design of the entire set: How should the uppercase 'K' relate to the lowercase 'k'? Will letterforms base their skeletal structure on a modern san-serif or an older historical serif face? And the one I kept asking myself at every stage: How pedantic do I want to be with this design? Too perfect, and it would never be finished. Too quick and the result would be sloppy and hidden for all eternity from public gaze.

Once the glyph artwork is created and made consistent, it is then painstakingly transferred to a font-creation programme where metrics and kerning³ are set. These values define the horizontal space between each letter, or between certain pairs of letters. The aim being to make any word typed with the font look right and feel evenly spaced. It takes anywhere from weeks to months to get this happening correctly. For this process I used a relatively new piece of software developed by a German software author and typographer named Georg Seifert - *Glyphs App*⁴. The efficiencies this programme enabled me to shorten the time from months down to weeks.

However, this is not to say I don't enjoy the task of finding the perfect curve, or the elegant solution to a visual dilemma. It gives me great and indescribable satisfaction to know that I am probably the only person who knows this typeface so intimately. Even if the end result is riddled with issues (it is) I know that the process has been immensely enjoyable for me and I intend to repeat it.





Typeface Philippa Berry Smith. Using spacing blocks and balls to ensure consistency of stroke width, serif angle, and serif brackets.



I have based my design on this nebulous desire to create a new slab-serif which somehow references the work of several renowned type designers: Matthew Carter (contemporary London typeface designer), Giambattista Bodoni (Italian type designer 1740–1813), and Kris Sowersby (contemporary New Zealand typographer and type designer). All mixed together with letter-shapes I have been drawing since I was in primary school. The varied influences here are probably part of the reason why my typeface doesn't fit nicely in any classification; it is a bit of a mongrel.

The images you see accompanying this text are taken from my development file and sketches, and reveal some of the more beautiful happy accidents that have occurred along the way.

Teaching typeface design

At the same time as making my own typeface I was also supervising three senior typography students who were embroiled in projects of their own. It is always a wonderful moment to watch students' faces when they install their font and use it for the first time. Working alongside them with our typeface projects running in tandem has given the class a relaxed and copacetic vibe. I help them with the creative and technical aspects, while they get to view and critique my designs as they progress. One major difference is how the underlying drive of their project (where they must select a sub-/ counter-/ culture and produce a representative typeface) is rather more focused than mine.

I am always quite astounded at the level of variation that students achieve when working from identical design briefs. In 2012 the cultures chosen included *Ganguro girls*, *preppy style*, and *rave culture*. This year (2013) the class is bigger and students have chosen *hoarding*, *hacky-sack*, *1950s hairstyles*, *Māori graffiti art*, *Pachuco*, *gay bear*, *elevator*, and *steam-punk* as their cultures to work with.

The project enables students to distil quite complex ideas down to their basic visual elements, and then expand those elements out across the alphabet. Teaching both technical skills in vector design and developing the dedication needed for a long and complex typeface, the project shows students the importance of attention to detail. This is one of the best projects for simultaneously teaching aspects of culture,





Typeface Philippa Berry Smith. Transparent letter forms in blue showing modular parts, with italic development in black.



research, drawing practice, digitisation, visual consistency (spacing, kerning) and typographical layout (where the students get to use their newly hatched fonts to create designs representative of the cultures chosen).

This typeface design project is, however, an acknowledged indulgence of mine: these students are not likely to need to build a typeface as they go out and gain employment as junior designers. They could be doing much more mainstream typography projects such as magazines and posters yet this project teaches them a complex set of skills that can flow on to all other aspects of their work. They are shown how a rather esoteric skillset can be applied in the graphic design industry to make them stronger designers, and how having a passion for a specific discipline of design can be useful. Hopefully this will translate into a competitive advantage for my students.

The class has also pushed me to explore new teaching methods, with some of the more complex software-based tasks being recorded with screen-capture software and posted to YouTube (<http://www.youtube.com/user/redwinggraphic>). This has enabled my students to practice the techniques repeatedly without needing me to be sitting beside them. An added bonus is that typographers and designers from around the world have been viewing these videos online and commenting favourably.

Type design around the world

With the instructional videos being online, they are gathering an international audience with over 150,000 views. There are more than 600 comments, mainly from people wanting help with their Illustrator or typeface design projects. Designers from the United States, the United Kingdom, Germany, Australia, Canada, Belarus, Turkey and Italy have sent their work to me for technical help and critique. Often this takes the form of a comment or private message, but more recently they are emailing me directly and sending their files. I am discovering what an amazing experience it is to have someone from the other side of the world write my name in their brand new unreleased typeface⁵.

How this new aspect to sharing my work and my knowledge should progress I am still undecided, but it shows my students what a reach their work can have. Visual design



can be incredibly powerful and being able to introduce my students to a working model of how the internet can be used to turbocharge the centuries old technology and practice of typeface design is exciting.

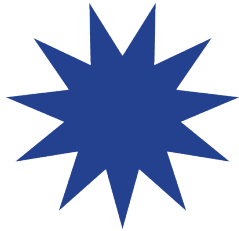
Conclusion

Being able to share this normally hidden part of the design process with you is quite unusual. Normally you, as the audience, would only get to see the final product as a choice in your font menu in Word. Hopefully this has let you sneak a look into the work that goes into creating those choices, and given you an idea of the work that goes into creating a typeface.

Notes

1. Slab-serif: The name of the short lines applied at the ends of letters (see the typeface Times New Roman). A slab-serif is a thick, bold rectangular style of serif. In contrast, a san-serif typeface has no serifs (see the typeface Arial).
2. Vector-digitisation: The process of converting sketches into digital artwork. Vector artwork is a mathematically controlled form of image representation composed of points, paths and angles. Artwork can be scaled to any size without loss of resolution. In contrast, raster or bitmap images are composed of individual pixels which cannot be scaled without the image quality degrading.
3. Kerning: Adjusting the space between two individual letters so they appear consistently spaced with the remainder of the font.
4. Glyphs App: A font-editor for Mac (<http://glyphsapp.com/>)
5. Unreleased typeface: Digital fonts are generally created by and released through online font foundries. The font files themselves are actually small pieces of software that get installed on the client computer. Fonts and typeface families are distributed both freely on the internet, and for sale.





Kathleen Moriarty

Introduction

Ethics is a key component of a research project. Despite years of research, debate and reflection, opportunities and tensions surrounding ethical principles and practices continue to be foregrounded in literature. Research within an early years setting is one such context inviting of examination, particularly that concerning the ethics of observing young children. The role of the researcher is paramount within this investigative process. My own post-graduate study has led me on a research journey where I have gained theoretical understandings and been enabled to practice my developing research skills. The purpose of this paper is to explore the ethical interplay of theory and practice while carrying out research involving young children and their families in the setting of one New Zealand Playcentre¹; a licensed early years centre where parents participate as educators of their own and others' children. My current research focus was that of a 'funds of knowledge framework' representing all that children, wider family and communities might value and contribute to children's on-going life journey (Gonzalez, Moll, & Amanti, 2005). One vignette 'ballet on the fort' has been chosen to illustrate my own ethical tensions within this research project.

Ethics within research

Within a research perspective, ethics refers to "the moral philosophy or set of moral principles underpinning a project" (Aubrey, David, Godfrey & Thompson, 2000, p. 156). Gaining ethics approval and following ethical procedures are important elements of undertaking research. However ethics is not confined merely to procedures; rather it permeates every moment of a research journey. It involves continually negotiating the roles, responsibilities and relationships of stakeholders. It includes being cognisant of personal and institutional attitudes, assumptions and potential bias. According to Aubrey, et al. (2000) researchers must involve themselves in reflexivity or "the ability to interrogate one's own influence on the research process ... challenging the idea that we can allow our own histories, experiences and assumptions to go unquestioned when we explore every phase of the research process" (p. 153). It is vital to continually ponder questions and

decision-making processes concerning whose interests are being met, who might benefit from any research and indeed, what right a researcher might have to do any such project? Graue and Walsh remind us that ethical behaviour involves an attitude of being humble, in that “entering other lives is intrusive” (1998, p. 56).

Research codes of ethical conduct from an institutional perspective

A key ingredient when undertaking research in an early years setting are the children. Formal research ethical approval processes from institutes concerning children may appear simple. For example, at Massey University the *Code of ethical conduct for research, teaching and evaluations using human participants* (2013), states that researchers need to be cognisant of power relations of vulnerable groups such as young children. More specific considerations concerning children state that any research should only occur if there is a specific and demonstrable need identified that is not against the interests of any one child. Children are legally identified as those aged fifteen years or younger from whom parent consent should normally be obtained before children are approached. Children must be able to give their own consent if they demonstrate understanding the nature of the research (decided by the researcher); this usually applies from about the age of seven, though it could be younger. In a group (early years setting), the anonymity of participants needs to be protected. Furthermore, research should avoid disruption to a setting's programme.

Issues concerning children as research participants

Informed consent

While it is now deemed that children younger than seven can give their own informed consent, the practice of children choosing whether to participate is an area worthy of further consideration. Children of this age are legally required to have initial parental or guardian consent; the differentiation between this and child agreement has been coined as ‘children's assent’ to try and address this point (Dockett, Einarsdottir & Perry, 2009). A question of children being fully informed involves them understanding the nature of the research, what is going to happen, what is expected, along with data collection and potential results, leading to pondering whether children do actually understand and have experience of such projects sufficiently to not only give their own



consent but to take part. Children's language is still developing. Are children really able to articulate their views and understandings of the world? It can be problematic gaining insights into what children really think. Do others really know what matters to children?

Furthermore, children might choose to take part because they perceive enjoying an on-going relationship with the researcher. They may wish to please a 'teacher-researcher' figure or as Coyne (2010) reports, children may feel unable to refuse because significant adults persuade them to consent. Flewitt's (2005) study attempted to address this dilemma by promoting the notion of provisional consent as "ongoing and dependent on the network of researcher/researched relationships built upon sensitivity, reciprocal trust and collaboration" (p. 556). As a researcher I drew on parent and educator intimate knowledge of children, as well as continual careful listening and study of body-language. Graue and Walsh agree saying that permission is more than completion of forms – it "permeates any respectful relationship between people" (1998, p. 56).

Confidentiality and anonymity

Children's notions of confidentiality and anonymity are also worthy of investigation. Conroy and Harcourt (2009) found that children often do elect and have even requested to use their own names or symbols, these children stating they did not want to pretend to be somebody else and that they wanted all readers to know their names. This could well be reflective of children's thinking as they are attempting to make sense of real and imagined worlds along with the value of honesty. This means that these children have the potential to self-identify, if not now, then later in life. Does assent for a young child mean this will stand forever? Children's developing cognitive abilities might mean they relate more to current situations than reflecting on past or impacting on future experiences. Do researchers prioritise issues of anonymity instead of considering a child's current thinking? A final consideration is the potential for research findings to extend to an increase of surveillance within children's lives and experiences (Dockett, Einarsdottir & Perry, 2009) in that when children agree to "share their secret places" (p. 293) adults might further intrude into children's private lives. Which is more important in the lives of children?



The changing rights of children

The last sixty years has seemingly seen significant developments concerning awareness of the rights of children (Aubrey, et al., 2000). A shift from viewing children from a scientific and universal paradigm to a more recent sociocultural-historical and ecological understanding of children as active, participating and collaborative learners are ideally paralleled within research approaches, ways of thinking and indeed ethical considerations. Woodhead and Faulkner (2000) however warn against throwing out "the baby with the developmental bathwater" (p. 31). They further state that:

respect for children's status as social actors does not diminish adult responsibilities. It places new responsibilities on the adult community to ... enable their [children's] participation in ways consistent with their understanding, interests and ways of communicating, especially in the issues that most directly affect their lives. (p. 31)

In the wise words of Graue and Walsh (1998, p. 57) "one cannot simply treat children like adults. They are not adults. One must treat them like children, but in a way that adults do not normally treat children. Therein lies the challenge".

Ethical tensions in practice

My chosen research investigated the question 'to what extent children in a [specific] Playcentre utilised their home funds of knowledge during socio-dramatic play'. The purpose was to ascertain the multiple ways by which funds of knowledge are enabled to be incorporated into a programme, or conversely, could be valued at a deeper and more authentic level. The setting chosen for this study was an urban Playcentre. Each session was group supervised by parents (the educators). Data-collection was by direct observation of four-year old children over five sessions (three hours; one day a week) while children were engaged in self-choice play.

I created an informed and voluntary consent form for parent-educators to sign, outlining my intent and plans. Children were identified by pseudonyms. A specially-designed space for children to sign their 'assent' was included. Children did choose whether or not to 'write' their name or 'signature'; ten children did so. One child who did 'sign' requested during a subsequent week if he could 'sign' his again, to which I readily agreed.



As a researcher my initial dilemma was where to observe children's play. What might happen if the children saw me? Would I interrupt their play? Is it OK to 'hide' from children? I really did want to be able to hear and see what was happening, so I needed to be reasonably close. What if I saw something that I thought wasn't appropriate? No other adults were around. Would I then change from my researcher role?

Vignette: Ballet on the fort

Three children – Jack (male, 4.11), Casey (female, 4.4) and Dario (male, 4.6) run outside and climb up the ramp to a flat space at the top of the fort. No parents are nearby. I follow the children, and stand at the base of the fort, clipboard in hand, where I can see and hear them. The children seem oblivious to me being in the area at all (maybe I was not seen as a threat because they don't really know me).

The three children briefly discuss a flower that one child had carried there; this is soon discarded. The ensuing discussion seems to come out of nowhere. Jack instructs Casey and Dario:

"Hold hands. Two hands."

Casey and Dario follow directions exactly.

"And now twirl and then you have to do this."

Jack holds their hands and moves them up over their head.

They hold the pose.

Jack: "Move around. Don't go so fast. Now hold hands. Now turn round. Now walk. Now we'll do ... the walk." Jack choreographs and plans their moves.

Jack: "You all have to watch Casey do a ballet dance."

Casey moves across, her hands high in a pirouette pose.

Jack now demonstrates a pirouette. Then Casey copies. Then Jack repeats it again.

Jack: "How about you go and find ..."

Casey: "I hate this game. I don't want to play."

Jack: "I'm sorry Casey" ... but Casey has already left.

These children (especially Jack) seemed to have intense funds of knowledge. Jack took on a 'teacher' role, knowing set poses (holding hands down low and up high above heads, twirls). He knew about variation of speed when moving. He identified this play as being a ballet dance. Casey too knew movements [by acting out a pirouette]. This allowed them to imitate each other, as if perfecting a skill.



I really wanted to know what was going on here. Was this something from home funds of knowledge? Do I talk to Jack's mum? Why/why not? Is this intruding into children's play? Is it my right? Or not? I was curious, so I did talk to Jack's mum. She could not make any connections with his fund of knowledge being from home. She was not aware of this interest before now. I was still curious and so was Jack's mum. She then asked Jack where he had seen ballet and how he knew about ballet. Jack was off-hand in his response and walked away. Jack's mum later reflected that it probably wasn't cool for Jack to want to discuss this topic with her.

I return to my research question – of ascertaining to what extent children's home funds of knowledge were (or not) utilised during socio-dramatic play. Did I overstep the mark? Did I intrude into children's lives to the extent that this play might be discarded in future? Respectful and trusting relationships underpin ethical research (MacNaughton, Rolfe, & Siraj-Blatchford, 2010). Underpinning the complexity of such relationships when researching with children and families in a Playcentre setting are the values of sensitivity, justice and fairness (Cullen, Hedges, & Bone, 2011). What about the lack of trust then, not just between myself as a researcher and these children, but even more relevant the potential tension between a child and his parent? Family lives do intersect intensely within a Playcentre: there lies a fine balance between what needs to remain private and what is appropriate to share with others. Was this exploitation?

Conclusion

Within this article, I wanted to highlight the ethical interplay of theory and practice while carrying out research involving young children and their families within a New Zealand Playcentre. While it is important to consider the broad principles and application of these generalist terms I learnt that 'one size does not fit all'. Codes of conduct from an institutional perspective were a valuable starting point. These principles then needed unpacking to include a situational stance, reflecting philosophical and practical perspectives embedded in an early years centre such as a Playcentre. Informed consent or 'assent', confidentiality and anonymity needed to be continually negotiated. The interplay of complex relationships did indeed pervade the whole research journey. Just how sensitivities, justice and fairness were played out within these on-going processes needed to reflect current theory and legislation. But perhaps what has been most valuable learning for me is the analogy of 'matapuna' (source of river) a



Māori concept which sees research as “part of the river of learning, which flows and grows as new tributaries join the sharing of knowledge. Researchers contribute to each others’ work and weave studies into ‘the literature’” (Liberty & Miller, 2003, p. 214). Within my own post-graduate study, I have immersed myself in the writings of other researchers and academics. I have had opportunities to practice the realities of small-scale research. I have been provoked and stimulated within my own academic writing. And perhaps most importantly I have been enabled to wallow in and to practice reflexivity. It is anticipated that this article goes some way to enable myself and other emerging researchers to be both provoked and excited.

Notes

1. Playcentre is a New Zealand early childhood organisation. Beginning as a parent co-operative during the 1940s its aim was to support families and promote new developments in early childhood education. The New Zealand Playcentre Federation formed as a national organisation in 1948.

References

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Margaret Smith

Abstract

In counselling we can begin to understand a personal quality or emotion that may be causing distress or a sense of imbalance by thinking of it in terms of a continuum. Rather than attempting to eliminate parts of ourselves that are causing distress we can seek to understand, learn, accept and manage ourselves and the distress. From my work as student counsellor at the Western Institute of Technology at Taranaki I have developed the Human Qualities Continuum (HQC) as a way to conceptualise holistic identities. This provides a way of viewing ourselves through a holistic multi-dimensional lens, to understand, befriend and manage challenging aspects of ourselves. It can be the struggle to fight with or rid one-self of challenging human qualities or emotions that can add to our distress. Thinking of the challenge on a continuum can reduce such struggles.

People come to the counselling room with hopes such as happiness, perfection, normality, purpose, security, elimination of stress or anger and may feel like failures because they cannot perpetually maintain these states or qualities. Often people struggle with disappointments when states or qualities fluctuate or become elusive. They may compartmentalise themselves into black and white, one or the other, dualist thinking. They may hold an expectation that a concrete set identity can give security, yet often it is this struggle for a fixed identity that can play havoc with the mind. I have found it useful to think of human qualities on a continuum with the counselling process as a means to understand the pros and cons of each quality, to accept that life experiences can disrupt balance, to seek balance, to recognise when becoming out of balance and discover strategies for balance maintenance. Difficult life experiences can tip the scales one way or another to cause a sense of imbalance. As we grow through life we can pick up skills to even out the weight of the scales from tipping too far one way or another. With growing self-awareness we learn to recognise the signs of imbalance and use strategies to pick up and carry on. Counselling can be one medium for developing this self-awareness and skill base. A state

of balance is something to keep working to maintain, but a sense of balance comes and goes and is not static in the ebbs and flows of living.

The HQC is one of many tools I can draw from in counselling people to access their own understanding, wisdom and direction from a person-centred approach. I might introduce the continuum as a possible way of viewing a quality and only continue working from this perspective if it resonates with the person; if not we would work to explore other ideas and ways of making meaning from a person-centred counselling approach.

So, the person-centred approach places the client at the centre. The central truth for Carl Rogers, the originator of the approach, was that the client knows best. It is the client who knows what hurts and where the pain lies and it is the client who, in the final analysis, will discover the way forward. The task of the counsellor is to be the kind of companion who can relate in such a way that the client can access their own wisdom and recover self-direction. (Mearns, Thorne & McLeod, 2013, p. 2)

I have developed the HQC with influences from constructivist and social constructivist perspectives of counselling such as solution focused, drama and narrative therapies. A number of therapy approaches have developed from a constructivist perspective, which is based on the assumption that people construct and make meaning of their world and the therapist's role is that of collaborative co-creator working alongside the client to construct more preferred realities.

Constructivism can be characterised as resting on three basic assumptions. First, the person is regarded as an active knower, as purposefully engaged in making sense of his or her world. Second, language functions as the primary means through which the person constructs an understanding of the world. Constructivist therapists are therefore particularly interested in linguistic products such as stories and metaphors, which are seen as ways of structuring experience. Third, there is a developmental dimension to the persons' capacity to construct their world. (McLeod, 2009 p. 224)

Solution focused therapy is a constructivist approach about co-creating solutions by inviting people to move quite quickly from a problem focus to constructing alternatives or unique exceptions from a range of possible options available. To identify where a



person is currently and to identify goals to work on, the solution focused therapist will use scaling questions (McLeod, 2009). For example 'From 0-10, if 10 were the problem completely absent from your life and 0 being totally consumed by the problem, where would you place yourself at this time?' Scaling questions have influenced the HQC by thinking of qualities, emotions and problems on a scale as a way to identify influence, contexts and movements along the scale or continuum.

Another constructivist approach is drama therapy, which has influenced the HQC. In 1999 and 2001, I was fortunate to attend a number of Drama Therapy workshops facilitated by John Bergman through the Wellington STOP¹ Programme where I learned the value of continuums to help people identify how they position themselves in relation to questions asked. From these workshops I learned to use a continuum in work with groups, and then to counselling with individuals as the HQC. For example in a group I facilitate for new students to WITT I ask people to stand up and place themselves in the room where one end of the room is 'I have completed lots of tertiary study' and the other end of the room is 'This is my first experience of tertiary study'. This acts as a warm up activity to get people moving, talking and identifying where they are on a continuum.

Narrative and drama therapies move beyond individual constructivism to examining social and cultural influences on peoples' experiences in the world. Some of my cultural perspectives are revealed in a previous article (Smith, 2011-12). As a social constructivist approach narrative therapy provides a process to help liberate people from thin, problem-centred identities, to work in respectful, non-blaming ways to understand multiple identities and cultural influences on those identities (Morgan, 2000). Moving people from thin problem centred descriptions towards understanding multiple dimensions of themselves in multiple contexts has informed the HQC.

I completed a postgraduate qualification in narrative therapy, which refined my careful focus on the use of language to frame questions and to externalise problems, emotions or personal qualities to help people move from blaming, totalising descriptions of themselves. A person may speak of themselves as 'always being a doormat' for example and we may discover this can mean a desire to please people, so we could explore the values, challenges, contexts, social conditioning, family expectations, influences and effects associated with this 'pleasing' or this 'doormat' identity. We can consider when it is absent and explore



those times further to uncover alternative stories to 'always being a doormat' to sometimes or never having doormat tendencies around. With this exploration we begin co-constructing other perspectives on this 'doormat' identity, different from the problem, totalising story. During this exploration I may bring in the idea of viewing the 'doormat' quality on a continuum as one of the many tools available for the client to take up as a way of viewing themselves or discarding depending on the relevance for them. I could use the whiteboard to diagram it like this:

*Passive/doormat/ ↔ Assertive/welcome mat/protection mat ↔
Aggressive/door-slamming*

... and then move on to ways of seeking balance, times and situations of being out of balance, when doormats and door slammings are useful, warning signs for tipping the balance and ingredients for balance maintenance.

An example from my life can demonstrate the value of thinking of qualities on a continuum. I used to be told as a young adult "You think too much", "You are never satisfied", "You always want to be on the other side of the door". This led me to question myself further and feel wrong for thinking 'too much'. I tried to think less. As with me, I have observed in others that 'trying' to think less about something can cause more thinking, struggle and dissatisfaction. Through the process of living, group therapy and learning from the feedback of others I discovered that thinking a lot has its pros and cons, its useful, not so useful and in between sides. My task was to accept and love the mind I have, know it well and seek to balance the useful and challenging aspects of my mind. I renamed it 'a busy mind' and sought to befriend it, because it's the only one I have, I'm stuck with it. There is no mind shop where I can purchase another.

I considered some pros and cons of a busy mind. The pros can be: thinking of multiple angles to situations; empathising with others struggling to 'tame' their busy minds; thinking things through to final conclusions; having fun in conversation with other busy minds. The cons of a busy mind can be: difficulties with sleeping when many thoughts are zooming around; moving quickly from one subject to another and challenges with focusing; worry about possible outcomes; concern about what people may think of me.

By thinking of the pros, cons and contexts on a flexible continuum and by accepting I will at times be at various, sometimes uncomfortable, out of balance places on that continuum I can



be more gentle and accepting of myself as I seek to balance this busy mind. When I've had a few nights of sleep difficulties I recognise it as a warning sign, a need to sort out some issues in my life, or a time to practice some relaxation techniques to calm my mind or write or discover something new. If I am over-thinking what people may be thinking of me I can check it out with them or change the subject or talk with people who care about me. I can consider in what contexts a busy mind can be useful and in what contexts it might be neutral or get in the way.

Cons or struggles with a busy mind are not to be eliminated, but rather embraced as growth edges because attempting to eliminate them tends to cause more internal strife. On a continuum the balancing act of a busy mind can look like this:

Mind in turmoil ↔ Busy mind ↔ Resting mind ↔ Slothful/lazy mind

My own busy mind developments have informed my counselling practice so that when people suggest they can cut off aspects of themselves they experience as unsavoury I consider part of my role is to help them understand, accept and learn to live with the particular strengths and challenges of the quality they refer to.

Feeling anger is an experience people often attempt to eliminate because of the problems it causes in their lives. Helping people recognise some positive and negative aspects of anger on a continuum can enable them befriend the emotion and channel it more appropriately, in ways that don't cause further problems.

Some positive aspects of anger can be: a warning sign that a problem exists; a motivation for change; a reason to establish boundaries; an aspect of self-defence. Some of the negatives to consider may be: when out of control it can hurt people; it blocks people from getting close; in excess it may negatively impact on physical health. Anger can be viewed on a continuum from explosive, to assertive to passive and we can explore where we want to be most of the time and in which contexts anger may be useful on an anger continuum. If on the explosive end of the continuum we could explore strategies for expressing it in more peaceful/less problem causing ways and when physical release is required. On the passive end we could consider strategies for speaking up and when silence is useful. From a social constructivist perspective we could explore the various cultural ideas around anger expression for males and females. We could uncover when anger is a mask of other emotions. We could make friends with anger as a useful indicator of action required in our lives and discover use-



ful ways to get needs met, rather than thinking we can eliminate anger from our lives. An attempt to eliminate anger could result in bottling up, explosions and/or depression, whereas tracking the effects of anger can be useful. Anger expression could look like this on a continuum:

*Abusive/out-of-control ↔ Yelling ↔ Assertive/controllable ↔
Shutting down ↔ Passive/handing over control*

The HQC can be a tracking device for undesirable qualities as well as desirable ones. Happiness is a state or quality people often wish to find and perpetually maintain. Disappointments are expressed about happiness fading away as a past memory never to be attained again or looking to a future where everlasting happiness might be achievable. Human experience shows happiness is in flux; it comes and goes, moves around on a continuum from ecstatic to OK. It can be helpful to get real about happiness with its elusive inconsistent nature. We can explore what adds and detracts from happiness but perpetual happiness is a thing of fairy tales and is a best friend of perfectionism. It may be cultural fairy tale ideas of happy ever after that can trick us into happiness illusions. In relationships when we reach a state of unhappiness we might think it's over, time to move on, to cut the relationship out of our lives because it's not consistently meeting our needs. Whereas thinking of happiness in life or in relationships as a continually moving tide can help us weather the inevitable storms, clinging to our life raft, finding our tool kit and knowing the sun will eventually shine on us again.

The value of recognising the pros and cons of human qualities and the ebb and flow of human conditions can help us let go of unrealistic expectations of ourselves and each other to be more tolerant, accepting and at peace in the world and to experience the full range of human complexities, contexts and conditions.

OK ↔ Happy ↔ Satisfied ↔ Joyful ↔ Ecstatic

People often leave my counselling room with more self-awareness, self-acceptance and more holistic identity constructions, as I have walked alongside them to help co-create within themselves their own best friend and less of their own worst enemy, to strengthen the positive internal dialogue and lessen the power of the negative. At times, like most in the helping professions, I too struggle with totalising ideas of failure when I'm not the right fit or I make a mistake or my counselling becomes ineffective for



a person. At these times the HQC can help me also to re-position these perfectionist ideas, to re-balance myself and liberate me to be a 'good enough' counsellor in these complex human constructions.

Notes

1. Sexual abuse counselling service – see <http://www.wellstop.org.nz/>

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New Zealand tuatara Vicki Catlow. Polychromos pencil on hot-press paper.





John Hudson

Preface

Constructive alignment is a teaching and learning strategy that links the learning outcomes of a programme of study and meets the student at the point of *where they are* relative to *their* particular learning journey. It builds on aspects of classroom practice through to assessment design and delivery technique, to scaffold and support the student through ongoing evaluation and self-reflective practise¹. This article looks at the author's own experience of: firstly, facilitating the topic to other tutors completing their Diploma of Teaching and Learning; secondly, looking at constructive alignment from a critical perspective in the context of today's tertiary education landscape; and finally drawing conclusions from the author's own perspective as a tertiary educator.

Introduction

In 2012 I was given the opportunity to facilitate a course entitled Design for Learning. The course broadly drew on key principles and theories from the content themes of student learning, design in learning, course objectives, learning outcomes, assessment, and teaching and learning approaches. As Ramsden (1992) states

The concept of approach describes a qualitative aspect of learning. It is about how people experience and organise the subject matter of a learning task; it is about 'what' and 'how' they learn, rather than 'how much' they remember. When a student learns he or she relates to different tasks in different ways. (p. 40).

The underpinning teaching and learning approach used was *constructive alignment*. The adage that you really don't know a subject until you teach it became more apparent as I delved deeper into the subject of constructive alignment. The most exciting aspect of this concept is the premise of an educational approach revolving around the student.

Often in the educational sphere of fiscal policy, budgetary constraints, EFTS (equivalent full-time student) targets, retentions and completions, and policies and procedures, one may be forgiven for losing sight of learning and teaching. These appear to be more of a *by-product* of the New Zealand education system, rather than a key *driver* of it. Over the years it could be argued that education has been used as a political football. There are many parts that make up the New Zealand tertiary education sector. These parts are vulnerable to changing opinions and political ideologies. Such are the influences that directly impact learners and educators.

What is constructive alignment?

John Biggs is widely regarded as the leading proponent of the thinking behind constructive alignment. Biggs ascribes constructive alignment to learning and teaching within a *whole integrated* system, embracing classroom, departmental and institutional levels. The combined effects generate optimum conditions for what Biggs refers to as, quality high-order learning that takes place (Biggs & Tang, 2007).

The driver behind the concept of constructive alignment is gearing all parts of a learning institute to revolve around the individual learner; by finding and meeting an individual's learning requirements through consistent reflection. Reflective cycles in both teaching and learning are not new concepts. Constructive alignment, however, is a distinctive change which places the student at the centre of the learning process. Don't we already do that? Perhaps we do, partially, but to engage fully in constructive alignment, is a conscious change of mind-set and practice and requires institutional support and understanding.

The constructive alignment model offers an enabling perspective, growing from and with the student's individual learning journey – the point at *where* they are at, and *why* they are engaging in the learning. Two crucial components underpinning constructive alignment are firstly to know the learner and their personal context, for example, their motivations, preferred learning styles, language, socio-cultural background, past educational experiences and so on. Secondly, the learning outcomes anchor the learning and teaching activities and progressively reflect the learning in the assessment tasks (Terrell & Kirkness, 2011). Programme documentation, therefore, must be regularly reviewed



for currency and relevance to all stakeholders leading to adjustments (of a programme of study), in order to seamlessly match learning outcomes with learning strategies. Consequently teaching strategies and assessments will follow suit. As requirements by both standard setting bodies and the institute are met, there is potential for economic viability. The end result is to the benefit of the student.

The Tertiary Education Commission [TEC] has called for

... more coherence, greater complementarity and a renewed focus on efficiency [is] needed for the tertiary education system to increase its contribution to New Zealand's economy and society ... It is fortunate that perhaps the greatest strength of New Zealand's tertiary education system is that – besides being comprehensive – it is both diverse and capable of responding to a wide and rapidly changing set of learner needs. (TEC, 2011, p. 1).

I believe constructive alignment offers a fresh perspective against a residual cynicism of tertiary education consistently missing its mark.

The point that attracts me to the thinking behind constructive alignment is that the students are at the centre of the theoretical model. The tutor needs to structure and define the learning framework from a platform of pedagogical strategies, curricula knowledge, student and stakeholder expectations and requirements. Brookfield highlights caution in what he regards as the 'meeting needs' rationale, very common to tertiary/higher education. The expectation is that a 'good' teacher will meet the needs of all of the students all of the time, but the institutional objectives often centre around also meeting the needs of the community and faculty. This can pose a potential dilemma for tutors in attempting to achieve the student-centric constructive alignment goals. And as Brookfield argues "... students themselves are not always in the best position to judge what is in their own best interests." (1995, p. 20). Even when constructive alignment is achieved this does not guarantee a successful outcome.

Reflective Context

The reflective context is my story about facilitating the topic of constructive alignment, one I had not taught before. I am a catering tutor, and have not taught at professional



development level. It was a new challenge, sharing a learning journey with a group of colleagues who teach a range of subjects at WITT. The course – initially for three days of class-based teaching/learning – commenced as these tutors were returning from summer break. We all had our own new students to prepare for. This course appeared to be of secondary importance to preparedness for our 2012 teaching year. This was the only time available to deliver the programme. The challenge was to match learning styles, time constraints (to enable participation and inclusivity), and condensing the material that people had previously covered in other courses, while facilitating learning for those unfamiliar with the required curriculum. It came together as a wonderful juggling act. Achieving the required learning became a team effort that I was privileged to be a part of. We were all very aware of the priorities that our students also negotiate in daily life; all of us trying to achieve a family, work and study balance. This was when I realised the need to *apply* the knowledge we were working through into my classroom practise, to actually walk the talk of constructive alignment – I could feel the nervous excitement of risk-taking emerging.

Through open dialogue between myself and the tutors and adherence to the 'must do' parameters of assessment requirements and moderation, a team-facilitative approach worked successfully in achieving the required outcomes while enjoying the learning content. We were a small class of tutors learning at level 6, and working to an extremely tight time frame. This was very different from my level 3 catering teaching. These are large classes of mainly English as second language students; motivated, but in the main, students learning a totally new subject. Adhering to the underpinning principles of constructive alignment was part of my own learning journey that I wanted to explore further in my hospitality related teaching practice.

The hallmarks of constructive alignment are open and safe communication, acknowledgement of strength and weakness in our own abilities, building a supportive environment that celebrates difference; cultural, language ability and confidence in a safe and non-threatening way that allows all participants regardless of *where they are at* to engage in the team. Active discussion on a one-to-one basis is essential. Some students demand more time than others. All students need to feel supported at *their* point of *their* learning journey. From a



resourcing perspective it is hard to measure the time and infrastructure required to provide this level of support, but to achieve constructive alignment, it cannot be ignored at the institutional level. Important considerations for institutions include multi-layering of student support, effective tutor-student ratio, accurate entry criteria, and structured tutor learning and development.

To facilitate constructive alignment tutors need to be risk takers; they need to push teaching boundaries, but be supported in their efforts of knowing and having access to new teaching methodologies, and equipping themselves to understand *why* these changes are important within *their* teaching context. A good example is given by Brookfield (2012), who, when addressing a university class, misread his audience and upon being over confident went 'belly-up', to the rapturous amusement of the students. I remember thinking that if Brookfield can still get it wrong, there's hope for tutors everywhere! If you are going to take risks, there's a flipside to it!

Learning doesn't just happen and teaching is complex

Reflective learning is intrinsic to the knowledge the student takes away with them at the end of the teaching day. A tutor must introduce a variety of teaching strategies that will facilitate the needs of their students at their respective level. Creativity and experimentation are all processes tutors can bring into play as part of their delivery. Brookfield reminds us that in order to teach responsively we must examine how students experience their learning, it is important to know what symbolic significance students ascribe, to your actions (as their tutor). For the students, your choice of exercises, materials and assignments evokes meanings that you may not have intended (Brookfield, 2006). For a tutor to be fully in tune with each student's point of understanding requires open communication through frequent dialogue and an environment of reinforced mutual trust and respect.

Assessment, from a student perspective, is the key that unlocks the door to the qualification. The recurring question from students that tutors face is *What do I need to do to pass?* Formative assessment and diagnostic strategies can be incorporated in such a way as to empower and regularly provide feedback to students on their progress with the tutor consistently evaluating their teaching practice is aligned to learning.



How we best relate and deliver quality education is dependent upon the tutor knowing where the students are in terms of their learning ability. The tutor can achieve that by building and fostering a relationship with the student, by having a comprehensive understanding of their subject (which includes clearly defined learning outcomes and assessment criteria), and while ensuring that the needs of the industry are being met.

Conclusion

Being given the opportunity to facilitate the design for learning course gave me more of an understanding about what made constructive alignment tick. The theory literally jumped out of the pages and pushed its way into the classroom context. Facilitating the subject with my colleagues I found both challenging and compelling. I believe I achieved my personal learning outcome which was to understand and conceptualise the philosophy behind constructive alignment. The continuing challenge is to build that into practice. If the students are to be scaffolded they must be met at *their* point of *their* learning journey. Relationship building is key to discovering the strengths and weaknesses of the individual student. That needs to be identified as an institutional objective and has to be resourced accordingly. The tutor must demonstrate a sound working knowledge of the required pedagogical strategies to receive and develop the student from the point of where they are at. In parallel, the tertiary educator is required to be an industry leader with an in-depth knowledge of the curriculum and how it relates to their industry within the wider economy. A student-centred approach must be integrated throughout all parts of the institute. 'Student-centred' cannot be used as a tokenistic *catch-cry* in the same way that 'quality' has been used in the previous decade, frequently expected to be achieved on a 99 cent budget. The exciting challenge with constructive alignment is to move from an economic to a people-focussed approach. That is, in my mind, *the* most exciting aspect of constructive alignment and will hopefully form the direction of education in the future.

Notes

1. For further information see <http://www.johnbiggs.com.au/academic/constructive-alignment/>



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New Zealand tuatara Vicki Catlow. Polychromos pencil on hot-press paper.





Barbara Morris

Introduction

The Western Institute of Technology at Taranaki (WITT) actively advocated and enabled the installation of the free, open source referencing manager software (FOSRMS) Zotero across campus. This provided students and staff with automatic access and synchronisation of their referencing resources both at WITT and on their personal computers. The author's interest for this referencing support arose from a search for improvement for Learning Skills tutor utilisation. As an institution, WITT no longer provided/subsidised the referencing software, Endnote. This was likely due to fiscal restraints, coupled with low staff usage of the package, reportedly because of the complexity of use.

The interest in finding a cost-effective and reliable alternative led to a shared exploration with a selection of WITT students and the author¹. Reflecting on the journey travelled in search of a tool to replace Endnote revealed a complexity of choice based upon identifying needs that best met institutional, departmental and student need in anticipation of reduced service costs for the Learning Centre.

Background

With the initial view of improving Learning Skills tutor utilisation, examination of existing services revealed the amount of time expended on differing types of service provision. Identified commonalities across individualised appointment times and across disciplines, revealed that referencing and writing assignments utilised significant amounts of Learning Skills tutors' time. Two solutions were considered:

- i) Firstly, to identify support areas that could be offered in-class as an academic literacy package, thus increasing in-class contact and reducing individualised support.
- ii) Secondly, the introduction of referencing management software.

The first was implemented via an academic literacy package. The

second initiated a project to determine which software would best meet institutional, staff and student needs. This project was seen to potentially provide multiple opportunities and benefits for:

- i) The Institution: a cost saving without a reduction in service.
- ii) Faculty staff: a reduction in marking time; new research tool.
- iii) The Learning Resource Centre: improved service efficiency (reduction of individualised tuition).
- iv) Students: increased independence and choice.

As noted earlier, 'Endnote' had been discontinued due to a low cost/benefit ratio and complexity of use. Discussion with AT-LAANZ (Association of Tertiary Learning Advisors of Aotearoa/New Zealand) colleagues at the 2011 conference presentation had suggested that student uptake of Endnote in some other institutions was also limited due to such complexities.

At the time, WITT students either completed referencing manually or used free unsophisticated online tools such as 'Style Wizard' (EB Communications, 2009) and/or 'Son of Citation' (Warlick & The Landmark Project, 2010). However, both packages could only compile one reference at a time and did not save the entries which meant that the reference list still had to be generated manually and even then, personal experience revealed, that the error rating in many of the entries was high thus potentially contributing to the high usage of Learning Skills tutor individualised appointments for referencing.

Why use referencing managers?

The academic rigor involved in accurate referencing has historically presented challenges (Angelo, 2010). To meet this challenge referencing managers were developed in 1983 for Apple, followed in 1988 by Endnote (Wikipedia Foundation Inc., 2012). Their continued existence and development into FOSS (free open source software) highlights their on-going usefulness to writers and value to the academic world, especially in relation to their time saving and standardising qualities.

Nagel (2011) summarises/compares the processes of referencing both manually and using a referencing manager (Figures 1 & 2). Manually, all articles used have to be entered both into intext citations and compiled in a reference list, often seen as an arduous and extremely time consuming process (Nagel, 2011).



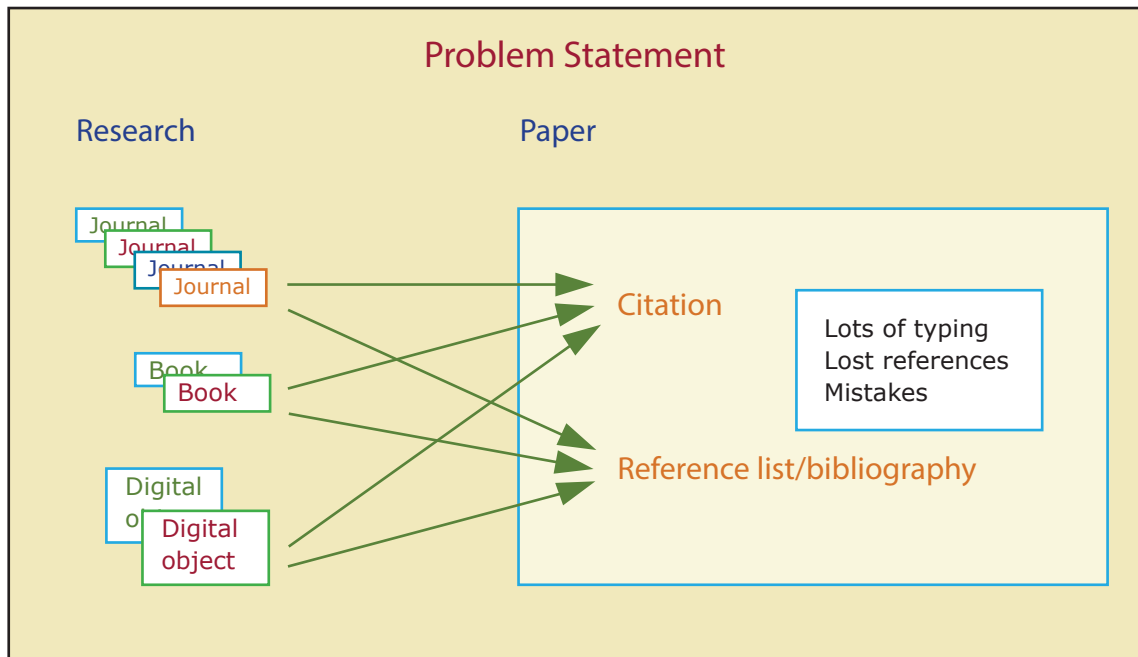


Figure 1: Process for referencing manually (from Nagel, 2011, slide 4)

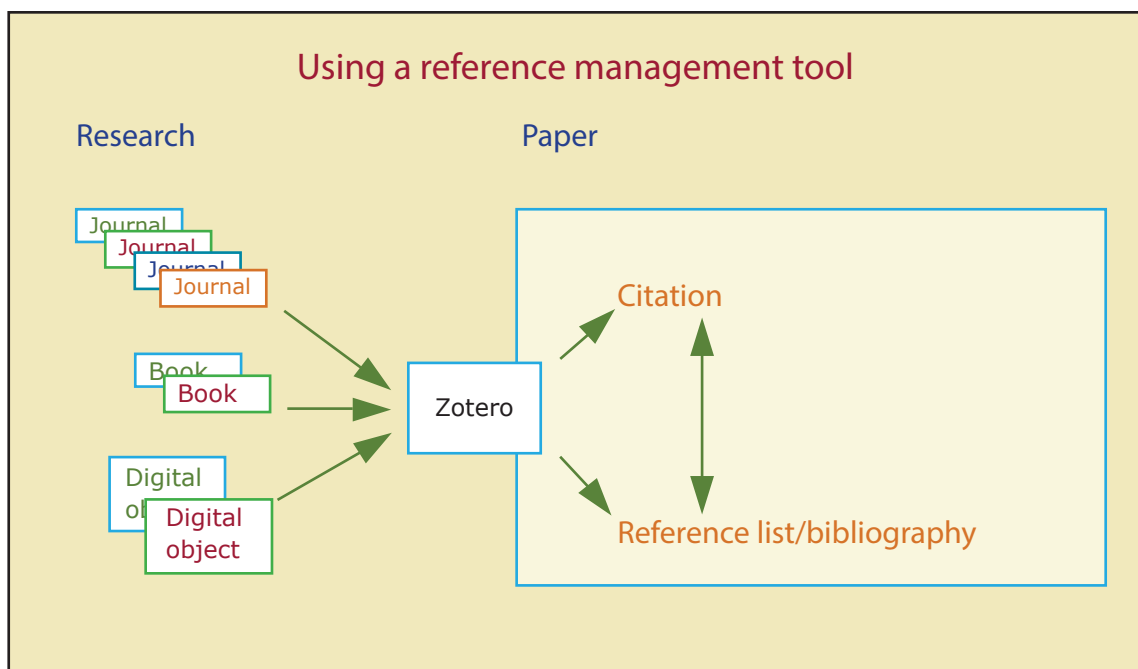


Figure 2: Referencing with a management tool (from Nagel, 2011, slide 5)



	Features								
Packages	Free	Open source	Windows & Mac	Word/Open Office	APA STyle	Password protected	Export to Endnote	RSS feed	Pub Med links
Aigaion	Y	Y	Y	N	Y	Y	N	N	N
Docear	Y	Y	Y	Y	Y	N	Y	N	N
JabRef	Y	Y	Y	N	Y	N	Y	N	Y
Mendeley	Y ²	Y ³	Y	Y	Y	Y	Y	Y	Y
Zotero	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 1: Comparison of Referencing Manager features

WITT students and staff, when visiting the Learning Resource Centre (LRC), often comment on the lack of time when researching their assignments. Referencing involves considerable typing with the potential for errors in formatting, missed sources, etc. For example, with APA having over 90 different formats for the reference list, (American Psychological Association, 2010) it presents a challenging complexity, especially for new students. Utilising a reference manager tool means that when all readings are entered into the tool and checked for accuracy. They are then sorted and formatted and with the 'click of a button' in text citations and the reference list are organised and inserted into the document - a major time saver and stress reliever.

Choosing the appropriate referencing manager for WITT students

In 2011 the exploration of referencing manager tools planted the seed for change which eventuated in a project/experiment with a group of degree students. This exploratory study involved searching for a referencing manager that would be free, open sourced and user friendly for the target group, namely polytechnic undergraduate students.



In a search of New Zealand tertiary institutions, it appeared that only Endnote had institutional endorsement. The search for referencing manager studies revealed a comparative study of 30 different packages, (Wikipedia Foundation Inc., 2012). This comparison helped with identifying the essential criteria for WITT:

- be free and open sourced
- work within a Windows or Mac environment
- be able to function within Word and Open Office
- function for APA referencing style
- be password protectable
- and work on the WITT system.

A desirables list was also compiled which included:

- exportability/importability between packages to enable personal referencing libraries to be moved if users relocate elsewhere not compatible with the chosen package
- having an RSS (rich site summary) feed.

The first level of reduction – free and open sourced, reduced the choice to 17. Focussing on the above criteria, eight others were eliminated reducing the list to five (Table 1).

While analysis left two possible packages, Zotero was the only one that met both the necessary and desirable requirements. Mendeley was free and owned by a business whereas Zotero was not only open source but was updated regularly by a group of dedicated educational professionals and contributed to by any interested party⁴. Users' questions are answered quickly and it is possible to request changes. This has resulted in the latest development namely Zotero going mobile (Takats, 2011). It has "a host of mobile apps [which] enable IOS and Android users to access and edit libraries (several even transform camera phones into barcode scanners)" (Fenton, 2012, "Zotero 3", para. 2). Mendeley offered a free 'Earth' account, the full version had a monthly charge; it was owned by a private company which Barsky (2010) suggested could be a considerable disadvantage in that it could disappear as an option at any time.

A major final consideration, for Zotero, was that it utilised cloud based technology that worked from a Firefox platform thereby the tool was working directly with the internet making an entry from websites or library databases an automatic process. The package could be installed on home computers and at WITT and synchronised from where-ever it was used. WITT already utilised



Firefox; institutional implementation was therefore not an obstacle. The IT department was able to confirm this and the package could be installed so that users could access it from all computers across the institution. A standalone version was also available.

An important consideration, missed in the initial analysis, was the accuracy of the packages, a problem that had caused concern with 'The Wizard' and 'Son of Citation'. Gilmour and Cobus-Kuo (2011) provided a comparative accuracy analysis of four referencing tools (CitULike; Mendeley, RefWorks and Zotero). They reviewed the tools against five referencing styles: American Chemical Society (ACS), American Medical Association (AMA), American Psychological Association (APA), Institute of Electrical and Electronics Engineers (IEEE), and Nature measuring number of errors, errors per citation and error-free citation. Overall, for APA referencing, Zotero had the best results for a free package - a little above Mendeley.

Other comparative studies (Barsky, 2010; Fenner, 2010; University of California, 2012) were also explored. Each of the studies placed praise on Zotero and Mendeley suggesting that both were free and relatively easy to use but Zotero seemed simpler. Angelo's (2010) research also reported support for Zotero because it was "simply easier to use than the alternatives and provided the same level of functionality [as the expensive options, such as Endnote]. ... It was free in terms of cost, and free in terms of being open source, or libre" (p.72-73).

The automaticity of the Zotero process is what Gilmour and Cobus-Kuo (2011) refer to as "a boon to scholars who find themselves spending far too much time navigating the intricacies of multiple citation styles" ("Citing references", para. 1). They further suggested that any manual alteration that may be necessary is quicker than generating a reference list manually. James (2012) and Owens (2010) go so far as to suggest that all students from secondary to PhD students should utilise the time-saving tools that this these type of technology present to them, especially when they are free.

Student/Learning Resource Centre Projects

Once Zotero was chosen as the preferred package, students in the Bachelor of Applied Social Science programme were offered the opportunity to trial the tool. A volunteer, who had a high level of computer literacy, explored the Zotero site independently. He shared results with other students who also wanted to become



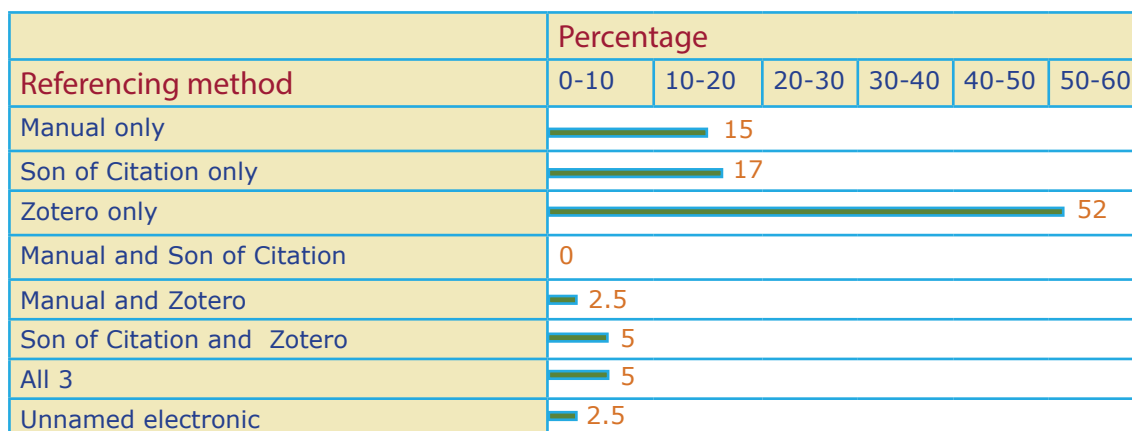


Figure 3. Preferred student referencing method by percentage

involved. Subsequently, the students endorsed the package and an LRC request was made to WITT's Research Committee and management for across-campus access. Zotero was installed for the 2012 academic year.

The initial student's response to the Zotero trial was "I've found Zotero to be an excellent tool in the writing of my first few essays; EASY and FREE – two of my favourite things" (M. Fabris, personal communication, March 29, 2011). Later this response was presented in one of three video clips currently on the WITT Library website: "really liked it ... free and easy ... beneficial to my learning ... initially really struggled with APA ... perfect result in referencing now (think I was the only one in my class" (Morris & Fabris, 2012).

This project was presented at the 2011 ATLAANZ conference (ATLAANZ, 2011). The session attendees were particularly interested in student uptake of Zotero. This resulted in a follow-up presentation at the 2012 conference. An exercise carried out during the presentation also confirmed previous findings that referencing was one of the major individual support issues experienced across institutions. Discussion with conference attendees determined this was mainly due to the complexity of the process (personal communication, November 27, 2011).

During 2012 a follow up study was initiated to monitor student uptake. A brief synopsis of this study revealed that of the 40 responses received 97% of the students needed APA referencing for their courses; 15% chose to utilise manual reference only; 17% Son of Citation only; 52% Zotero only while 15% used multiple approaches according to assignment requirements such as



number of references needed in an assignment. Overall 76.5% of the student respondents utilised some sort of electronic referencing whether it was Zotero, Son of Citation or other (Figure 3)⁵.

Conclusion

Exploring the need for and identifying a referencing manager appropriate for a small provincial tertiary institution has been a journey of discovery. The choice of tool was based upon meeting the needs of the end users (students and staff) while providing cost benefits to the institution. WITT students and staff who have provided verbal and written feedback to date have either loved it or found it too challenging – the option of continued usage is theirs. Referencing managers are not the answer for all but do provide an option for writers irrespective of whether they are secondary, first year tertiary or PhD students. Such tools bring us into the 21st century and as Puckett (2011, p. 2) states:

the 20th century tool for writers was the typewriter; its 21st century counterpart is the word processor. In the same way, if a 20th century tool for researchers was the index card scribbled with citation notes, its 21st century equivalent is Zotero.

Zotero has withstood close scrutiny from the academic and cyber communities thus supporting the purpose for which it was intended.

Notes

1. The project resulted in a presentation to the 2011 national ATLAANZ conference where interest was such that a follow up presentation for 2012 was requested relating to student uptake.
2. With limitations.
3. No certainty in future open sourcing.
4. Zotero is a trademark of George Mason University. Over 180 tertiary institutions from around the world, including Yale and Harvard and the University of Cambridge recommend using Zotero (see <http://www.zotero.org>).
5. A write up of the project can be found in Morris, B. (2013). A journey to access free open source referencing management systems (FOS-RMS): Zotero. In C. Gera (Ed.). *Working together: Planting the Seed: Proceedings of the 2012 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa/New Zealand (ATLAANZ)*. Hamilton, New Zealand.



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Ian M. Clothier

Abstract

The project *Te Kore Rongo Hungaora/Uncontainable Second Nature* is predicated on a bridge between Māori and European cultures. Based on this view, works from art and science were re-contextualised as cultural texts symbolic of belief systems. The project was conceived and curated for exhibitions in Istanbul and Rio de Janeiro. Discipline was not viewed as fixed, but fluid in a transformational environment. Five themes were selected from within European and Māori world-views: cosmological context; all is energy; life emerged from water; anthropic principle; and, integrated systems. The selected works addressed more than one of these thematic regions. While aspects of thinking might be shared across a cultural boundary, the agreement is only at the level of summary of view, rather than at the level of detail. This distinction is important in moving human thinking forward to an integrated condition particularly where negotiating hybridity is concerned. Certainly knowledge is advanced in a sense, and cultural bridging can be observed in practice at several New Zealand organisations such as the National Institute of Water and Atmospheric Research, the Institute of Geological and Nuclear Sciences and the Department of Conservation which all employ staff whose position entails observance and care of Māori perspectives on subjects under investigation and study. The connection between the work of Kaumātua (elder) Dr Te Huirangi Waikarepuru and Zoologist Mike Paulin in the exhibitions was semantic rather than computational. Here the function of metaphor in uniting what were previously considered divergent world-views becomes apparent. Myth is often reported as distinctive to a specific culture, however, considering inter-connections ignites a more expansive view of culture and consciousness.

A cultural bridge

As the title *Te Kore Rongo Hungaora/Uncontainable Second Nature* suggests, this project is predicated on a bridge between Māori and European cultures. It is conventional to present creative output in ethnically or nationally distinct groups. Most museums arrange their displays in this way, and the Venice Biennale is divided by nationality. Apposite to the conventional approach, this project put forward a unique bridge between Māori and European cultures.

Dual languages in the title indicate a framework of similarity and difference. *Te Kore* refers to Potential – the potentiality inherent in universal energies for example (according to Māori there are many forms of potential). *Rongo* refers to Peace – an Atua traditionally considered a kind of semi-God of Peace. Dr Te Huirangi Waikerepuru interpreted this as referring to Balance, so the *Atua* has become more of an expression of natural universal law in contemporary thinking. *Hungaora* is a conjoint word: *hunga* refers to a group of people, while *ora* refers to nature or life. Consequently the Māori version of the title refers to the group of people looking on nature with a view to balance, in the framework of natural potential.

The English version of the title is a combination of international and local awareness. Uncontainable was the main theme of exhibitions at ISEA 2011 Istanbul. As Artistic Director Lanfranco Aceti wrote:

The lines and borders of contemporary national states present the observer with ideological and cultural frameworks that are no longer valid. Concepts of identity, cultural identifiers, nation state and belonging as well as place and time are challenged in both real and virtual contexts ... (2011, para. 1)

Further, Aceti cites Charlie Gere who wrote that “technologies radically bring into question not just the way in which art galleries and museums operate, but the very notions of history, heritage, and even time itself upon which they are predicated” (Gere, 2008 as cited in Aceti, 2011, para. 4). These statements point to a fluid and transformational view of culture, process and product; suitable but not identical to the potential space of *Te Kore*.

Second Nature was a reference to the well-known metaphor for intuitive knowledge – though not in the Kantian sense, more to do with knowledge that is endemic to the person. Also addressed is the notion of looking again at nature (and hence the relationship to *hungaora*).

Te Kore Rongo Hungaora/Uncontainable Second Nature consisted of Mātauranga Māori (reflecting pre-1840 Māori knowledge and philosophy), with Dr Waikerepuru contributing *Te Taiao Māori* (the Māori Universe) in the form of a large chart. Paul Moss contributed photo astronomy images. There was a painted *kohatu* (stone) by Jo Tito. *Te Kore Street of Breaths* by Sophie Jerram and Dugal McKinnon was an audio work featuring breathing. *Whanaunga* was a video by Lisa Reihana, which featured *Maui* and *Mahuika*



two figures from Māori legend. *psworld 2011* by Julian Oliver was a work of 'philosoftware' where the activity of Protozoa define the world upon which psworld depends. *Information Comes from the Sun* by Julian Priest used mixed animation and installation including water from the Whanganui River. Associate Professor Mike Paulin's contributed the computer model *Computational Visualisation of the Electromagnetic Sensory World of Sharks*. Rachael Rakena's *One Man is an Island* was a video work that forms part of a long love poem, and *Kāinga a roto/Home Within* was a five-channel video and audio work inside a site specific installation by Sonja van Kerkhoff, Sen McGlinn and Toroa Pohatu.

Art-science

In order to discuss the re-contextualising of art and science it is necessary to first sketch the five themes that provided an umbrella for project selection. *Cosmological context* is a simple reference to the idea that planets, orbiting bodies, stars, galaxies and the universe are appropriate to a consideration of reality. The notion that *all is energy* points to energistic conceptions of nature, such as that given by quantum theory for example. The idea that *life emerged from water* is conventional in evolutionary biology – the idea that the earliest life forms were living in the sea, and that land-based animals evolved from amphibians. The *anthropic principle* in Western cosmology proposed by Brandon Carter "can be used to explain why the conditions happen to be just right for the existence of (intelligent) life on the earth at the present time" (Penrose, 1989, p. 561). This relocates humanity from a Copernican periphery to an approximated and disputed centrality. *Integrated systems* refers to concepts around interconnected sub-systems and points to theories of chaos and complexity, the rhizome according to Deleuze and Guattari, cybernetics and engineering non-linear properties of systems.

To review these notions from a multicultural perspective, it is clear that the first – cosmological context is shared by many cultures. In the Māori world-view both animate and inanimate objects such as stones are viewed as having energy. That life emerged from water has a strong emphasis for Māori, is exemplified in the breaking of the waters before birth (*Wai Te Ika²*), and in the wider sense of water as an interconnective substance reaching from mountain/river/sea to sky and into the human via breath. Anthropomorphising universal energies has been part of the expression of Māori cosmology in terms of viewing the *Atua* as personages though this has been revised. That reality is viewed as an integrated and interconnected system is clear in the



chart provided by Dr Waikerepuru, where physical elements such as *Tane* (land life) and *Tangaroa* (water life) are intermingled with human focused energies such as *Tumatauenga* (defender of community). *Te Taiao Māori* is an exemplary instance of an integrated world-view.

The above forms the framework around which works were selected for exhibition. The re-contextualisation of science is well illustrated by reference to Associate Professor Paulin's *Computational Visualisation of the Electromagnetic Sensory World of Sharks*. As a work of science the purpose of the video is to mathematically define the behaviour of a dogfish as it navigates using sonar bounced off the earth's electromagnetic sphere. In the context of *Te Kore Rongo Hungaora*, the work is strongly related to energistic conceptions of nature; there is a weak relationship to the idea of life emerging from water; and clearly the shark swims within a field that is both integrated and interactive in terms of relationship to the environment. It is astonishing that a work of science could be read in both Māori and European ideological structures, and this is precisely the territory the project sought to investigate.

Having located an ideological bridge between cultures, it is important to note that this bridge does not hold at the level of detail of the theoretical bases underpinning the assumptions. In regard to energistic conceptions of nature, while Māori base this view on a fundament of connection with all living entities, aspects of quantum theory rest on shells, available electrons, and sub nucleic characteristics such as the strange and charmed properties of quarks. Here the two ideologies are in contraindication. It is only at the higher level, the summary level that a bridge can be located.

What is important about this consideration is the necessity to observe levels of reality. At one level, every human is part of one reality – that of inhabiting a planet. At localised levels, however, there are tensions and anxieties. Consequently scale is a consideration for ideology.

This distinction between summary and detail view is important in moving human thinking forward to an integrated condition particularly where negotiating hybridity is concerned. In order to avoid becoming entangled in debate about detail, it becomes necessary to maintain higher level viewpoints. As society transgresses boundaries in the way framed by Aceti, singularities dissolve, multiplicities become more evident and exclusion loses power as a way forward.



Aotearoa New Zealand

The location of Aotearoa New Zealand in the midst of such contention is not coincidental, as it passed through a lengthy period of bi-culturalism to become the multicultural nation it is today. This process allowed bi-cultural approaches to become embedded within governmental policy. The National Institute of Water and Atmospheric Research (NIWA) is a Crown-owned company undertaking scientific research in the field of water and the atmosphere. Te Kūwaha is NIWA's Māori Environmental Research Group, employing a number of research scientists including Darren Ngaru King (links to Ngāti Raukawa), an interdisciplinary research scientist whose principal areas of research include: climate and Māori society – investigating the linkages between human and biophysical systems (King et al., 2010); and palaeo-tsunami science – understanding tsunami disturbance, recurrence and risk along New Zealand's coast using applied geological approaches and Māori knowledge, practice and belief (King & Goff, 2010). The presence of dual knowledge systems located within a single personality underscores a progressive awareness of the interconnective qualities of core science and cultural beliefs, once considered opposite sides in a dichotomy.

The above example is not solitary. GNS Science (formerly the Institute of Geological and Nuclear Sciences) specialises in earth, geoscience and isotope research. Its General Manager Māori Strategy Rawiri Faulkner convened an event in Te Papa Tongarewa the Museum of New Zealand, 'Unlock a moment in time' which 'involved a fusion of mātauranga Māori [traditional Māori knowledge] and Western sciences'. GNS Maori Relationships and Projects Advisor Diane Bradshaw (affiliates to Waikato – Maniapoto, Ngati Te Wehi – Ngati Mahuta Iwi) is currently engaged in a diverse range of natural science projects focused on capturing and utilising traditional Māori knowledge; recognising the creative potential held within this knowledge to inform the development of new knowledge; and identifying opportunities across GNS core science areas that can provide outcomes for Māori.

Further, the Department of Conservation (DOC) is a government department consisting of six executive departments: Business Services Group, Capability & Engagement Group, Kāhui Kaupapa Atawhai, Operations Group, Policy and Regulatory Services Group and Science and Technical Group. Kāhui Kaupapa Atawhai 'Leads the integration of Kaupapa Māori [Māori policy or approach] in DOC as essential to conservation management [...] Coordinates DOC's connection with... Iwi [tribes]...' and builds '... DOC's cul-



tural awareness and cultural capability...’ while administering a range of environmental funds conserving ecosystems and biodiversity including Māori biodiversity (New Zealand Government 2012). The presence of this unit at executive level in a Crown department and the commitment to integrate the Māori view of the land into environmental management – impacting resource development – is notable.

The above examples form a backdrop to what was attempted in *Te Kore Rongo Hungaora/Uncontainable Second Nature*. Turning attention to the intersection of science and mātauranga Māori in the creative project sheds a light on the role of metaphor in the act of bridging cultures. As described above, both *Te Taiao Māori* as presented by Te Huirangi Waikarepuru and Associate Professor Mike Paulin’s *Computational Visualisation of the Electromagnetic Sensory World of Sharks* can be understood as having reference points to three of the five themes that guided the curatorial selection process: all is energy, life emerged from water and integrated systems. Clearly, this interconnection is not computational but is semantic: it takes a particular awareness to appreciate.

The customary practices and belief systems of indigenous peoples are conventionally viewed as in diametric opposition to western science. However as demonstrated, parallels can be drawn provided careful attention is paid to the scale of the contentions. A metaphorical linkage most easily accommodates adversarial systems of belief. Although a slightly deeper level of interrogation is supported by the cultural bridge, the linkage is not sustained at the level of detail in the belief systems.

Myth is often reported as distinctive to a specific culture; however, considering interconnections ignites a more expansive view of culture and consciousness. There will be commentators who disagree with aligning myth and science; however, both myth and science function to provide a foundation for belief. In the current era of increasing cultural diversity, following adversarial approaches confines the intellect to cohabitating with pockets of divergent beliefs. There is a community of thinkers worldwide for whom a striking drive in knowledge towards considering integrated systems is taking place. Integrating knowledge across cultural borders at some level is necessary to integrating humanity and consciousness.



Notes

1. The Māori portion of the title also hints at larger forces: Te Kore, Te Maungarongo, Te Hunga Ora, Te Tapu are sequenced from ancient to modern times as developmental stages – respectively, referring to Time, Nature, Potentiality, Balance, Harmony, Peace; All of Life, Animals, Humans; Principle of Law, Protection, Conservation.
2. Māori also refer to Ika Moana, Ika Whenua, Ika Tangata – fish, fish land, fish people.

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Monarch caterpillar Vicki Catlow. Polychromos pencil on hot-press paper.

