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ABSTRACTS

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Presenters

Welcome

Welcome to SCANZ 2017: Practice in context

Welcome to SCANZ 2017: Practice in Context, and welcome to beautiful Auckland.

I'm very pleased to be welcoming you all to the 2017 SCANZ conference on behalf of the Executive Committee of the Science Communicators' Association of New Zealand.

This year's conference gives the doing of science communication centre place, and invites us to ask 'How do we practice science communication?', 'What does it mean to do science communication?', 'What works when we practice science communication…and what doesn't/ didn't work?', and 'In what context do we do science communication?'.

Practice, we'll all agree, should be informed. It should be informed by theory, by expertise, and by the experience of past practice. That is what this year's conference is all about: a merging and bringing together of theory, expertise, and practice.

I invite you, over the next two days, to talk with each other, to learn from each other, and to share with each other knowledge, your expertise and your experience so we can all improve how science communication is practised.

Fabien Medvecky

Opening

A science communication MOOC for New Zealand practitioners

Rebecca Priestley
Victoria University of Wellington

One of the things I promised to do with my PM Science Prize money was to launch a website and MOOC focused on science communication, with a specific NZ focus. I would like to use this session to outline my plans, and to alert conference attendees to a survey that I'll have online (maybe on paper too) canvassing ideas and opinions on (i) what people would find useful on the website/ MOOC and (ii) where people might be able to contribute expertise.

I will also give a brief update on the science journalism fund, launched in June this year with some money from the PM Prize.

Closing

Science Communication in New Zealand

Sir Peter Gluckman
Chief Science Advisor to the Prime Minister of New Zealand

Programme

7:30	Registration		
8:30	Māori Welcome	Hare Paniora, UNITEC	
8:40	Opening	Rebecca Priestley	A science communication website and MOOC for New Zealand practitioners
9:00	President's Welcome	Fabien Medvecky	
9:05	Plenary	Craig Cormick	WHOSE TRUTH?
9:50	Speed Talks	Kaitlyn Martin	Engaging secondary students with science communication
		Marie McEntee	Sea science: Giving children voice and agency in coastal management
		Peter Buchanan	Fauna, flora and the missing f-word
10:30	Morning Tea		
10:50	Workshop	Craig Cormick	ONCE UPON A TIME… TELLING A BETTER STORY
12:35	Discussion	Dacia Herbulock	Story Collider live shows SCANZ!
12:45	Lunch & Networking		
1:30	Speed Talks	Emma Timewell	Demonstrating scientific impact
		Charlotte Wood	Science communication and quality of advice – A Ministry for the Environment perspective
		Claire Concannon	The double benefits of final year undergraduate science outreach projects
		Ahi Pepe | Mothnet project team	Badges and art auction: How raising funds helps raise profiles and allows citizen science projects to make opportunities realties
		Mike Dickison	Wikipedia as an outreach tool
		Gabby O'Connor	Intergenerational, transdisciplinary science communication: Playing the long game
		Sarah Morgan	Creating community-led opportunities for science communication
3:00	Afternoon Tea & Posters		
3:30	Speed Talks	Daniel Solis	Measuring engagement and learning at Discovery World with an iPad based survey
		John Kerr	How many scientists does it take to change a mind? Communicating scientific consensus and contentious science
		Manon Knapen	Homeopathy & science, where is the miscommunication?
		Rhian Salmon	Climate change engagement in the Deep South Challenge: Two years on
		Shirley Ho	Intrinsic or extrinsic motivations? Understanding factors motivating scientists' engagement with the public in Singapore
4:30	Panel	Sarah Fraser	Engagement in the National Science Challenges – Different approaches
5:15	Close of Day One		

DINNER AT 7:00 pm – Dinner at IMA Cuisine, 53 Fort St, Downtown, Auckland, ($80 per person)

8:55	Opening of Day Two		
9:00	Plenary	Kirsten Carlson	CONNECTING DIVERSE AUDIENCES TO SCIENCE THROUGH ART
9:45	Speed Talks	Ceridwyn Roberts	I'm not a scientist, but...
		Craig Hilton	What is Science, what is it not? What is Art, what is it not?
		Tara Roberson	Putting hype in context
10:25	Morning Tea		
10:45	Workshop	Kirsten Carlson	GRAPHIC DESIGN FOR THE SCIENCE COMMUNICATOR
12:30	Lunch & AGM		
1:20	Speed Talks	Claire Concannon	Encouraging science exploration in the very young – the Science Playground project
		Emily Hall	Fight like a physicist
		Delphine Mitchell	Impact versus effort: How to get the most out of a Science Cafe type event
		Michael Edmonds	Communicating a need for engineers
		Lucie Lindsay & Patsy Hindson	Collaborative science communication in contemporary teaching practice
		Kate Hannah	Practical kindness: Trying out kindness in science communication with the Science Scholars 101 students
2.40	Afternoon Tea		
3.00	Speed Talks	Jocelyn Williams	Art communicating science through a participatory event: Public response to Project °TEMP
		Damian Christie	SciComm & influencers: Jamie's World On Ice
		Nicholas O'Flaherty	Outreach through podcasts
		Ian Letham	Podcasting science capabilities
		Sarb Johal	"Who cares? What's the point?" Building a psychology communication podcast
		Veronika Meduna	Global perspectives
4.25	Panel & Response	Victoria Metcalf	A paradigm shift for science and technology engagement, science, and education: Reflecting on three years of the participatory science platform
5.00		Sir Peter Gluckman	Response to panel and closing remarks
5.15	Close of Conference		

Plenary

Whose truth?

Craig Cormick

How do you tell a story that captures the truth of science in an era of alternative truths, tribal ideologies and contested facts? An analysis of research into the challenges of effective science communication in 2017 and beyond.

Connecting diverse audiences to science through art

Kirsten Carlson

Humans have been using art much longer than language to communicate with others. Over time, art has evolved into a multi-faceted set of pathways that connect people with ideas, stories and knowledge. Science does exactly the same thing but language has become its primary path. And, unlike artists—whose audience is non-artists—scientists are typically in conversation with other scientists. And, in doing so, have developed a language that stops most non-scientists in their tracks. By utilizing the visual arts, specifically illustration and graphic design, science communicators can reach non-scientists in much the same way as artists reach non-artists. This presentation will explain why and how art can communicate science to non-scientists. And what kinds of art can be integrated with science. It is time for science to embrace art as an effective way to connect with non-scientists. You do not need to be an artist or artistic to attend.

Panels

A paradigm shift for science and technology engagement, science, and education: Reflecting on three years of the participatory science platform

Victoria Metcalf[1], Sarah Morgan[2], Josh Richardson[3], and various project leads.
[1]Office of the Prime Minister's Chief Science Advisor, [2]COMET, [3]Venture Taranaki

The Participatory Science Platform (PSP) has been piloted for the last three years in three New Zealand regions (South Auckland, Taranaki and Otago) in a world first as part of Curious Minds; a suite of initiatives encouraging engagement with science and technology. Within the PSP, communities are able to work on projects that are meaningful to them in partnership with scientists and educators. The eighty odd projects funded to date are diverse, spanning across science and technology, but they all have communication of what they are doing at their core.

In her unique role as National Coordinator for the PSP, Victoria Metcalf travels to the pilot regions to better understand the impact these participatory science projects are having. She will relay through weaving an introductory narrative, how transformational these projects are, conveying that they are creating a paradigm shift in how science communication, science, and education are performed, whilst also building communities. This will be followed by regional managers and project leads highlighting the impact on their communities via a Q and A discussion, including about the various ways in which communication techniques are integral to their success.

Engagement in the National Science Challenges – Different approaches

Sarah Fraser
NIWA

Building on a popular panel in 2016, this discussion will explore how "engagement" and "science communication" have been interpreted, structured, funded and delivered across a range of National Science Challenges. This will include strategic choices associated with the prioritization of educational activities, citizen science, dialogue processes, traditional communications and branding, co-production, community-led research and integration of social science in the heart of the Challenges. Expect a robust discussion about the diversity of the field, politics, opportunities and struggles that have been occurring behind the scenes in these multi-million-dollar national research programmmes.

Poster presentations

Family science – Does it work?

Ashleigh Fox
Family Science Workshops

Our second year of Curious Minds funding has helped us to expand our earlier project into new STEM topics and include more schools. This year we tackle electricity and rockets. These developments have also brought us new challenges, in both the content and delivery of the workshops. We outline what we have found effective, as well as sharing some of the lessons we have learned by getting out there and doing our science communication. With our face-to-face approach, and audiences comprising primary school-aged children and their adult family members from a range of Auckland backgrounds, we have found we need to be prepared, flexible, adaptable, and able to relate the activity to the group members lives in different ways each time. We always aim to deliver on fun and laughter as well as interesting science activities that families can do at home themselves.

Can we marry the interests of the scientist, the community and the funder?

Cristina Armstrong
Cawthron Institute

Cawthron Institute (CI) is NZ first independent science organisation, started up almost 100 years ago in Nelson. The science has changed through the decades, but has always had the same vision, applied science to protect and support sustainable development of NZ primary industries.

In the last 7 years CI has been developing its communication team, aiming to inspire a new generation of scientists and increase scientific literacy by showcasing CI applied research. Our audience is as diverse as our science. The science varies from aquaculture, coastal, freshwater, toxicology, food testing, biosecurity, algal biotechnology, etc. The audience which we communicate and translate our science to starts in-house and expands to our local community, teachers, students, media and all our partners and funders. Our challenge lies in being able to connect the needs and interests of our audiences with what our scientists, their collaborators and funders require.

This presentation will showcase the wide range of programmes and events we host. The partnerships and connections we have with our audiences has directed the way we communicate. We continuously adapt, allowing us to bridge the gap between the needs of all parties involved.

Critical Public Understanding of the Philosophy of Science (cPUPS): A challenge for science communicators?

David Mercer
University of Wollongong

There are multiple public understandings of the philosophy of science, spanning numerous contexts and taking numerous forms, ranging from implicit 'folk epistemology' to more 'formal' references to well known philosophers of science. I contend science communicators need to pay more attention to studying and responding to the implications of these public understanding(s) of the philosophy of science. My presentation will examine the use of references to the famous philosopher of science Sir Karl Popper in popular climate change debates as a case study.

Paper presentations

Engaging secondary students with science communication

Kaitlyn Martin
Centre for Science Communication, University of Otago

Interest in science by adolescents is decreasing around the world and in New Zealand according to international surveys. Given the increasingly integral part that science and technology will play in their lives, it is crucial to establish an interest in science early in our youth so that they may participate in scientific arguments as they relate to public policy, health, conservation, and research. In 2017 we administered a survey which aimed to establish the current levels of science interest for students in years 7-10 in Otago schools. We will discuss the results of this survey, the implications for teaching pedagogy and student engagement, as well as plans for science communication based teaching intervention we will be trialing next year.

Sea science: Giving children voice and agency in coastal management

Marie McEntee[1], Joseph Fagan[1], Maraea Grant[1], Brittany Goodwin[1], Tracey Turner[1], Okiwi Kura[2], Kaitoke School[2], Mulberry Grove School[2]
[1]University of Auckland, [2]Aotea Great Barrier Island

Sea Science is a project funded through MBIE's Curious Minds Programme. It is a partnership between the schools on Aotea Great Barrier Island and Coastal and Science Communication specialists at the University of Auckland, to enable Year 1-8 children to positively contribute to the management of their coastal environment. The project, which ran between February to December 2017, used the context of beach cleanups to actively engage the children in the scientific process from problem identification, data-gathering, data analysis, interpretation, development and implementation of solutions through to communication and publication. This engagement in science stimulated the children's curiosity to investigate their pre-existing concerns about marine debris on their coasts. It gave the children a voice to report their thoughts in their own language through theatre, film, art and song and to come up with creative solutions for managing their coastal environment. In this way the children of Aotea Great Barrier Island were given agency to shape their own futures. This paper on the Sea Science project acts as a case study to illustrate how to undertake science communication to effect change through partnerships between scientists, science communication specialists, children and their local communities.

Fauna, flora and the missing f-word

Peter Buchanan
Landcare Research

MBIE's Unlocking Curious Minds funding has supported two initiatives to introduce school students to the fascinating, functionally fundamental, and frequently forgotten FUNGI. I plan to describe two completed projects. The first sought to demystify the science of species discovery. We collaborated with students at each of three schools to find, discriminate, and describe a species new to science. For each new fungal species, the students chose the species epithet (second name). Student names, and sometimes photos, are included in the scientific paper. The second project developed a student booklet in te reo and a bilingual teacher resource for kura kaupapa, focusing on returning to Māori students ancestral indigenous knowledge of uses of fungi. While much indigenous knowledge has been lost, the project collated accessible information from early European texts. New awareness of the relevance of fungi – for food, medicine, fire-carrying, and tattooing – is thus being made accessible to kura kaupapa students and whanau.

Demonstrating scientific impact

Emma Timewell
Plant & Food Research

In 2012, Plant & Food Research introduced Growing Futures – a set of online case studies to demonstrate the impact its science was creating for New Zealand. The website was designed to sit alongside the company's Annual Report, with multimedia linkages between the two. Each year, more case studies have been added to the website, which now totals 46 case studies across the horticulture, wine, cropping, seafood and food and beverage industry. The inclusion of online content garnered a Special Award for Innovative Reporting from the New Zealand Institute of Chartered Accountants in 2013, and the Growing Futures publicity campaign was awarded a Gold Quill by the International Association for Business Communicators (IABC) in 2014.

Science communication and quality of advice – A Ministry for the Environment perspective

Charlotte Wood
Ministry for the Environment

MfE operates at the boundary of science and policy. The Ministry's role in the environmental management and natural resource systems' requires the science informing its work to be considered in conjunction with the social and political context (policy context).

This presentation will explore the importance of science communication to the Ministry's work, issues the Ministry faces in communicating science, and initiatives in place to address them.

The double benefits of final year undergraduate science outreach projects

Claire Concannon
Otago Museum

The Cell EXPLORERS programme (www.cellexplorers.com) is an educational outreach programme based in Ireland that engages with the public on STEM topics. As part of the Cell EXPLORERS working model, third level education students can complete science outreach final year projects as part of their curricula. These projects are currently in their 4th year and more than 40 students from final year Biochemistry, Microbiology and Zoology courses have undertaken this research project. Students are tasked with creating, piloting and evaluating novel science education & outreach activities. The students are guided through the project by a series of interactive self-reflective workshops and seminars. These cover key concepts and methods in the fields of science outreach

and science education, and aim to equip the students with skills to develop effective outreach resources. All resources created are then piloted within the community and the students are asked to reflect on their evaluations. Here we will present an overview of the module structure as well as how it benefitted both the students and the partners involved. The preliminary findings of the evaluation of the project module suggest that this type of project could be extended to a wider public of final year students.

The evaluative research this session is based on was conducted during my employment as Cell EXPLORERS coordinator at National University of Ireland Galway under the supervision of Dr. Muriel Grenon, Cell EXPLORERS director. The module pilot was funded by the Wellcome Trust and the continuation of the module has been supported by Science Foundation Ireland and the Discipline of Biochemistry in NUI Galway.

Badges and art auction: How raising funds helps raise profiles and allows citizen science projects to make opportunities realties

Ahi Pepe | Mothnet project team

When Ahi Pepe | MothNet collaborators Te Kura Kaupapa o Otepoti were given an opportunity to attend the World Indigenous Conference on Education (WIPCE) 2018 in Toronto Canada to present "Science through an indigenous lens – a moth study". It presented an opportunity that support the kaupapa and foster the mana of the wider Ahi Pepe | MothNet project. The challenge however, is that conference attendance wasn't something the original citizen science funding stretches to support. So the target fundraising to make this opportunity a reality for the kids that have been pivotal in the development and growth of the project falls to parents, teachers and project partners to draw on their networks. This talk explores the wins and woes, stops and goes of fundraising for aspects of citizen science projects go beyond the original scope. How ownership of citizen science projects themselves can start to become a community science project. How fundraising can add value for participants and to the profile of citizen science projects.

Wikipedia as an outreach tool

Mike Dickison
Whanganui Regional Museum

Wikipedia is the first port of call for anyone seeking information, so as science communicators we have to know how it works, and how to add information to it. Anyone can edit Wikipedia, but only as an individual, not an organisation. Conflict-of-interest rules forbid us from editing pages about our friends, relatives, or employer. Even if you have a conflict of interest, every Wikipedia page has a Talk tab, where you can leave corrections and suggestions. You can also see from the History tab every edit ever made to the page and who made it. Photos for Wikipedia have to be public domain or released under an open license that allows any use, including commercial. And every bit of information has to be referenced, using reliable secondary sources (ideally ones that are published, peer-reviewed, and online). Because Wikipedia is easy and free to update, and has more reach and impact than any organisation's website, it should be our primary online communication tool.

Intergenerational, transdisciplinary science communication: Playing the long game.

Gabby O'Connor[1], Dr Alys Longley[1], Dr Karen Fisher[1], Carolyn Lundquist[2], Craig Stevens[2]
[1]Auckland University, [2]also from NIWA

A changing climate is creating challenges for everyone, from policy makers, householders, through to the next generation considering their futures. Here I examine the hypothesis that primary school-aged students can form the starting point in a chain reaction of understanding that will provide enhanced outcomes that benefit a range of stakeholders. This is achieved by introducing primary school-aged children to high quality science, scientific concepts and scientists early and personally. This leap is made possible by art. I will present work, embedded in the National Science Challenges, that spans Antarctic sea ice field camps to the flood-prone shores of a New Zealand community. The approach uses student-aided construction of art works in collaboration with scientists and artists. A number of aspects emerge. (i) Siloes are removed and art is taught alongside and with equal importance to science, geography, maths and history. (ii) The approach reverses the top-down flow of knowledge so that the children become ambassadors for their new-found knowledge and experiences, communicating these to their family and communities. (iii) The approach is cost-effective but requires patience. (iv) It needs to produce bona fide art and science. Communication of science is fundamental at the start and end of the process. Science is communicated to the students rather than taught. The students then become science-aware citizens and do their own science communication.

Creating community-led opportunities for science communication

Sarah Morgan[1], Victoria Metcalf[2], South Auckland PSP project lead(s)
[1]COMET, [2]Office of the Prime Minister's Chief Science Advisor

The Participatory Science Platform (PSP) has been piloted in South Auckland for the last three years and is locally known as SouthSci. More than twenty projects have been funded across diverse themes of health, buildings, information technology, environment, and conservation etc. Many of these projects incorporate communicating what they are doing and their findings in innovative ways back to their communities, and we are gaining insight into what works well.

An outstanding 2017 SouthSci project and their communication strategy that best engages their community will be profiled. As the 2017 projects are only recently underway, the most suitable project will be identified later in the year.

Measuring engagement and learning at Discovery World with an iPad based survey

Daniel Solis[1], Nancy Longnecker[1], David Hutchinson[2]
[1]Centre for Science Communication; University of Otago, [2]Physics Department and The Dodd-Walls Centre for Photonic and Quantum Technologies, University of Otago

Visitors define their own visit objectives and hence the success of exhibits. But science centres have objectives too. For instance, a visitor might come to have fun while the centre may hope for learning outcomes. Surveying is a popular method to assess outcomes ranging from attitudes to facts. A pre and post-visit survey is being conducted at Discovery World, a science centre located in the Otago Museum. The questionnaire is comprised of Likert scale items and questions asking about science knowledge and attitudes. The learning section focuses on the Light Zone, an exhibition inside Discovery World dedicated to light and electromagnetism. To avoid alienation with younger respondents, especially due to the factual questions, a children-friendly survey was developed. SurveyGizmo and iPads were chosen as the platforms to conduct the survey in situ. While some people, especially older visitors, still prefer paper-based surveys, the advantages of surveying on iPad overcome the disadvantages. For instance, it is more convenient to match pre and post, to reduce paperwork and to record visit time. The survey and preliminary results will be presented.

How many scientists does it take to change a mind? Communicating scientific consensus and contentious science

John Kerr
School of Psychology, Victoria University Wellington

Climate change, vaccines and genetic modification... There's no shortage of 'hot-button' issues where the scientific consensus is rejected or called into question. Public awareness of the scientific consensus on many issues is low, and there has been a recent push for communicators to focus on scientific consensus as a way to shift entrenched attitudes. But is this a return to deficit model thinking? How does this type of information change attitudes—if at all?

This talk will delve into how perceptions of scientific agreement are related to individual beliefs and offer practical insights for science communicators engaging in dialogue with a range of audiences.

Homeopathy & science, where is the miscommunication?

Manon Knapen
University of Otago

Following on from a nation wide survey looking at the use of homeopathy in New Zealand and respondents' perception of the scientific basis of homeopathy (which I presented last year), this paper presents preliminary results of follow-up semi-structured interviews that took place in April 2017. The interviews focused on homeopathy users to explore the survey results in more details. The principal objective of the interviews was to get a better understanding of why homeopathy users perceive homeopathy as scientifically proven (or not). The participants also described what homeopathy is according to them and what scientific/science means. The access to information about homeopathy was also addressed as well as the reasons why the participants trust certain sources of information over others.

Climate change engagement in the Deep South Challenge: Two years on

Rhian Salmon
Victoria University of Wellington

In a plenary presentation at SCANZ 2015, Rhian Salmon presented a $1.6M "hot off the press" engagement strategy for the Deep South National Science Challenge, the goal of which was to "improve New Zealanders' ability and capacity to make decisions informed by [climate change] research".

Two years on, this presentation will explore unforeseen challenges and opportunities associated with translating that theory into practice. It will also outline how the experience of building and delivering a programme focused on climate change engagement will be used to further inform the research community and so, hopefully, contribute to bridging the theory-practice divide so often experienced in science communication.

Intrinsic or extrinsic motivations? Understanding factors motivating scientists' engagement with the public in Singapore

Shirley Ho, Juliana Chan, & Tong Jee Goh
Nanyang Technological University
Wee Kim Wee School of Communication and Information, Nanyang Technological University

As science progresses, public communication of science and technology (PCST) between the scientists and the public remains key in enhancing public understanding of science. Applying the theory of planned behaviour, this study seeks to examine how socio-psychological factors drive PCST, and find out the frequency of expert-public engagements. Focus group discussions were conducted among scientists based in Singapore to understand their engagement practices. The NVivo software was used to identify key themes of the discussions. As the participants feel strong public altruism and duty to publicise the findings for the funding organisations, they share the sentiment against organisational norms that galvanise PCST for career advancement. They do not support practices that overlook public interest. Furthermore, they acknowledge the prevalence of career progression, securing funding, furthering institutional goals and gaining visibility as extrinsic motivators. Of key concern is the media misrepresentation of science. However, they feel that communication trainings will spur them towards PCST. In terms of frequency, there is low engagement in PCST; scientists would oblige on request. Overall, the results of the focus groups reveal the key motivators and barriers that scientists face in PCST in Singapore. Further theoretical implications and insights into PCST will be discussed.

I'm not a scientist, but...

Ceridwyn Roberts
Motu Economic and Public Policy Research

Tips for the non-scientist working with scientists. This session will explain how to support the research without repeating the jargon. I will take a brief look at communications materials and techniques that can help shape the language for both audience and scientist.

What is Science, what is it not? What is Art, what is it not?

Craig Hilton[1], Fabien Medvecky[2]
[1]The Mind Lab / Tech Futures Lab, [2]Centre for Science Communication, University of Otago

Art, science and science communication have their own dogmas.

As science communicators, we need to talk not only of what science is, but also of what science is not. It is not omniscient; it is not omnibenevolent; and it is not omnipotent. Scientists and science communicators need to maintain a healthy humility and scepticism towards its findings.

Science is often presented and communicated as a set of absolute truths. A set of absolute truths can be simply denied (the term "post-truth" has made it in the dictionary). Absolute truth requires belief and creates the space for non-belief. The denial of the human role in climate change, the efficacy of vaccines, or the economic fall-out of Brexit is not downstream of scientific endeavour or critical belief but of a rejection of the concept of absolute truth. Science itself is not communicated, rather Truth with a capital T is dictated.

So how can we push against this dogma and communicate as we should; communicate both the capacity and limits of science? One option to force this science evangelism to slow down and reconsider its stance is to call on 'the idiot'. The idiot is an interesting character; Michael, Strengers and others have called on the figure of the idiot as a figure of enormous potential to inform the interaction of science and society. Here, the idiot is not meant as the mentally challenged, but the Dostoyevsky-esque idiot who fails to comply. The idiot does not fit our expected norms for interactions with science. By misbehaving in non-normal ways, the idiot doesn't allow us to simply to carry on; he forces us to stop, to ask why; to slow down. This slowing down offers science communicators unique moments for social reflections, and this paper presents a case study of using the idiot as a way to challenge the dogma of science.

As artists, we constantly talk of what is art and what is not. Sometimes art can be more fun and provocative if it looks like it is certainly not. Was the Atheistic Pride March an art event or was it an idiotic event?

The Atheistic Pride March 2016 was a politically and culturally driven attempt to redefine atheism and be a challenge to all simplistic thinking. Simple solutions are hyped be they from religion or any other kind of dogma including the promises of absolute knowledge via science—this only leads to disappointment. In the context of capitalism and hype, science is in danger of becoming a religion itself- yet it is a wonderful invention. Atheism is not just a rejection of organised religion—it is a rejection of all simplistic poppycock. We are all going to hell, let's face it.

On November 16th, 2017 *Sahelanthropus tchadensis* in a parade in Dunedin to celebrate the ambiguity of knowledge and the pleasure that comes with not knowing. To be true atheists and to bravely declare that we do not have a clue! What we love about science when it is used with humility—is the more we know, the more we know that we don't know! We are simple-minded, banana-eating, sex-driven, short-lived blips in time.

Uga Uga Uga Chuga!

Putting hype in context

Tara Roberson
Centre for Public Awareness of Science, The Australian National University

Our technological and scientific futures are shaped by expectations and visions in the present. By understanding the future as an analytical object, we can understand how representations of the future can be used to marshal resources, coordinate activities and manage uncertainty. In the drive to promote specific futures and shape social and political support, researchers and communications professionals may draw upon an often-criticised tactic: hype, or simplified and sensational science. This talk offers a 'less judgemental, more pragmatic' look at hype in the context of doing science communication, and explores how hype can be an effective communication tool for prototyping possible futures.

Encouraging science exploration in the very young – The Science Playground project

Claire Concannon
Otago Museum

Young learners are constantly wondering and discovering. The idea behind Kia Rapua - Science Playground is to create a playful environment that will foster scientific thinking by giving young children (under the age of 7) the time, space, and materials to exercise their curiosity. The project involves close collaboration with early childhood educators to develop teaching resources and Do-It-Yourself at home experiment guides, to help educators and guardians engage young children in science. Here we introduce the project and describe the results of the first phases which included science playground design and running a science activity workshop for preschool educators. Learnings from the design phase and workshop evaluation are discussed.

This project is supported by a MBIE Unlocking Curious Minds grant.

Fight Like a physicist

Emily Hall
University of Otago

At the SCANZ conference last year, I presented on work that I had done with Year 11 students at a local high school teaching Physics principles through the medium of karate. I teach the students a unit of 12 karate lessons targeted at specific Physics principles in their Physical Education class. The classes are 100% practical and the students are active participants in every lesson. I have also presented workshops to the public based on the same concept at Science Festivals. This year to present at SCANZ, I have another year of data and, additionally have been working with Year 12 and Year 13 students in different ways with similar results. Additionally, I have done a follow up survey one year after the unit with my original Year 11 cohort which suggests

that they are more interested in Physics and more likely to pursue Physics as a result of having undertaken this intervention in Year 11.

In the session I would like to briefly overview the project, present the new data, and interactively involve the audience to demonstrate the concept.

Impact versus effort: How to get the most out of a Science Cafe type event.

Delphine Mitchell
Science in Society group (VUW)

In July 2016 the Science in Society group (VUW) rebooted the Wellington central Cafe Scientifiques. We have successfully held several events over the last year which have appealed to a new and younger audience, whilst not alienating the former regulars. This year we are investigating the impact of Cafe Scientifique as a knowledge-translation (alongside transmission) tool which enables people to make more informed decisions about topical issues. This talk will cover some of our key findings for setting up and running a science communication event that both engages and informs a wide cross section of society.

This research is being carried out in conjunction with Rhian Salmon and Tim Corballis of the Science in Society group.

Communicating a need for engineers

Michael Edmonds
Ara Institute of Canterbury

The New Zealand 2010 National Engineering Plan determined that New Zealand required more engineers to be trained, yet for the past 7 years little seems to have changed in terms of student interest in engineering. Only recently, have numbers increased and these are arguably occurring in the areas with the least need.

In this presentation, Dr Edmonds will explore the landscape of engineering qualifications, connections and disconnections will schools, the recent selective success of the E2E programme and an outline of some initiatives being supported by TEC to raise the profile of engineering qualifications in the ITP sector.

Collaborative science communication in contemporary teaching practice

Lucie Lindsay[1], Patsy Hindson[2], The Science Scholars 101 2017 cohort students
[1]The Mindlab by Unitec, [2]Saint Kentigern Boys School

In this collaborative presentation, Patsy Hindson, Head of Science, and Lucie Lindsay, a postgraduate teacher-educator discuss collaborative science communication in teaching practice. Patsy's science students collaboratively create content and contribute to an online learning community in a range of activities that are designed to promote critical scientific thinking. She has instigated an annual Symposium where scientists are invited to speak alongside students to the school community. The Symposium coincides with a school Science Fair providing students with a good opportunity to share their self-led projects. Lucie teaches postgraduate teachers about digital and collaborative learning and researches design for collaborative, online learning. Together they will discuss and how learning communities and digital tools can support science communication within the school, within the community, and with the wider scientific community.

Practical kindness: Trying out kindness in science communication with the Science Scholars 101 students

Kate Hannah, Siouxsie Wiles
Te Pūnaha Matatini/University of Auckland

Science Scholars is an application-only cohort programme for New Zealand's "best and brightest" science students which was launched at the University of Auckland in 2015. In 2017, Kate Hannah and Siouxsie Wiles redesigned the first year, first semester class, Science in Action, introducing a reflexive, iterative, self-designed code of conduct based on the principle "everyone here is smart, so distinguish yourself by being kind." The final assignment required students to develop a reflexive creative work for a specific audience, based on the course content and principles. This short presentation focuses on the development of a reflexive pedagogy of Practical Kindness, and showcases some of the students' science communication creative works.

Art communicating science through a participatory event: Public response to Project °TEMP

Jocelyn Williams[1], Deborah Rolland[2], Stéphane Boyer[2], Marie-Caroline Lefort[2]
[1]ICL Graduate Business School ICL Education Group, [2]Unitec Institute of Technology

Over the course of almost four weeks in March-April 2017, Project °TEMP aimed to stimulate conversations about climate science among members of the public, artists and scientists through a number of art installations with a global warming theme over the open ground of Corban Estate Arts Centre in Henderson, and indoors at Te Uru Contemporary Gallery in Titirangi, Auckland. We surveyed over 180 volunteers drawn from both sites to assess their attitudes on climate change, whether they think scientists and artists are good at communicating with the public, how they rated the success of Project TEMP in its aim to communicate climate science, and other variables relevant to our research goal (to evaluate Project °TEMP's impact in terms of public participation). Open ended questions also gave respondents the opportunity to provide anecdotal comment. This presentation invites reflection on some of the key findings which include clear agreement over the connection between human activity and global warming but equivocation over whether science can solve it and whether scientists are good communicators, strong agreement that art and science can work well together to benefit society, and much more. Indications here are that there is a lot of room for art to trigger the emotional connection needed to make people pause for thought about how they can act to limit their carbon emissions.

SciComm & influencers: Jamie's World On Ice

Damian Christie
SciFilms

Popular social media figures (influencers) have followings that dwarf the world's most successful science communicators – but how useful are they at bringing science communication to a new, larger audience? And what are the risks?

As a test project, documentary producer Damian Christie (SciFilms) took 20 year old YouTube star Jamie Curry to Antarctica as part of Antarctica New Zealand's Community Engagement Programme. With more than ten million followers, the majority young women, Jamie's audience represented a group often missed by mainstream media and traditional science communication, but as a younger group, very important to reach to discuss the issues faced by climate change.

The resulting series, released April 2017 reached millions via Facebook and YouTube, and generated additional media coverage across televison, radio and print.

Damian Christie will discuss the project, its challenges, risks and results.

Outreach through podcasts

Nicholas O'Flaherty
The Antarctic Report

Dedicated to all things on Antarctica and the Southern Ocean, the Antarctic Report is an online portal showcasing the hard science which underlines the importance of Antarctica as a bellwether of global climate change. The weekly podcast interview series significantly extends the outreach of the site.

The Antarctic Report podcast is hosted here: https://www.antarcticreport.com/podcasts

Podcasting science capabilities

Ian Letham
Plant & Food Research

Thanks to the advances and uptake of podcast-related technology, and the popularity of science podcasts in particular, podcasting was identified as a way to tell Plant & Food Research's science stories and introduce our scientists in a relaxed and accessible way.

Although the company has a history of producing videos, podcasting was appealing due to minimal production time and the fact that listeners can be engaged for a longer period of time – allowing for a more expansive way of highlighting our science capabilities. The format is also conducive for helping to bring scientists forward who are less willing/comfortable with the video format, for showing thought leadership, and highlighting the company's science activity while being able to avoid commercial sensitives.

Key strategic areas for podcasting were identified: promoting our 'stretchy' science, changing perceptions concerning science, tech transfer, promoting science as a career, and in due course, complementing press releases, published research, and topical news.

With no prior experience in podcast production, the process has been positive and interesting.

"Who cares? What's the point?" Building a psychology communication podcast

Sarb Johal
School of Psychology, Massey University

There is a global appetite for information to help us to understand human behaviour. People consume this information in lots of different ways, including podcasts. 15% of the US population have listened to a podcast in the last week, compared with 3% going to the movies. Podcast listenership is also growing steadily at around 10-20% each year. There are many science communication podcasts that exist globally and in NZ, but few focus on psychology. This short paper outlines how I spotted a gap in the podcast market, and executed a plan to bring the best of global psychology to NZ audiences, and to promote NZ and early career behavioural researchers to the world.

Global perspectives

Veronika Meduna
New Zealand editor of The Conversation

The 10th World Conference of Science Journalists takes place in San Francisco this year under the theme Bridging Science and Societies. Veronika Meduna reports back from the meeting, focusing on sessions that address the challenges in delivering effective science communication in a post-truth, post-expert world as well as issues of particular relevance to the Asia-Pacific region, including genome technologies to study indigenous populations, science data in storytelling, and climate stories about agricultural emissions.

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Notes

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