

The 'truth' as a shared vision

Engaging under-represented audiences in science

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As science communicators, we are sworn converts to the body of knowledge that is science. We uphold a system of rational inquiry, and we're passionate about the amazing sights, experiences and 'Eureka' moments which science can give us.

So what happens when our audiences just don't get it? What do you do when people switch off, or worse, just don't turn up?

Working with audiences who don't share our passion for science can be hard work. But as it was succinctly highlighted at the recent Science Communication Conference, there are no 'hard to reach' audiences, just those who are 'resource-intensive'!

At the conference, I was able to share my experiences of working with Māori in New Zealand (NZ). Māori are the indigenous people of Aotearoa (NZ) but through years of social injustice, they are also one of the most deprived social groups enduring stark health inequalities. If any group should be receiving health and science communications it would be Māori, and yet they're the group who are least likely to attend or engage with communication efforts.

This was particularly apparent at a neuroscience festival I organised in Auckland. The event featured lectures, discussions, science experiments, community expos and art installations, and was very highly rated by the 3000 people who attended each year. Yet Māori made up only 2% of the audience, compared to 17% of the general population.

So where were we going wrong? Well firstly it was the subject matter – Māori consider the head as *tapu*, meaning it is sacred and deeply respected. Secondly, it was science itself. Science and scientists have been linked to Māori oppression, as a Western system which is done *on* Māori, not *with* or *by* them. Māori have a deeply spiritual way of viewing the world, with people, families and relationships placed at the centre of all interactions.

These two traditions seem at first glance to be poles apart. On the one hand we have clinical, factual science, where knowledge is defined through extensive and systematic inquiry. On the other we have an innate and cultural knowledge, which is passed down through the *tangata whenua*, or the 'people of the land'. Can both be right?

This is where I highlighted the example of our Duchess of Cambridge on her recent trip to NZ. The now infamous picture shows a beautifully coiffured Kate shaking hands with a Māori warrior, who just happens to have a naked bottom! Now I would never meet Royalty with my bottom on show, but in Māori culture this is perfectly acceptable – in fact it is required in some situations!

So here we have an example where the 'truth' is relative – neither of us is wrong, it's simply a case of agreeing what is right. In this scenario, meaning is co-constructed through experience –which is better known as social constructionism. This philosophical position asserts that other groups have their own knowledge, systems and values – and while they may be different to ours, they are not better or worse.

My colleagues and I used these transformative principles to co-develop a schools programme for Māori youth, empowering the pupils as researchers to design, collect and analyse experiments at the science festival. The teenagers were 'agents of change' – placed in positions of respect and trust they were able to connect with their community and present health research in appropriate language and cultural contexts.

So what can we learn from this here in the UK? Well our country is so diverse that we find several different cultures simply passing through one city! Be it differences in age, class, language, gender or race; we would do well to remember that our 'truth' is not necessarily perceived as such by someone else. I believe science communicators need to listen before speaking, enabling us to work towards shared visions and goals with under-represented audiences. Co-constructing our truth means we can enhance understanding, involvement and engagement with science - for all our futures.

Laura Fogg-Rogers spoke on a panel at the Science Communication Conference 2014 (1-2 May 2014) with Mat Hickman from the Wellcome Trust and Hema Teji from the British Science Association.

He aha te mea nui o te ao

What is the most important thing in the world?

He tangata, he tangata, he tangata

It is the people, it is the people, it is the people