

Come to the Table! Haere mai ki te tēpu!

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ABSTRACT

Come to the Table! explores whether extended realities (XR) can create a bridge between indigenous people (Māori), descendants from European settlers (Pākehā) and people from other ethnicities, by practicing social inclusion. The experience uses real time depth sensing technology and AR/VR displays to enable participants to view and be part of tabletop conversations with people from different cultural backgrounds, in a playful, explorative and powerful way.

CCS CONCEPTS

• Extended Reality • Virtual Reality • Augmented Reality

KEYWORDS

intercultural, indigenous, Augmented Reality, Virtual Reality

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1 Introduction

This project explores how Extended Reality (XR) can be used to overcome the distance between people from different cultures. Aotearoa New Zealand was formerly inhabited by Polynesian Māori. In the 19th century, it was colonised by Britain who used tactics that have left relations between those indigenous people and the descendants of the early settlers in a problematic state. So, it is now necessary for us to imagine what a healthy, productive and positive partnership might look like and to put that into practice.

In this project I have chosen to use a real table to create a cross cultural meeting place. A kitchen or dining table is often the creative and generative hub of the home. By inviting Māori

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to the table, can we experience how mutual respect and inclusion might feel? Can newer migrants and visitors from far and wide also find connection there? Can this change attitudes and behaviour? What are the best technological conditions for such transformation and cultural exchange?

2 The Visitor Experience

Come to the Table! is an XR experience where people from different cultural and ethnic backgrounds 'meet' while seated around a table in an attempt to break out of the distanced interracial encounters that often take place in the street.

The experience has three parts; (1) pre-recorded conversation, (2) AR meeting, (3) VR presentation of visitor responses. We discuss each in turn.

Pre-recorded Conversation: Prior to the conference, a round table discussion (Figure 1) between two or three indigenous people, will be recorded using a central 3D 360 camera. The camera uses a cluster of 8 Intel RealSense sensors to capture a 3D view of its surroundings, along with a spatial audio recording. The 3D data set of recorded conversations are exported and edited for subsequent viewing in AR headsets.



Figure 1: Table in NZ where conversation between indigenous people is captured using a 3D 360 camera.

AR Meeting: At the conference, attendees will be invited to sit at a table (Figure 2) and put on an AR display to see virtual guests seated around a real table. The virtual guests will appear as 3D volumetric data captured from the pre-conference recording, and will have a conversation about culture and being at the same table of power. Once the user has listened to the brief discussion, one of the AR guests will turn to the visitor and ask what they think. Their response will be captured by a

microphone and 3D 360 camera placed on the table, creating a new 3D recording.

VR Presentation: At a separate table in a second space, attendees can sit and view the recorded visitor ‘conversations’ in VR headsets. Users will be able to see several 3D recorded responses from the previous people who viewed the AR conversation. In addition of all Māori/indigenous discussion will continue to play in the background to ensure that the indigenous voices are heard by all attendees who take part by sitting at one or both of the two tables. The VR users can walk around the space and see 3D representations of the speakers from any perspective.



Figure 2: At the exhibition, recorded conversations between indigenous people are seen and heard in AR.

The main novelty of the experience is that it uses a new type of capture experience to enable an ongoing engagement with the cultural conversation. Previous works have shown pre-recorded 3D video or depth sensing capture, but this is one of the first that uses live 3D capture technology to immediately capture the visitor response and include it back in the experience. The presentation of 3D recordings in AR/VR speech means that the participants can move around the space and feel like they are becoming part of the conversation.

3 Iterative Design and Development

The results of *Come to the Table!* are expected to contribute to an experimental, iterative design process that uses an extended reality interface as a bridge between former strangers to begin overcoming interracial discomfort.

Attendees will be afforded the opportunity to use a AR headset to bring indigenous people to their real table where they can watch and listen to their discussion. Short (1 minute) responses by those attendees will then be recorded and selected for viewing by others in VR at a second table. There, they can also experience encounters in Reality with fellow attendees. They may also discuss different technological approaches and how technology might be employed to overcome social separation between different groups of people. It will be interesting to note whether the virtual encounter stimulates a desire to meet in Reality with those they have seen and listened to in the virtual world.

The next iteration will benefit from the discussion among formerly marginalised groups, the practice of the technical team,

and the responses that arises among the attendees. Such responses, recorded in 2D video and in 3D at the table, will inform how to adopt and/or adapt the technology to progress the desire to support intercultural connections, but also to amplify the voices of those who are heard less often than more dominant societal groups.

The original participants/interviewees will have input into how to work with them to ensure that the content is more effective or exciting. They will also have the opportunity to feed into the design process and to see responses to their discourse. The technical team will see an application of their work in the real world that might positively affect the development of the 3D 360 camera and the software. The designer will discover what successes and failures look like.

Reflection and Future Application

4 Reflection and Further Applications

Various commentators are calling for a re-evaluation and a re-centering of relationships between people. George Monbiot in his revised human narrative, *Out of the Wreckage*, a response to the threat of climate change, states that our task is to “reach across the divides and find common ground” [Monbiot, 2017]. And in *Team Human*, Douglas Rushkoff saliently points out that “Art and culture give us a way to retrieve our lost ideals, actively connect with others, travel in time, communicate beyond words, and practice the hard work of reality creation” [Rushkoff, 2019]. Such is the small contribution made to this ongoing work by *Come to the Table!*

With this work, many ethical and production value concerns are similar to those that concern traditional documentary makers. But, due to the diminished set of controls, such as lack of selective focus, only one ‘global’ aspect ratio/shot size and one camera position (by choice), my main attention turns to the user experience. This is a hallmark of a truly relational project. How will viewers be affected by their experience? My hope is that *Come to the Table!* affords participants the experience of engaging with Māori/indigenous people and that this experience will be positive and thought provoking.

Recordings of their responses can be brought home to Aotearoa New Zealand and shown to Māori who might find this subsequent experience enlightening and encouraging. It may also prove to be a useful template for further iterations involving different cultural groups. Imagine, for example, a viewer from one gender experiencing a conversation and an encounter with a group of people who identify as a different gender.

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