

BREAK THROUGH

CUTTING EDGE RESEARCH FROM THE GEELONG REGION

Building up good feelings

MADDISON BRAKE

AT Geelong's Deakin University, PhD candidate Isabella Bower — supported by the School of Architecture and Built Environment, and the School of Psychology — hopes to prove that a well-designed space has an effect on us.

It's got heart.

But emotion is a fickle building block. Researchers have been asking if certain types of buildings give people a more positive experience, but relying on anecdotal testimonials means the "evidence" is hard to quantify. What we do know is that the environments we go into and out of leave a mark.

"Our evaluation of architectural space has always been highly subjective, biased by our own experiences and preferences," Ms Bower said.

"While, in a limited capacity, we can subjectively say if a building has a positive effect, what we're lacking is an

objective, proven method for measuring emotional response to our built environments."

It's a matter of bringing subconscious thoughts to the forefront. To do this, Ms Bower is fusing knowledge of design

“DESIGNING SPACES WHICH RESULT IN POSITIVE EMOTIONS WOULD MAKE SENSE. IT'S NOT ONLY ABOUT BUILDING WELL, BUT CREATING HEARTFELT SPACES FOR US TO BE HUMAN IN.”

ISABELLA BOWER

and neuroscience to track how our body "feels" in an environment, in relation to the scale of a space.

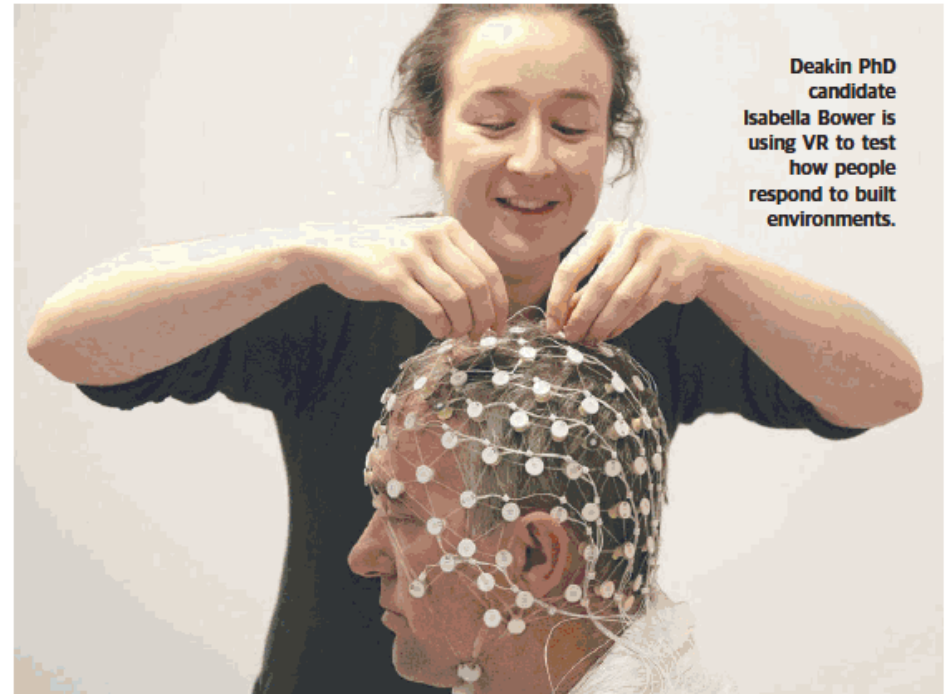
The real world is unpredictable, so how can this be done? Virtual reality may offer the answer.

Ms Bower's research uses the cave automated virtual environment (CAVE) at Deakin's Waurn Ponds campus, where users wear a pair of stereoscopic glasses to see imagined landscapes and spaces.

"The VR CAVE enabled me to show multiple conditions in the one experiment, without having to physically construct life-size rooms and move the participant between them all," she said.

"While we rendered each built environment scene to look realistic (through lighting, texture etc), it is still virtual reality. If the time and resources were available, building prototype rooms to see if the same effect is experienced would be an interesting follow-up."

It is clear that immersive experiences such as this might not be "the real deal", but they are still valuable as a means of understanding how we respond emotionally to a situation. Hooked up to wires



Deakin PhD candidate Isabella Bower is using VR to test how people respond to built environments.

galore, with heart rate monitors and brain data on show, the physiological response occurring in a person's body can be tracked.

Even better, this autonomic activity can show how people respond to the scale of a space. From the size of a door to the height of the roof, researchers can use VR to change the scale of a space to determine the participant's response. It's design driven by the body.

It's early days, but the use of virtual reality could be a way toward developing a consist-

ent, reproducible method to answer the big question: how do buildings affect our emotions?

Ms Bower argues that creating positive places for people is ultimately an ethical endeavour.

"It's about making new environments for life to grow. Good designers have the end-user front of mind, planning their experiences as they design the space," she said.

"When a building has been designed well, the intention is articulated in the built form

and this matches the intention for the space (which should be informed by the users of the environment)."

And so, the environments we spend the majority of our time in — our homes and workplaces — should be designed with the principle of improving the occupants' experience and health.

"Designing spaces which result in positive emotions would make sense. It's not only about building well, but creating heartfelt spaces for us to be human in," Ms Bower said.