People living with advanced dementia become increasingly withdrawn, isolated and ‘locked-in’. Since there is currently no cure for the devastating disease, finding new ways to improve a person’s quality of life and help them live well with the disease are urgently needed. The Ludic Artefacts Using Gesture & Haptics (LAUGH) research project, led by Professor Cathy Treadaway at Cardiff Metropolitan University, aims to do just that – through designing innovative playful objects that amuse, comfort, engage and bring joy to people living with advanced dementia.

Compassionate Design is a method of designing, pioneered by Treadaway, which places loving-kindness towards vulnerable people at the heart of the design process.
communication difficulties often receive few visits. The LAUGH team designed ‘Hug’ for a lady who was considered by her carers to be in the final stages of the disease. She talked and ate little, was chain-bound, and no longer socialised with the other residents. Her carers told the research team that what she needed most of all was a hug. In response to this brief a long-armed, soft cushion-like wearable object was developed, with the hands and feet weighted to replicate the sensation of a hug. The object was made out of a furry fleece textile that is soft and comforting to touch. ‘Hug’ has a simple floppy head with sleepy eyes, nose, and mouth. The weight and form is evocative of a sleeping child. Digital technologies were used to replicate the sensation of a rhythmic heartbeat, and when moved, sensors activate a microcontroller and speakers inside the body cavity to play the residents’ favourite music. ‘Hug’ has been a big success from the outset. As soon as she received ‘Hug’, the resident snuggled into it, rested her head and closed her eyes to enjoy the sensation of the heartbeat and music. A few moments later, to the amazement of the research team, to the amazement of the huge success from the outset. As soon as she received ‘Hug’, the resident snuggled into it, rested her head and closed her eyes to enjoy the sensation of the heartbeat and music. A few moments later, to the amazement of the research team, to the amazement of the research team, to the amazement of the research team, to the amazement of the research team, to the amazement of the research team.

Why is it important to research how to improve the wellbeing of people living with dementia, rather than perhaps looking at cures for the disease in the short term?

While scientific research is busy seeking a cure for dementia, there are many thousands of people who are currently living with the condition. Even if a cure is found tomorrow, it is likely to be some years before treatments can be rolled out in the community. In a compassionate society, each individual life is of value. It is vital that we should be concerned with enabling those with a diagnosis of dementia to live well with the condition and have the best quality of life possible.

What has your research shown about how different objects can improve wellbeing, encourage people living with dementia to live in the moment and help them make connections with people?

By creating bespoke highly personalised objects we are able to help maintain the dignity of the person living with dementia, even when they no longer remember for themselves who they are. Their personal preferences such as favourite music, colours, hobbies that once gave them pleasure, can influence the design that can stimulate pleasurable emotional memories.

What impact has your work had on the people living with dementia, their families and the people that care for them?

The work impacts on everyone involved. The care professionals and members of the research team have observed how the playful objects have improved the wellbeing of the people we have been working with. Sometimes the changes are dramatic and momentary but others seem to be significant and ongoing, including reduction in falls, increased appetite, greater communication – and laughter! Carers report positive responses to the objects, not only because they see improved wellbeing of the residents, but also because they assist them to perform their caring role, making communication and interaction easier.

What aspects of the research – be it the findings or experiences you’ve had along the way – have surprised you the most?

Probably the most surprising aspect of the research has been the huge impact relatively simple playful objects have had on people living with such a complex and distressing disease.