Press Release: Brussels, 30 October 2017

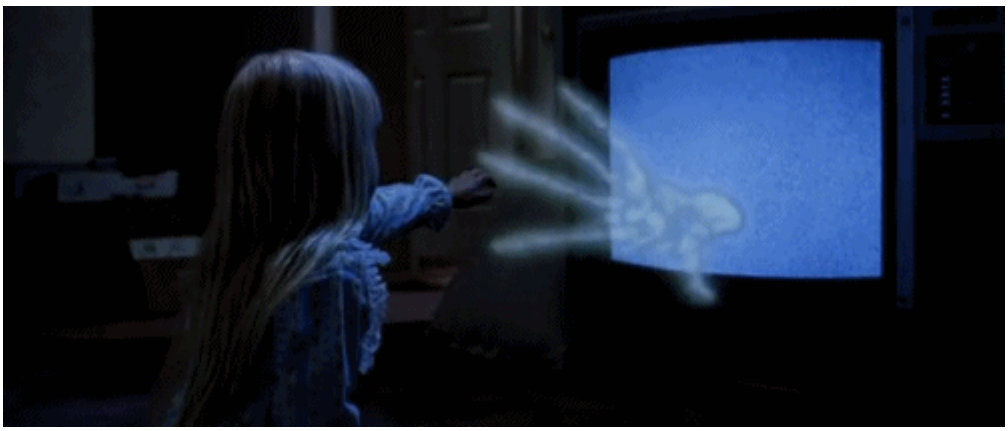
Smelly-vision: The ultimate Halloween nightmare, or a dream come true?

Marianna Obrist, an ERC-funded UK researcher, says 9D-TV is on the horizon.

That's vision, hearing, smell and touch, plus the five tastes (sweet, sour, bitter, salty, and umami).

But are we ready for it?

Read our interactive article on Obrist here



Remember the ghostly white hand that emerges from the television in *Poltergeist*, the 1982 American supernatural horror film? The film was remade in 2015 in 3D. Imagine watching it in 9D on TV.

Black and white silent movies were revolutionary in their time. Then came sound. Then colour. Now 3D cinema is all the rage, while 4DX theatres – complete with moving seats and wind machines – promise to make the experience even more realistic.

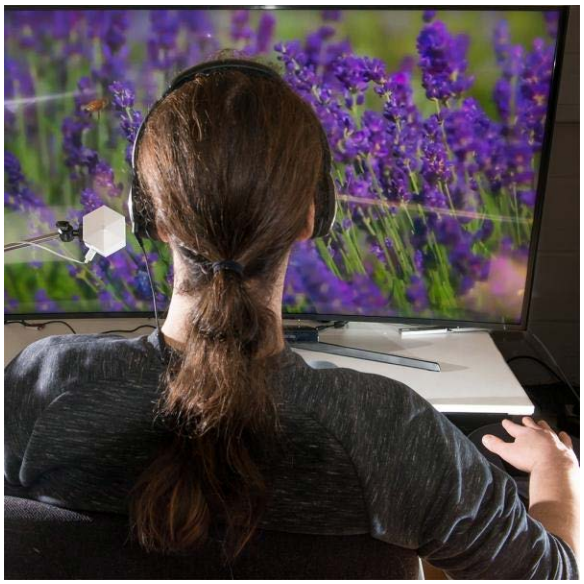
This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 672302).

But why stop there? Just as soundtracks help to build suspense and convey emotion, Marianna Obrist, an ERC grantee who leads the Sussex Computer Human Interaction Lab (SCHI) at Sussex University, wants ‘smell-tracks’ to bring us into movie scenes or video games in a totally new way.

"It would be a more immersive, multi-sensory experience," says Obrist, “But it has to be more than a gimmick. We need to think about integrating smell, touch and taste into the narrative from the beginning of the process.”

The big challenges are to figure out how smell maps onto experiences; which tastes trigger what emotions; and how touch influences our experience. And, for each of these, what level of intensity is required to have the desired effect."We are only beginning to understand the chemical senses but there has been a lot of progress over the past 10 years," Obrist explains.

"We can learn a lot from how scientists characterised colour in the 20th century. As mathematical models were developed to describe the subtleties and contrasts of colour, cinematographers applied this to create powerful visual effects."



Multisensory TV at the SCHI Lab

"Being able to smell the odours that a character on screen would smell, or feel the objects or atmosphere they would feel, can create anticipation and build suspense in the same way as sound currently does."

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Marianna Obrist

Marianna is a Reader (Multisensory Experiences) in the Department of Informatics at the University of Sussex. She leads the SCHI Lab - Sussex Computer Human Interaction Lab established within the School of Engineering and Informatics, as part of the Creative Technology Research group. Her vision and ambition is to gain a rich and integrated understanding on peoples' tactile, gustatory, and olfactory experiences in order to provide designers and developers with the ability to create truly compelling multisensory experiences and novel interactions with technology.

About the SCHI Lab

The SCHI Lab research lies in the area of Human-Computer Interaction (HCI), an area in which research on multisensory experiences makes a difference on how we design and interact with technology in the future.

ERC=Science²

Obrist's research is among several studies into the senses that have been funded over the past decade by the European Research Council the EU's premiere agency for frontier research. Our interactive feature on Obrist's research will be available 26 October on ERC=Science², our communications campaign that uses popular scientific themes such as 'longevity' and 'food' to highlight ERC-funded research and the potential impact it can have on society. The feature on Obrist is the second in a series of articles on the senses that will be released in the coming weeks on ERC=Science².

About the European Research Council

The ERC's mission is to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the basis of scientific excellence. The ERC expects that its grants will help to bring about new and unpredictable scientific and technological discoveries - the kind that can form the basis of new industries, markets, and broader social innovations of the future. **ERC grants are awarded through open competition to projects headed by starting and established researchers, irrespective of their origins, who are working or moving to work in Europe. The sole criterion for selection is scientific excellence.**

Please feel free to contact Diane Fresquez (diane.fresquez@sciencebusiness.net) if you would like **an interview** with the researcher, Marianna Obrist.

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