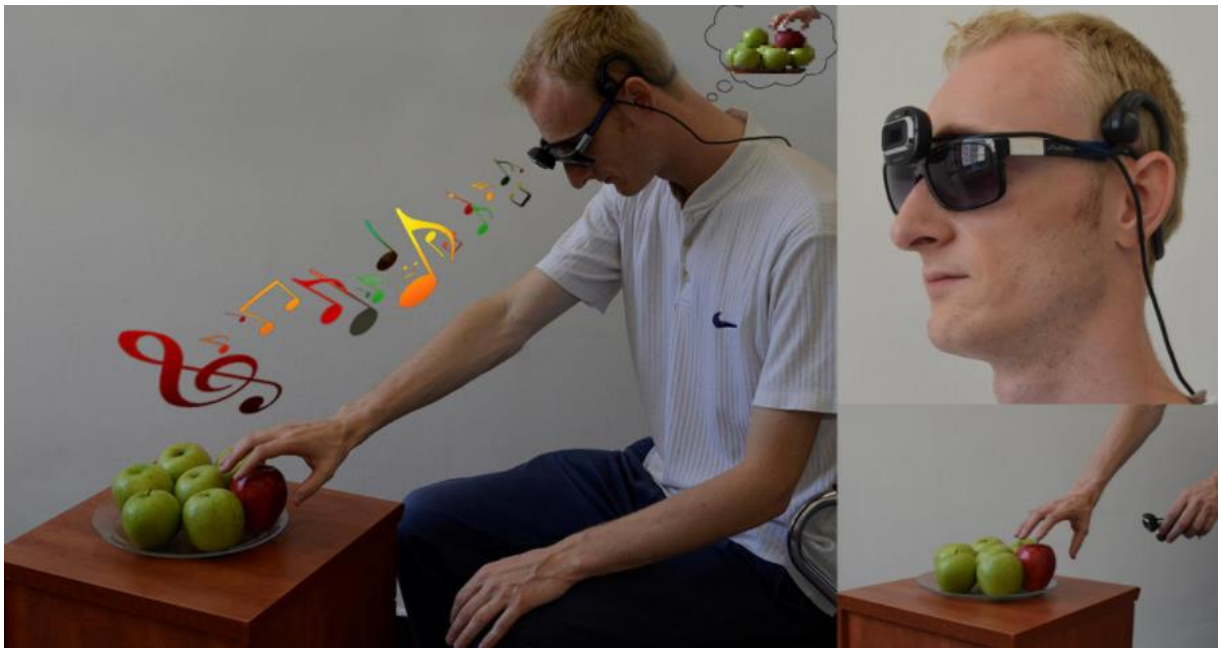
Press Release: Brussels, 12 October, 2017

Seeing the world through the ears

What if you could see with your ears? That's the challenge that Israeli researcher Amir Amedi has taken up, with European funding – and the result is an app for the blind that works on a smartphone.

About 50 years ago, an American neuroscientist tried designing machines for the blind to get a sense of the world from tiny electrical pulses delivered to the tongue. And today, in Israel, scientist Amir Amedi thinks he is just a few years away from a commercial device for the blind to 'hear' the sights around them.



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

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Using Amedi's EyeMusic device, blind people can describe faces, read other people's emotions, recognise body postures and detect colour. Tall objects are represented by high-pitch sounds while low objects are lower pitch. The width of an object is represented by the duration of a sound; colour is conveyed by using different musical instruments. While the sound is far from musical, 10 hours training is enough to teach someone the basics of this new language – although fluency takes longer.

Tali (blind from aged 3, no vision at all) after 22.5 hours of Eye Music training

"It's like learning a new language."

"I feel that it can be almost like to decode something."

"Sometimes Imbar [blind from birth] and I listen to a song or something and we say 'oh that sounded like white.'"

www.brainvisionrehab.com

Amedi is an internationally acclaimed brain scientist with 15 years of experience in the field of brain plasticity and multisensory integration. He has a particular interest in visual rehabilitation. He is an Associate Professor at the Department of Medical Neurobiology at the Hebrew University and the ELSC brain center.

Amedi'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 Amedi's research will be available from 12 Oct 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 Amedi will be the first in a series of articles on the senses released in the coming weeks on ERC=Science².

⇨ **Read our interactive article on Amedi here.**

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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 me if you would like **an interview** with the researcher, Amir Amedi.

Best wishes,

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