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Open Letter on FTC

Dear Friends and Colleagues,

I need your help to address an action by the Federal Trade Commission (FTC) that sets a bad precedent that will discourage scientists and innovators, like myself, from translating their research into concrete applications that benefit the public. Please read this message, share it with others and consider posting comments to the FTC's [webpage](#) (their statement is [here](#)). My hope is that with your support, we can reverse this action and push for policies that incentivize scientists to bring the fruits of their research to the public rather than penalize innovation.

At issue is that the FTC determined that research not involving large-scale, double-blinded, placebo-controlled studies is invalid and thus, that no claim, in my case, can be made that brain-based training improves vision (despite a rich literature showing on the topic). This decision by the FTC disregards the validity of not just my research, but also that of the field of many of my colleagues, as well as much of Psychological and Neuroscience research at large.

This is relevant to me because I took a technique that is well-established in the literature for improving vision, published 3 studies (Current Biology, Vision Research, and Frontiers in Psychology - see below) replicating the essential benefits of this training approach; demonstrating benefits to contrast sensitivity, acuity, peripheral vision, reading, and even hitting baseballs. I then made that software available to the public via a company (Carrot Neurotechnology) as an App called ULTIMEYES (sold for \$6-\$10). While I haven't received a single penny from my work with Carrot, I personally must pay \$75,000 (of a \$150,000 settlement), which exhausts my savings and puts me into debt. The FTC's actions threaten to destroy my company, damage my professional reputation, and establish a precedent that the FTC can ignore research and experts in the field regarding the evidentiary basis of the lab to market place solutions that are increasingly pushed by Universities and Funding Agencies (such as NIH and NSF).

Aside from their impact on me, I believe that these developments are concerning for several reasons:

- 1) A federal commission appears able to make rulings that dismiss solid science and experts in the field. They largely ignored the testimony of Dennis Levi (former Dean of Optometry at Berkeley, Editor in Chief of Vision Research and top researcher in the field of Vision Science and Perceptual Learning) who told the FTC commissioners that there is good reason to believe that these techniques improve vision. Applying a simple standard, such as "double-blind placebo control", may make sense from the perspective of simplifying the regulatory process, however it does not address the fact that there are many factors that contribute to the evidentiary utility of research studies.
- 2) The general population is prevented from trying and benefiting from techniques that are reported and vetted through the peer-reviewed research; of note ULTIMEYES has minimal risk and potential benefit.
- 3) Translating innovations is discouraged - not only are companies that license technologies from Universities liable, but so are the scientists who help to translate the research even when methods pose minimal risk to the public. I was careful to report my conflict of interest in all publications, to the University, where I have a conflict of interest management-plan, and to stay out of sales and marketing, however this didn't protect me being fined.

None of this discounts the need for regulations to control the quality of science-derived products we can all agree on the importance of truth in advertising, that science-based claims should have a firm grounding in research, and that public should be protected from scams. Also, at issue here isn't to defend of the exact wording of Carrot's advertising but whether any claim can be made that this type of perceptual learning training improves vision. Carrot was in fact eager to work with the FTC to address their concerns and voluntarily changed the web-page and AppStore descriptions (the advertisements under question) as soon as the FTC made their complaint. However, the FTC disregarded the validity of an entire body of research, ignored experts in the field, and demanded a severe fine.

We need to speak up and ensure that scientists have a say in how science is evaluated and translated. Otherwise, we will continue with the status quo – an unfortunate situation where companies with no, or poor research, but lots of money and access to good lawyers, can dominate the marketplace, while scientists who attempt to enter the space with research-based approaches are forced out.

Please help by spreading the word and posting comments on the FTC [webpage](#) ; please include your titles and affiliations so that the FTC understands that credible people are posting comments.

And finally, feel free to contact me if you have any questions or would like more information.

Thank you for your help,

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Peer Reviewed Research papers on ULTIMEYES:

* Deveau and Seitz (2014). "Applying Perceptual Learning to achieve practical changes in vision.", *Frontiers in Psychology*, doi: 10.3389/fpsyg.2014.01166

* Deveau, Ozer and Seitz (2014). "Improved Vision and On Field Performance in Baseball through Perceptual Learning", *Current Biology*, 24(4), R146-7

* Deveau, Lovcik, and Seitz (2014). "Broad-based visual benefits from training with an integrated perceptual-learning video game", *Vision Research*, Jun;99:134-40.

There are many other examples in the literature of methods similar to those used in ULTIMEYES providing similar vision improvements. Here are some recent examples:

Polat U, Schor C, Tong JL, Zomet A, Lev M, Yehezkel O, Sterkin A, & Levi DM (2012) Training the brain to overcome the effect of aging on the human eye. *Scientific reports* 2:278.

Polat U (2009) Making perceptual learning practical to improve visual functions. *Vision Res* 49(21):2566-2573.

Polat, U., Ma-Naim, T., Belkin, M. & Sagi, D. Improving vision in adult amblyopia by perceptual learning. *Proc Natl Acad Sci U S A* 101, 6692-6697 (2004).

Lev, Ludwig , Gilaie-Dotan, Voss , Sterzer , Hesselmann, Polat. Training improves visual processing speed and generalizes to untrained functions, *Scientific Reports* 4, Article number: 7251 doi:10.1038/

DeLoss DJ, Watanabe T, Andersen GJ. Improving vision among older adults: behavioral training to improve sight. *Psychol Sci*. 2015 Apr;26(4):456-66. doi: 10.1177/0956797614567510.

Camilleri R, Pavan A, Ghin F, & Campana G (2014) Improving myopia via perceptual learning: is training with lateral masking the only (or the most) efficacious technique? *Atten Percept Psychophys* 76(8):2485-2494.

Campana G, Camilleri R, Pavan A, Veronese A, & Lo Giudice G (2014) Improving visual functions in adult amblyopia with combined perceptual training and transcranial random noise stimulation (tRNS): a pilot study. *Front Psychol* 5:1402.

Camilleri R, Pavan A, Ghin F, Battaglini L, & Campana G (2014) Improvement of uncorrected visual acuity and contrast sensitivity with perceptual learning and transcranial random noise stimulation in individuals with mild myopia. *Front Psychol* 5:1234.