

Brain Recording, Mind-Reading, and Neurotechnology

Description

Image not found or type unknown

Further References

1. Akbari, H., Khalighinejad, B., Herrero, J., Mehta, A., & Mesgarani, N. (2018). Towards reconstructing intelligible speech from the human auditory cortex. *BioRxiv*. doi.org/10.1101/350124.
[Article](#) [Google Scholar](#)
2. Akst, J. (2013). Decoding dreams. *The Scientist Magazine*. www.the-scientist.com/notebook/decoding-dreams-39990. Accessed 10 Oct 2018.
3. Allison, B. Z., Wolpaw, E. W., & Wolpaw, J. R. (2007). Brain–computer interface systems: Progress and prospects. *Expert Review of Medical Devices*, 4(4), 463–474.
[Article](#) [Google Scholar](#)
4. Amodei, D., Ananthanarayanan, S., Anubhai, R., Bai, J., Battenberg, E., Case, C., Casper, J., Catanzaro, B., Cheng, Q., Chen, G., Chen, J., Chen, J., Chen, Z., Chrzanowski, M., Coates, A., Diamos, G., Ding, K., Du, N., Elsen, E., et al. (2016). Deep speech 2: End-to-end speech recognition in English and Mandarin. In *International conference on machine learning* (pp. 173–182). proceedings.mlr.press/v48/amodei16.html. Accessed 6 Nov 2018.
5. Bashashati, A., Fatourechi, M., Ward, R. K., & Birch, G. E. (2007). A survey of signal processing algorithms in brain–computer interfaces based on electrical brain signals. *Journal of Neural Engineering*, 4(2), R32. doi.org/10.1088/1741-2560/4/2/R03.
[Article](#) [Google Scholar](#)

6. Bocquet, F., Hueber, T., Girin, L., Savariaux, C., & Yvert, B. (2016). Real-time control of an articulatory-based speech synthesizer for brain computer interfaces. *PLoS Computational Biology*, 12(11), e1005119. doi.org/10.1371/journal.pcbi.1005119.
[Article](#) [Google Scholar](#)
7. Boire, R. G. (2001). On cognitive liberty. *The Journal of Cognitive Liberties*, 2(1), 7–22.
[Google Scholar](#)
8. Bollier, D., & Firestone, C. M. (2010). *The promise and peril of big data* (pp. 1–66). Washington, DC: Aspen Institute, Communications and Society Program.
9. Boyd, D., & Crawford, K. (2012). Critical questions for big data. *Information, Communication & Society*, 15(5), 662–679. doi.org/10.1080/1369118X.2012.678878.
[Article](#) [Google Scholar](#)
10. Brumberg, J. S., et al. (2011). Classification of intended phoneme production from chronic intracortical microelectrode recordings in speech-motor cortex. *Frontiers in Neuroscience*. doi.org/10.3389/fnins.2011.00065.
[Article](#) [Google Scholar](#)
11. Cadwalladr, C., & Graham-Harrison, E. (2018). The Cambridge analytica files. *The Guardian*, 6–7. davelevy.info/Downloads/cabridgeanalyticafiles%20-theguardian_20180318.pdf. Accessed 21 Mar 2019.
12. Chakrabarti, S., Sandberg, H. M., Brumberg, J. S., & Krusienski, D. J. (2015). Progress in speech decoding from the electrocorticogram. *Biomedical Engineering Letters*, 5(1), 10–21. doi.org/10.1007/s13534-015-0175-1.
[Article](#) [Google Scholar](#)
13. Chang, L., & Tsao, D. Y. (2017). The code for facial identity in the primate brain. *Cell*, 169(6), 1013–1028.e14. doi.org/10.1016/j.cell.2017.05.011.
[Article](#) [Google Scholar](#)
- 14.

Choudhury, S., & Slaby, J. (2016). *Critical neuroscience: A handbook of the social and cultural contexts of neuroscience*. New York: Wiley.

[Google Scholar](#)

15. Churchland, P. S. (1989). *Neurophilosophy toward a unified science of the mind brain*. Cambridge: MIT Press.

[Google Scholar](#)

16. Collins, D., Efford, C., Elliot, J., Farrelly, P., Hart, S., Knight, J., et al. (2019). *Disinformation and 'fake news'* (Vol. 8, p. 111). London: The Digital, Culture, Media and Sport Committee.

[Google Scholar](#)

17. Del Vicario, M., Zollo, F., Caldarelli, G., Scala, A., & Quattrociocchi, W. (2017). Mapping social dynamics on Facebook: The Brexit debate. *Social Networks*, 50, 6–16.
doi.org/10.1016/j.socnet.2017.02.002.

[Article](#) [Google Scholar](#)

18. Dennett, D. C. (1993). *Consciousness explained* (New Ed ed.). London: Penguin.

[Google Scholar](#)

19. Eickhoff, S. B., & Langner, R. (2019). Neuroimaging-based prediction of mental traits: Road to utopia or Orwell? *PLoS Biology*, 17(11), e3000497. doi.org/10.1371/journal.pbio.3000497.

[Article](#) [Google Scholar](#)

20. Farah, M. J., Smith, M. E., Gawuga, C., Lindsell, D., & Foster, D. (2009). Brain imaging and brain privacy: A Realistic Concern? *Journal of Cognitive Neuroscience*, 21(1), 119–127.
doi.org/10.1162/jocn.2009.21010.

[Article](#) [Google Scholar](#)

21. Farahany, N. (2018). *When technology can read minds, how will we protect our privacy?*
www.ted.com/talks/nita_farahany_when_technology_can_read_minds_how_will_we_protect_our_privacy. Accessed 28 Nov 2018.

22. Forrest, C. (2017). *Facebook planning brain-to-text interface so you can type with your thoughts*. TechRepublic. www.techrepublic.com/article/facebook-planning-brain-to-text-interface-so-you-can-type-with-your-thoughts/

-
- .
23. Glannon, W. (2016). Ethical issues in neuroprosthetics. *Journal of Neural Engineering*, 13(2), 021002. doi.org/10.1088/1741-2560/13/2/021002.

[Article](#) [Google Scholar](#)
 24. Gnanayutham, P., & Good, A. (2011). Disabled users accessing off-the-shelf software using a button interface. In *Paper presented at computer science and information systems, 7th annual international conference*. Athens.
 25. Haynes, J.-D., Sakai, K., Rees, G., Gilbert, S., Frith, C., & Passingham, R. E. (2007). Reading hidden intentions in the human brain. *Current Biology*, 17(4), 323–328.

[Article](#) [Google Scholar](#)
 26. Hinton, G., Deng, L., Yu, D., Dahl, G., Mohamed, A., Jaitly, N., et al. (2012). Deep neural networks for acoustic modeling in speech recognition: The shared views of four research groups. *IEEE Signal Processing Magazine*, 29(6), 82–97. doi.org/10.1109/MSP.2012.2205597.

[Article](#) [Google Scholar](#)
 27. Howard, P. N., & Kollanyi, B. (2016). *Bots, #Strongerin, and #Brexit: Computational propaganda during the UK–EU referendum* (SSRN Scholarly Paper ID 2798311). Social Science Research Network. papers.ssrn.com/abstract=2798311. Accessed 21 Mar 2019.
 28. Ienca, M., Haselager, P., & Emanuel, E. J. (2018). Brain leaks and consumer neurotechnology. *Nature Biotechnology*, 36, 805–810. doi.org/10.1038/nbt.4240.

[Article](#) [Google Scholar](#)
 29. Ikeda, S., Shibata, T., Nakano, N., Okada, R., Tsuyuguchi, N., Ikeda, K., et al. (2014). Neural decoding of single vowels during covert articulation using electrocorticography. *Frontiers in Human Neuroscience*. doi.org/10.3389/fnhum.2014.00125.

[Article](#) [Google Scholar](#)
 30. Kapur, A., Kapur, S., & Maes, P. (2018). AlterEgo: A personalized wearable silent speech interface. In *23rd International conference on intelligent user interfaces* (pp. 43–53).
 31. Kay, K. N., Naselaris, T., Prenger, R. J., & Gallant, J. L. (2008). Identifying natural images from
-

human brain activity. *Nature*, 452(7185), 352–355. doi.org/10.1038/nature06713.

[Article](#) [Google Scholar](#)

32. Kellmeyer, P. (2018). Big brain data: On the responsible use of brain data from clinical and consumer-directed neurotechnological devices. *Neuroethics*. doi.org/10.1007/s12152-018-9371-x.

[Article](#) [Google Scholar](#)

33. Martin, S., Brunner, P., Holdgraf, C., Heinze, H.-J., Crone, N. E., Rieger, J., et al. (2014). Decoding spectrotemporal features of overt and covert speech from the human cortex. *Frontiers in Neuroengineering*, 7, 14. doi.org/10.3389/fneng.2014.00014/full.

[Article](#) [Google Scholar](#)

34. Martin, S., Brunner, P., Iturrate, I., Millán, J. R., Schalk, G., Knight, R. T., et al. (2016). Word pair classification during imagined speech using direct brain recordings. *Scientific Reports*, 6, srep25803. doi.org/10.1038/srep25803.

[Article](#) [Google Scholar](#)

35. McStay, A., & Urquhart, L. (2019). 'This time with feeling?' Assessing EU data governance implications of out of home appraisal based emotional AI. *First Monday*. doi.org/10.5210/fm.v24i10.9457.

[Article](#) [Google Scholar](#)

36. Mecacci, G., & Haselager, P. (2019). Identifying criteria for the evaluation of the implications of brain reading for mental privacy. *Science and Engineering Ethics*, 25(2), 443–461. doi.org/10.1007/s11948-017-0003-3.

[Article](#) [Google Scholar](#)

37. Meegan, D. V. (2008). Neuroimaging techniques for memory detection: Scientific, ethical, and legal issues. *The American Journal of Bioethics*, 8(1), 9–20. doi.org/10.1080/15265160701842007.

[Article](#) [Google Scholar](#)

- 38.

Mégevand, P. (2014). Telepathy or a painstaking conversation in morse code? Pierre Mégevand goes beyond the media hype. *PLOS Neuroscience Community*.
blogs.plos.org/neuro/2014/09/08/telepathy-or-a-painstaking-conversation-in-morse-code-pierre-megevand-goes-beyond-the-media-hype/. Accessed 16 Aug 2018.

39. Pei, X., Barbour, D., Leuthardt, E. C., & Schalk, G. (2011). Decoding vowels and consonants in spoken and imagined words using electrocorticographic signals in humans. *Journal of Neural Engineering*, 8(4), 046028. doi.org/10.1088/1741-2560/8/4/046028.

[Article](#) [Google Scholar](#)

40. Perrone-Bertolotti, M., Rapin, L., Lachaux, J.-P., Baciú, M., & Lœvenbruck, H. (2014). What is that little voice inside my head? Inner speech phenomenology, its role in cognitive performance, and its relation to self-monitoring. *Behavioural Brain Research*, 261, 220–239.
doi.org/10.1016/j.bbr.2013.12.034.

[Article](#) [Google Scholar](#)

41. Rainey, S. (2018). A steadying hand": Ascribing speech acts to users of predictive speech assistive technologies. *Journal of Law and Medicine*, 26(1), 44–53.

[Google Scholar](#)

42. Rainey, S., Bublitz, J. C., Maslen, H., & Thornton, H. (2019). Data as a cross-cutting dimension of ethical importance in direct-to-consumer neurotechnologies. *AJOB Neuroscience*, 10(4), 180–182. doi.org/10.1080/21507740.2019.1665134.

[Article](#) [Google Scholar](#)

43. Revell, T. (2018). Mind-reading devices can now access your thoughts and dreams using AI. *New Scientist*. www.newscientist.com/article/mg23931972-500-mind-reading-devices-can-now-access-your-thoughts-and-dreams-using-ai/. Accessed 16 Oct 2018.

44. Robertson, A. (2019). Facebook just published an update on its futuristic brain–typing project. The Verge. www.theverge.com/2019/7/30/20747483/facebook-ucsf-brain-computer-interface-typing-speech-recognition-experiment. Accessed 13 Aug 2019.

45. Roelfsema, P. R., Denys, D., & Klink, P. C. (2018). Mind reading and writing: The future of neurotechnology. *Trends in Cognitive Sciences*, 22, 598–610.

[Article](#) [Google Scholar](#)

-
46. Sani, O. G., Yang, Y., Lee, M. B., Dawes, H. E., Chang, E. F., & Shanechi, M. M. (2018). Mood variations decoded from multi-site intracranial human brain activity. *Nature Biotechnology*, 36 (10), 954–961. doi.org/10.1038/nbt.4200.
[Article](#) [Google Scholar](#)
47. Sententia, W. (2006). Neuroethical considerations: Cognitive liberty and converging technologies for improving human cognition. *Annals of the New York Academy of Sciences*, 1013(1), 221–228. doi.org/10.1196/annals.1305.014.
[Article](#) [Google Scholar](#)
48. Solon, O. (2017). Facebook has 60 people working on how to read your mind. *The Guardian*. www.theguardian.com/technology/2017/apr/19/facebook-mind-reading-technology-f8. Accessed 14 Nov 2018.
49. Steinert, S., Bublitz, C., Jox, R., & Friedrich, O. (2018). Doing things with thoughts: Brain–computer interfaces and disembodied agency. *Philosophy & Technology*. doi.org/10.1007/s13347-018-0308-4.
[Article](#) [Google Scholar](#)
50. Steinert, S., & Friedrich, O. (2019). Wired emotions: Ethical issues of affective brain–computer interfaces. *Science and Engineering Ethics*. doi.org/10.1007/s11948-019-00087-2.
[Article](#) [Google Scholar](#)
51. Sulleyman, A. (2018). Mind-reading headset allowing people to control computers with their thoughts described in Microsoft patent. *The Independent*. www.independent.co.uk/life-style/gadgets-and-tech/news/mind-reading-headset-computer-control-thoughts-microsoft-patent-a8163976.html. Accessed 14 Nov 2018.
52. Véliz, C. (2019). *Privacy is a collective concern*. www.newstatesman.com/science-tech/privacy/2019/10/privacy-collective-concern. Accessed 23 Oct 2019.
53. Wexler, A., & Thibault, R. (2018). Mind-reading or misleading? Assessing direct-to-consumer electroencephalography (EEG) devices marketed for wellness and their ethical and regulatory implications. *Journal of Cognitive Enhancement*. doi.org/10.1007/s41465-018-0091-2.
[Article](#) [Google Scholar](#)
- 54.
-

Whyte, C. (2018). Mind-reading headset lets you Google just with your thoughts. *New Scientist*. www.newscientist.com/article/mg23731723-300-mind-reading-headset-lets-you-google-just-with-your-thoughts/. Accessed 14 Nov 2018.

Category

1. General

Date Created

26. September 2021

Author

web45