William Thomas Newsome, III

Birth: June 5, 1952, Live Oak, Florida, USA

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Education:

1970-1974	B.S., Physics, *summa cum laude*, Stetson University, Deland, FL.
1974-1979	Ph.D., Biology, California Institute of Technology, Pasadena, CA.

Academic Positions:

2013-present	Harman Family Provostial Professor, Stanford University
2013-present	Director, Stanford Neurosciences Institute
1997-2019	Investigator, Howard Hughes Medical Institute
2008-2013	Director, BioX NeuroVentures, Stanford University
2005-2008	Chair, Department of Neurobiology, Stanford University School of Medicine
2000-2005	Director, Neurosciences Graduate Program, Stanford University
1993-present	Professor, Department of Neurobiology, Stanford University School of Medicine
1995-1996	McDonnell-Pew Visiting Fellow, University of Oxford Senior Visiting Research Fellow, St. Johns College, Oxford
1988-1993	Associate Professor, Department of Neurobiology, Stanford University School of Medicine
1984-1988	Assistant Professor, Department of Neurobiology and Behavior, State University of New York at Stony Brook
1980-1984	Staff Research Fellow, Laboratory of Sensorimotor Research, National Eye Institute

Research Interests:

Central mechanisms in visual perception and visually-based cognition. Neural mechanisms underlying simple forms of decision making. Neural basis of motivation and reward, and their influence on decision-making.

Professional Affiliations:

Society for Neuroscience, American Association for the Advancement of Science, American Philosophical Society, American Academy of Arts and Sciences, National Academy of Sciences USA

Honors:

2017 American Academy of Arts and Sciences, elected to membership
2015 Pepose Award for the Study of Vision, Brandeis University
2012 Honorary Doctor of Science degree, State University of New York, School of Optometry
2011 The American Philosophical Society, Elected to membership
2010 The Champalimaud Vision Award, Lisbon
2010 The Karl Spencer Lashley Award, American Philosophical Society
2004 The Dan David Prize, Tel Aviv University
2004 Lyman Hooker Distinguished Visiting Professor, McMaster University, Canada
2003 Award for Outstanding Service to Graduate Students, Stanford University
2002 Distinguished Scientific Contribution Award, American Psychological Association
2000 National Academy of Sciences, USA, elected to membership,
2000 Distinguished Alumni Award, Stetson University, Deland, Florida
1997 Investigator, Howard Hughes Medical Institute
1997 Henry J. Kaiser Award for Excellence in Teaching, Stanford University
1995 Guggenheim Fellowship
1995 Fogarty International Senior Research Fellowship
1994 W. Alden Spencer Award, College of Physicians and Surgeons, Columbia University
1994 Sparks Award, Neurobiology Research Center, University of Alabama at Birmingham
1993 MERIT Award (R37), National Eye Institute
1992 The Rank Prize in Opto-electronics, The Rank Prize Funds, London
1992 The Golden Brain Award, Minerva Foundation, Berkeley, CA
1991 Henry J. Kaiser Award for Excellence in Teaching, Stanford University
1987 McKnight Development Award
1985 Sloan Research Fellowship
1974 Danforth Graduate Fellowship, won in national competition

Distinguished lectureships:

2021 The Elliot S. Valenstein Distinguished Lecture, University of Michigan
2021 The Bidwell Memorial Lecture, Massachusetts Institute of Technology
2021 BBS Signature Seminar, Cornell University
2019 Werner Heisenberg Lecturer, Siemens Foundation and the Bavarian Academy of Sciences, Munich
2017 Russell DeValois Memorial Lecture, School of Optometry, UC Berkeley
2017 7th Annual Dean of Science Lecture in Neuroeconomics, New York University
2016 The Kavli Foundation Lecture, Federation of European Neuroscience Societies, Copenhagen
2016 1st Annual Mind-Brain Lecture, Grossman Institute for Neuroscience, University of Chicago
2016 The Adler Lecture, University of Pennsylvania
2016 19th Annual Stephen W. Kuffler Lectures, University of California at San Diego
2014 18th Annual Swartz Mind-Brain Lecture, Stony Brook University, Stony Brook, NY
2013 Distinguished Visiting Scholar, Kavli Institute of Brain and Mind, UC San Diego
2011 Distinguished External Speakers Series, Georgia University of the Health Sciences, Augusta
2010 Max Birnstiel Lecture, Institute for Molecular Pathology, Vienna
2010 The Gregory Lecture, University of Edinburgh
2009 The Evnin Lecture, Princeton University

2007 Brain and Behavior Distinguished Lecturer, Georgia State University, Atlanta
2006 Sherrington Centenary Lecturer, University of Oxford
2006 The Ninth Brenda Milner Lecture in Cognitive Neuroscience, McGill University, Montreal
2005 The Thirtieth Annual Clinton Woolsey Lecture, University of Wisconsin
2005 The Creutzfeldt Lecture, biannual meeting of the German Neuroscience Society, Goettingen
2005 Distinguished Visiting Lecturer, Dean's Discovery Series, University of Cincinnati
2004 The Mind/Brain/Behavior Initiative Distinguished Lecturer, Harvard University
2004 1st Annual Bo/McCreight Distinguished Neuroscience Lecturer, Wake Forest University
2003 The Grass Lecture, Annual Meeting of the Society for Neuroscience, New Orleans
2003 The Nineteenth Annual James M. Sprague Lecture, University of Pennsylvania
2003 Distinguished Lecturer Series, Center for Mind and Brain, Princeton University
2002 The Tenth Annual Vernon B. Mountcastle Lecture, Johns Hopkins University
2002 The Kuffler Lecture, Department of Neurobiology, Harvard Medical School
2001 The Australian National University Special Lecture, IUPS Satellite Symposium, Sydney
2001 7th Annual George Miller Distinguished Lectureship, Cognitive Neuroscience Society, New York
2001 MR Bauer Distinguished Lecturer, Volen Center for Complex Systems, Brandeis University
2000 The Jeffrey Lecture in Cognitive Neuroscience, University of California, Los Angeles
2000 The McGuigan Lecture, Ann. Mtg of the Society for Psychophysiological Research, Granada
1999 The Volker Henn Memorial Lecture, Center for Neuroscience, University of Zurich
1999 The Overseas Lecture, Australian Neuroscience Society Annual Meeting, Hobart, Tasmania
1998 The Eighth Annual Einar Hille Memorial Lecture, University of Washington, Seattle
1998 The Rush and Hellen Record Lecture, Baylor College of Medicine, Houston
1996 The Maclyn McCarty Lecture, Annual Meeting of the Whitney Research Fellows, New York
1996 The King Solomon Lectures in Animal Behavior, Hebrew University, Jerusalem
1996 The Thirteenth Annual David Marr Memorial Lecture, University of Cambridge
1995 The Seventh Annual W.S. Stiles Lecture, University College, London
1994 Distinguished Psychologist Lecture Series, University of California, Los Angeles

Recent Invited Presentations and Colloquia:

2021
The Valenstein Lecture, University of Michigan
The Bidwell Lecture, Massachusetts Institute of Technology
Keynote Lecture, University of Texas neuroscience retreat, Austin
BBS Signature Seminar Series, Cornell University, Ithaca

2020
Plenary Lecture, The Stanford-EPFL Symposium, Lausanne
Plenary Lecture, Annual meeting, Neurophilosophy of Free Will working group, Templeton Foundation
Plenary Lectures, Summer School on Theology and Psychology, Fuller Theological Seminary, Pasadena
Public conversation on “Manufacturing Minds”, Collegium Institute, Philadelphia

2019
Hong Kong Institute for Advanced Study, Hong Kong
IBRO/ICPBR Summer School on Primate Neurobiology, Shanghai
Werner Heisenberg Lecturer, von Siemens Foundation and the Bavarian Academy of Sciences, Munich

Other Professional Activities:

Editorial Boards:
Visual Neuroscience (1990-1992), *The Journal of Neuroscience* (1989-1996), *Behavioral Neuroscience* (1990-1995), *Current Biology* (1995-2001), *Annual Review of Neuroscience* (1995-2006), *Current Opinion in Neurobiology (2000-present)*, *Faculty of 1000, Co-Head of the neuroscience faculty,* (2000-present)

Consulting (ad hoc) reviewer:
Brain, Cerebral Cortex, Guggenheim Foundation, Israel Science Foundation, *Journal of Comparative Neurology*, *Journal of Neuroscience, Journal of Neurophysiology*, National Science Foundation, National Institutes of Health, *Nature*, *Nature Neuroscience, Neuron*, *PNAS, Science*, *Vision Research*, *Visual Neuroscience*

Ad hoc study section member: Visual Sciences B study section, NIH (1986-1996)
NSF Supercomputing Metacenter Advisory Board for Computational Neuroscience (1993-1994)
U.S. National Committee for the International Brain Research Organization (1993-1995)
Society for Neuroscience Nominating Committee (1995)
Zanvyl-Kreiger Mind/Brain Institute Advisory Council, Johns Hopkins University (1995-1999)
Chair, SAVP subpanel, National Eye Institute strategic planning committee, 1997.
Associate Member, Neurosciences Research Program (1994-2001)
Scientific Advisory Board, McGovern Institute for Brain Research, MIT (2001-2002)
Advisor, Neuroscience Program, Baylor College of Medicine (1998-2004)
Dean's Advisory Committee for the Center for Learning and Memory, MIT (1999-2002)
National Scientific Advisory Committee, Washington Regional Primate Research Ctr. (1999-2004)
Advisory Board, College of Arts and Sciences, Stetson University (2000-2004)
Director, Neurosciences Graduate Program, Stanford University (2001-2005)
Chair, Troland Research Awards Committee, National Academy of Sciences, 2005
Member, Troland Research Awards Committee, National Academy of Sciences, 2006
External Review Committee, Columbia University Graduate Program in Neuroscience, 2007
Councilor, Society for Neuroscience (2002-2006)
NAS Temporary Nominating Group, 2004
NAS Class II Membership Committee, 2005, 2007, 2009, 2010
Scientific Advisory Board, RIKEN Brain Sciences Institute, Japan (2003-2012, 2016)
McKnight Scholars Awards Selection Committee (2007-2013)
Correspondent, Committee on Human Rights, The National Academies of the USA (2001-present)
Scientific Advisory Board, Max Planck Institute for Biological Cybernetics, (2009-2015)
Committee on Committees, Society for Neuroscience (2010-2014)
Co-Chair, NIH BRAIN Working Group, Advisory Committee to the Director (2013-2014)
Group Leader Reviews, HHMI Janelia Farm Research Campus (2014, 2016)
Chair, Gerard Prize Selection Committee, Society for Neuroscience (2014-2018)
International member, Brain Canada Scientific Advisory Forum (2015-2020)
Scientific Strategy Advisory Group, Wellcome Trust (2017-2020)
Chair, Scientific Advisory Board, RIKEN Center for Brain Science, (2018-2020)
Committee on Ethical, Legal and Regulatory Issues Associated with Neural Chimeras and Organoids, The National Academies (2020-2021)

Scientific Advisory Board, Safra Institute for Neuroscience, Hebrew University (2014-present)
Chair, Lashley Award Selection Committee, American Philosophical Society (2016-present)
Scientific Advisory Board, Stanley Center for Psychiatric Research, The Broad Institute (2017-present)
External Advisory Board, Sanford Institute for Empathy and Compasion, UC San Diego (2021-present)
Scientific Advisory Board (Neurobiology), Weizmann Institute for Science, Israel (2021-present)

Publications: edited volume

Eatock, RA and WT Newsome, Guest Editors. *Current Opinion in Neurobiology: Sensory Systems*. Volume 9, Number 4. 1999.

Peer reviewed publications

1. Newsome, WT and JM Allman. Interhemispheric connections of visual cortex in the owl monkey, *Aotus trivirgatus*, and the bushbaby, *Galago senegalensis*. *Journal of Comparative Neurology* 194: 209-233, 1980.

2. Baker, JF, SE Petersen, WT Newsome and JM Allman. Visual response properties of neurons in four extrastriate visual areas of the owl monkey (Aotus trivirgatus): A quantitative comparison of medial, dorsomedial, dorsolateral and middle temporal areas. *Journal of Neurophysiology* 45: 397-416, 1981.

3. Van Essen, DC, WT Newsome and JL Bixby. The pattern of interhemispheric connections and its relationship to extrastriate visual areas in the Macaque monkey. *Journal of Neuroscience* 2: 265-283, 1982.

4. Van Essen, DC, WT Newsome and JHR Maunsell. The visual representation in striate cortex of the macaque monkey: asymmetries, anisotropies and individual variability. *Vision Research* 24: 429-448, 1984.

5. Newsome, WT., RH Wurtz, MR Dursteler and A Mikami. Deficits in visual motion processing following ibotenic acid lesions of the middle temporal visual area of the Macaque monkey. *Journal of Neuroscience* 5: 825-840, 1985.

6. Newsome, WT, RH Wurtz, MR Dursteler and A Mikami. Punctate chemical lesions of striate cortex in the macaque monkey: effect on visually guided saccades. *Experimental Brain Research* 58: 392-399, 1985.

7. Movshon, JA, EH Adelson, MS Gizzi and WT Newsome. The analysis of moving visual patterns. In: *Pattern Recognition Mechanisms,* C Chagas, R Gattass and C Gross (Eds.), Springer-Verlag, New York; 1985.

8. Burkhalter, A, DJ Felleman, WT Newsome and DC Van Essen. Anatomical and physiological asymmetries related to visual areas V3 and VP in macaque extrastriate cortex. *Vision Research* 26: 63-80, 1986.

9. Van Essen, DC, WT Newsome, JHR Maunsell and JL Bixby. The projections from striate cortex (V1) to areas V2 and V3 in the macaque monkey: asymmetries, areal boundaries, and patchy connections. *Journal of Comparative Neurology* 244: 451-480, 1986.

10. Mikami, A, WT Newsome and RH Wurtz. Motion selectivity in macaque visual cortex. I. Mechanisms of direction and speed selectivity in extrastriate area MT. *Journal of Neurophysiology* 55: 1308-1327, 1986.

11. Mikami, A, WT Newsome and RH Wurtz. Motion selectivity in macaque visual cortex. II. Spatiotemporal range of directional interactions in MT and V1. *Journal of Neurophysiology* 55: 1328-1339, 1986.

12. Newsome, WT, A Mikami and RH Wurtz. Motion selectivity in macaque visual cortex. III. Psychophysics and physiology of apparent motion. *Journal of Neurophysiology* 55: 1340-1351, 1986.

13. Newsome, WT, DC Van Essen and JHR Maunsell. Ventral posterior visual area of the macaque: Visual topography and areal boundaries. *Journal of Comparative Neurology* 252: 139-153, 1986.

14. Maunsell, JHR. and WT Newsome. Visual processing in monkey extrastriate cortex. *Annual Review of Neuroscience* 10: 363-401, 1987.

15. Dürsteler, MR, RH Wurtz and WT Newsome. Directional pursuit deficits following lesions of the foveal representation within the superior temporal sulcus of the macaque monkey. *Journal of Neurophysiology* 57: 1262-1287, 1987.

16. Newsome, WT, RH Wurtz and H Komatsu. Relation of cortical areas MT and MST to pursuit eye movements. II. Differentiation of retinal from extraretinal inputs. *Journal of Neurophysiology* 60: 604-620, 1988.

17. Newsome, WT and RH Wurtz. Probing visual cortical function with discrete chemical lesions. *Trends in Neuroscience* 11: 394-400, 1988.

18. Newsome, WT and EB Paré. A selective impairment of motion perception following lesions of the middle temporal visual area (MT). *Journal of Neuroscience* 8: 2201-2211, 1988.

19. Newsome, WT, KH Britten and JA Movshon. Neuronal correlates of a perceptual decision. *Nature* 341: 52-54, 1989.

20. Salzman, CD, KH Britten and WT Newsome. Cortical microstimulation influences perceptual judgements of motion direction. *Nature* 346:174-177, 1990.

21. Britten, KH, WT Newsome and RC Saunders. Effects of inferotemporal cortex lesions on form-from-motion discrimination in monkeys. *Experimental Brain Research* 88:292-302, 1992.

22. Salzman, CD, CM Murasugi, KH Britten and WT Newsome. Microstimulation in visual area MT: effects on direction discrimination performance. *Journal of Neuroscience* 12:2331-2355. 1992.

23. Britten, KH, MN Shadlen, WT Newsome and JA Movshon. The analysis of visual motion: a comparison of neuronal and psychophysical performance. *Journal of Neuroscience* 12:4745-4765. 1992.

24. Movshon, JA and WT Newsome. Neural foundations of visual motion perception. *Current Directions in Psychological Science*. 1:35-39, 1992.

25. Murasugi, CM, CD Salzman and WT Newsome. Microstimulation in visual area MT: effects of varying pulse amplitude and frequency. *Journal of Neuroscience* 13:1719-1729. 1993.

26. Murasugi, CM, CD Salzman and WT Newsome. Microstimulation of visual area MT: effects on choice behavior in the absence of moving visual stimuli. In: *Brain mechanisms of perception and memory: from neuron to behavior*. T Ono, LR Squire, ME Raichle, D Perrett and M Fukuda, (Eds.) Oxford University Press, Oxford. 1993.

27. Britten, KH, MN Shadlen, WT Newsome and JA Movshon. Responses of neurons in macaque MT to stochastic motion signals. *Visual Neuroscience* 10:1157-1169. 1993.

28. Zohary, E, S Celebrini, KH Britten and WT Newsome. Neuronal plasticity that underlies improvement in perceptual performance. *Science* 263:1289-1292. 1994.

29. Salzman, CD and WT Newsome. Neural mechanisms for forming a perceptual decision. *Science* 264:231-237. 1994.

30. Bair, W, C Koch, W Newsome and K Britten. Power spectrum analysis of bursting cells in area MT in the behaving monkey. *Journal of Neuroscience* 14:2870-2892. 1994.

31. Celebrini, S and WT Newsome. Neuronal and psychophysical sensitivity to motion signals in extrastriate area MST of the macaque monkey. *Journal of Neuroscience* 14:4109-4124. 1994.

32. Zohary, E, MN Shadlen and WT Newsome. Correlated neuronal discharge rate and its implications for psychophysical performance. *Nature* 370:140-143. 1994.

33. Shadlen, MN and WT Newsome. Noise, neural codes and cortical organization. *Current Opinion in Neurobiology* 4:569-579, 1994.

34. Celebrini, S and WT Newsome. Microstimulation in extrastriate area MST influences performance on a direction discrmination task. *Journal of Neurophysiology* 73:437-448. 1995.

35. Shadlen, MN and WT Newsome. Is there signal in the noise? *Current Opinion in Neurobiology* 5:248-250, 1995.

36. Britten, KH, WT Newsome, MN Shadlen, S Celebrini and JA Movshon. A relationship between behavioral choice and the visual responses of neurons in macaque MT. *Visual Neuroscience* 13:87-100. 1996.

37. Shadlen, MN and WT Newsome. Motion perception: seeing and deciding. *Proceedings of the National Academy of Sciences, USA* 93:628-633. 1996.

38. Shadlen, MN, KH Britten, WT Newsome and JA Movshon. A computational analysis of the relationship between neuronal and behavioral responses to visual motion. *Journal of Neuroscience*, 16:1486-1510. 1996.

39. Movshon, JA and WT Newsome. Visual response properties of striate cortical neurons projecting to area MT in macaque monkeys. *Journal of Neuroscience* 16:7733-7741. 1996.

40. Groh, JM, RT Born and WT Newsome. How is a sensory map read out? Effects of microstimulation in area MT on saccades and smooth pursuit eye movements. *Journal of Neuroscience* 17:4312-4330. 1997.

41. Parker, AJ and WT Newsome. Sense and the single neuron: probing the physiology of perception. *Annual Review of Neuroscience* 21:227-277, 1998.

42. Shadlen, MN and WT Newsome. The variable discharge of cortical neurons: implications for connectivity, computation and information coding. *Journal of Neuroscience* 18:3870-3896. 1998.

43. Seidemann, E, E Zohary and WT Newsome. Temporal gating of neural signals during performance of a visual discrimination task. *Nature* 394:72-75, 1998.

44. Britten, KH and WT Newsome. Tuning bandwidths for near-threshold stimuli in area MT. *Journal of Neurophysiology* 80:762-770, 1998.

45. DeAngelis, GC, BG Cumming and WT Newsome. Cortical area MT and the perception of stereoscopic depth. *Nature* 394:677-680, 1998.

46. DeAngelis, GC and WT Newsome. Organization of disparity-selective neurons in macaque area MT. *Journal of Neuroscience* 19:1398-1415, 1999.

47. Seidemann, E and WT Newsome. Effect of spatial attention on the responses of area MT neurons. *Journal of Neurophysiology* 81:1783-1794, 1999.

48. Horwitz, GD and WT Newsome. Separate signals for target selection and movement specification in the superior colliculus. *Science* 284:158-161, 1999.

49. Heeger, DJ, GM Boynton, JB Demb, E Seidemann and WT Newsome. Motion opponency in visual cortex. *Journal of Neuroscience* 19:7162-7174, 1999.

50. Nichols, MJ and WT Newsome. The neurobiology of cognition. *Nature* 402(SUPP):C35-C38. 1999.

51. Wandell, BA, AB Poirson, WT Newsome, HA Baseler, GM Boynton, A Huk, S Gandhi, and LT Sharpe. Color signals in human motion-selective cortex. *Neuron* 24:901-909, 1999.

52. Seidemann, E, AB Poirson, BA Wandell and WT Newsome. Color signals in area MT of the macaque monkey. *Neuron* 24:911-917, 1999.

53. Bair, W, E Zohary and WT Newsome. Correlated firing in macaque visual area MT: Time scales and relationship to behavior. *Journal of Neuroscience*, 21:1676-1697, 2001.

54. Shadlen, MN and WT Newsome. Neural basis of a perceptual decision in the parietal cortex (Area LIP) of the rhesus monkey. *Journal of Neurophysiology*, 86:1916-1936, 2001.

55. Horwitz, GD and WT Newsome. Target selection for saccadic eye movements: direction selective visual responses in the superior colliculus induced by behavioral training. *Journal of Neurophysiology*, 86:2527-2542, 2001.

56. Horwitz, GD and WT Newsome. Target selection for saccadic eye movements: prelude activity in the superior colliculus during a direction discrimination task. *Journal of Neurophysiology*, 86:2543-2558, 2001.

57. Nichols, MJ and WT Newsome. MT microstimulation influences veridical judgments of motion direction. *Journal of Neuroscience*, 22:9530-9540, 2002.

58. Liu, J and WT Newsome. Functional organization of speed tuned neurons in visual area MT. *Journal of Neurophysiology*, 89:246-256, 2003.

59. Cohen, MR and WT Newsome. What electrical microstimulation has revealed about the neural basis of cognition. *Current Opinion in Neurobiology* 14:1-9, 2004.

60. Horwitz, GD, AP Batista and WT Newsome. Representation of an abstract perceptual decision in macaque superior colliculus. *Journal of Neurophysiology*, 91:2281-2296, 2004.

61. DeAngelis, GC and WT Newsome. Perceptual "read-out" of conjoined direction and disparity maps in extrastriate area MT. *PLOS Biology*, 2:394-404, 2004.

62. Sugrue, LP, GS Corrado and WT Newsome. Matching behavior and the encoding of value in parietal cortex. *Science*, 304:1782-1787, 2004.

63. Horwitz, GD, AP Batista and WT Newsome. Direction-selective visual responses in superior colliculus induced by behavioral training. *Neuroscience Letters*, 366:315-319, 2004.

64. Müller, JR, MG Philiastides and WT Newsome. Microstimulation of the superior colliculus focuses attention without moving the eyes. *Proceedings of the National Academy of Sciences*, 102:524-529, 2005.

65. Liu, J, and WT Newsome. Correlation between speed perception and neural activity in middle temporal visual area. *Journal of Neuroscience,* 25:711-722, 2005.

66. Sugrue, LP, GS Corrado and WT Newsome. Choosing the greater of two goods: neural currencies for value and decision-making. *Nature Reviews Neuroscience*, 6:363-375, 2005.

67. Barberini, CL, MR Cohen, BA Wandell and WT Newsome. Cone signal interactions in direction-selective neurons in area MT. *Journal of Vision*, 5:603-621, 2005.

68. Corrado, GS, LP Sugrue and WT Newsome. Linear-nonlinear-Poisson models of primate choice. *Journal of the Experimental Analysis of Behavior*, 84:581-617, 2005.

69. Liu, J and WT Newsome. Local field potential in cortical area MT: Stimulus tuning and behavioral correlations. *Journal of Neuroscience*, 26:7779-7790, 2006.

70. Fiorillo, CD, WT Newsome and W Schultz. The temporal precision of reward prediction in dopamine neurons. *Nature Neuroscience*, 11:966-973, 2008.

71. Cohen, MR and WT Newsome. Context-dependent changes in functional circuitry in visual area MT. *Neuron*, 60:162-173, 2008.

72. Corrado, GS, LP Sugrue, JR Brown and WT Newsome. The trouble with choice: studying decision variables in the brain. In *Neuroeconomics: Decision Making and the Brain*. Eds: Glimcher, Camerer, Fehr and Poldrack. Amsterdam: Elsevier. 2008.

73. Feng, S, P Holmes, A Rorie and WT Newsome. Can monkeys choose optimally when faced with noisy stimuli and unequal rewards? *PLoS Computational Biology,* 5(2):e1000284, 2009.

74. Cohen, MR and WT Newsome. A reaction time task and noise correlation data change estimates of the contribution of single neurons to perception. *Journal of Neuroscience*, 29:6635-6648, 2009.

75. Churchland, MM, BM Yu, JP Cunningham, LP Sugrue, MR Cohen, GS Corrado, WT Newsome, AM Clark, P Hosseini, BB Scott, DC Bradley, MA Smith, A Kohn, JA Movshon, KM Armstrong, T Moore, SW Chang, LH Snyder, SG Lisberger, NJ Priebe, IM Finn, D Ferster, SI Ryu, G Santhanam, M Sahani, KV Shenoy. Stimulus onset quenches neural variability: a widespread cortical phenomenon. *Nature Neuroscience*, 13:369-378, 2010.

76. Rorie, AE, J Gao, JL McClelland and WT Newsome. Integration of sensory and reward information during perceptual decision-making in lateral intraparietal cortex. *PLoS One*, 5(2):e9308, 2010.

77. Hedges, JH, Y Gartshteyn, A Kohn, NC Rust, MN Shadlen, WT Newsome and JA Movshon. The relation between signals in macaque MT neurons and the perception of local and global motion. *Current Biology*, 21:2023-2028, 2011

78. Kimmel, DL, D Mammo and WT Newsome. Tracking the eye non-invasively: simultaneous comparison of the scleral search coil and optical tracking techniques in the macaque monkey. *Frontiers in Neuroscience*, 6:49, 2012.

79. King, RL, JR Brown, WT Newsome and K Butts-Pauly. Ultrasound induced *in-vivo* neurostimulation. *Ultrasound in Medicine and Biology* 39:312-331, 2013.

80. Mante, V, D Sussillo, KV Shenoy and WT Newsome. Selective integration of sensory evidence by recurrent dynamics in prefrontal cortex. *Nature*, 503:78-84, 2013.

81. Newsome, WT, PW Glimcher, J Gottlieb, D Lee and ML Platt. Comment on "In monkeys making value-based decisions, LIP neurons encode cue salience and not action value." *Science* 340:430, 2013.

82. Kiani, R, CJ Cueva, JB Reppas and WT Newsome. Changes-of-mind during decision-making: neural correlates on single trials. *Current Biology* 24:1542-1547, 2014.

83. Fetsch, CR, R Kiani, WT Newsome and MN Shadlen. Effects of cortical microstimulation on confidence in a perceptual decision. *Neuron* 83:797-804, 2014.

84. Kiani, R, CJ Cueva, JB Reppas, D Peixoto and WT Newsome. Natural grouping of neural responses reveals spatially segregated clusters in prearcuate cortex. *Neuron* 85:1359-1373, 2015.

85. Jorgenson, LA, WT Newsome, et al. The BRAIN Initiative, Developing Technology to Catalyze Neuroscience Discovery. *Philosophical Transactions of the Royal Society of London, B*, 370: DOI: 10.1098/rstb.2014.0164. 2015.

86. McGinty, VB, A Rangel, WT Newsome. Orbitofrontal cortex value signals depend on fixation location during free viewing. *Neuron* 90:1299-1311. 2016.

87. Chandrasekaran, C, D Peixoto, WT Newsome, KV Shenoy. Laminar differences in decision-related neural activity in dorsal premotor cortex. Nature Communications, 8:614. 2017.

88. Yang, GR, HF Song, WT Newsome, XJ Wang. Task representations in neural networks trained to perform many cognitive tasks. *Nature Neuroscience*, 22:297-306. 2019.

89. Igaya, K, Y Ahmadian, L Sugrue, G Corrado, Y Loewenstein, WT Newsome, S Fusi. Deviations from the matching law can reflect an optimal strategy involving learning over multiple time scales. *Nature Communications*, 10:1426, 2019.

90. Kubanek J, J Brown, P Ye, K Butts-Pauly, T Moore, WT Newsome. Transcranial ultrasound selectively biases decision-making in primates. *Science Advances* 6: eaaz4193, 2020.

91. Kimmel, DL, GF Elsayed, JP Cunningham and WT Newsome. Value and choice as stable, separable representations in orbitofrontal cortex. *Nature Communications* **11**, 3466, 2020.

92. Feng, G, FE Jensen, H Greely, H Okano, S Treue, AC Roberts, JG Fox, S Caddick, M Poo, WT Newsome, JH Morrison. Opportunities and limitations of genetically modified nonhuman primate models for neuroscience research. *Proceedings of the National Academy of Sciences, USA,* 117(39):24022-24031, 2020.

93. Lui, J, ND Nguyen, SM Grutzner, S Darmanis, D Peixoto, MJ Wagner, WE Allen, JM Kebschull, EB Richman, J Ren, WT Newsome, SR Quake and L Luo. Differential encoding in prefrontal cortex projection neuron classes across cognitive tasks. *Cell*, 184:489-506, 2020. https://authors.elsevier.com/c/1cFtBL7PXcM8O

94. Feng G, Jensen FE, Greely HT, Okano H, Treue S, Roberts AC, Fox JG, Caddick S, Poo MM, Newsome WT, Morrison JH. Opportunities and limitations of genetically modified nonhuman primate models for neuroscience research. *Proceedings of the National Academy of Sciences* 117:24022-2403, 2020. doi: 10.1073/pnas.2006515117

95. Peixoto, D, JR Verhein, R Kiani, JC Kao, P Nuyujukian, C Chandrasekaran, J Brown, S Fong, SI Ryu, KV Shenoy and WT Newsome. Decoding and perturbing decision states in real time. *Nature*, 591:604-609, 2021. https://doi.org/10.1038/s41586-020-03181-9

96. Peixoto, D, R Kiani, C Chandrasekaran, SI Ryu, KV Shenoy, WT Newsome. Population dynamics of choice representation in dorsal premotor and primary motor cortex. bioRxiv, 2020.

97. Kollmorgen, S, WT Newsome, V Mante. Spatial and temporal structure of choice representations in primate prefrontal cortex. bioRxiv, 2020.

98. Chadrasekaran, Chandramouli, J Soldado-Magraner, D Peixoto, WT Newsome, KV Shenoy, M Sahani. Brittleness in model selection analysis of single neuron firing rates. bioRxiv, 2020.

Publications: book chapters, commentary

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