John P O'doherty

List of Publications by Year
in descending order

123 papers	24,578 citations	17405 63 h-index	17546 121 g-index
124 all docs	124 docs citations	124 times ranked	14367 citing authors

#	Article	IF	Citations
1	Cortical substrates for exploratory decisions in humans. Nature, 2006, 441, 876-879.	13.7	1,790
2	Empathic neural responses are modulated by the perceived fairness of others. Nature, 2006, 439, 466-469.	13.7	1,470
3	Human and Rodent Homologies in Action Control: Corticostriatal Determinants of Goal-Directed and Habitual Action. Neuropsychopharmacology, 2010, 35, 48-69.	2.8	1,437
4	Temporal Difference Models and Reward-Related Learning in the Human Brain. Neuron, 2003, 38, 329-337.	3.8	1,311
5	Reward representations and reward-related learning in the human brain: insights from neuroimaging. Current Opinion in Neurobiology, 2004, 14, 769-776.	2.0	1,289
6	Neural Responses during Anticipation of a Primary Taste Reward. Neuron, 2002, 33, 815-826.	3.8	990
7	States versus Rewards: Dissociable Neural Prediction Error Signals Underlying Model-Based and Model-Free Reinforcement Learning. Neuron, 2010, 66, 585-595.	3.8	935
8	A specific role for posterior dorsolateral striatum in human habit learning. European Journal of Neuroscience, 2009, 29, 2225-2232.	1.2	637
9	Regret and its avoidance: a neuroimaging study of choice behavior. Nature Neuroscience, 2005, 8, 1255-1262.	7.1	567
10	Temporal difference models describe higher-order learning in humans. Nature, 2004, 429, 664-667.	13.7	557
11	Evidence for a Common Representation of Decision Values for Dissimilar Goods in Human Ventromedial Prefrontal Cortex. Journal of Neuroscience, 2009, 29, 12315-12320.	1.7	539
12	Neural Computations Underlying Arbitration between Model-Based and Model-free Learning. Neuron, 2014, 81, 687-699.	3.8	470
13	Neural correlates of mentalizing-related computations during strategic interactions in humans. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6741-6746.	3.3	464
14	Determining the Neural Substrates of Goal-Directed Learning in the Human Brain. Journal of Neuroscience, 2007, 27, 4019-4026.	1.7	452
15	The Role of the Ventromedial Prefrontal Cortex in Abstract State-Based Inference during Decision Making in Humans. Journal of Neuroscience, 2006, 26, 8360-8367.	1.7	451
16	Reward Value Coding Distinct From Risk Attitude-Related Uncertainty Coding in Human Reward Systems. Journal of Neurophysiology, 2007, 97, 1621-1632.	0.9	418
17	Model-Based fMRI and Its Application to Reward Learning and Decision Making. Annals of the New York Academy of Sciences, 2007, 1104, 35-53.	1.8	416
18	Opponent appetitive-aversive neural processes underlie predictive learning of pain relief. Nature Neuroscience, 2005, 8, 1234-1240.	7.1	384

#	Article	IF	Citations
19	Neural evidence for inequality-averse social preferences. Nature, 2010, 463, 1089-1091.	13.7	370
20	Is Avoiding an Aversive Outcome Rewarding? Neural Substrates of Avoidance Learning in the Human Brain. PLoS Biology, 2006, 4, e233.	2.6	355
21	Reinforcement Learning Signals in the Human Striatum Distinguish Learners from Nonlearners during Reward-Based Decision Making. Journal of Neuroscience, 2007, 27, 12860-12867.	1.7	344
22	Determining a Role for Ventromedial Prefrontal Cortex in Encoding Action-Based Value Signals During Reward-Related Decision Making. Cerebral Cortex, 2009, 19, 483-495.	1.6	330
23	Learning, Reward, and Decision Making. Annual Review of Psychology, 2017, 68, 73-100.	9.9	328
24	Transformation of stimulus value signals into motor commands during simple choice. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18120-18125.	3.3	316
25	Appetitive and Aversive Goal Values Are Encoded in the Medial Orbitofrontal Cortex at the Time of Decision Making. Journal of Neuroscience, 2010, 30, 10799-10808.	1.7	302
26	Neural Prediction Errors Reveal a Risk-Sensitive Reinforcement-Learning Process in the Human Brain. Journal of Neuroscience, 2012, 32, 551-562.	1.7	293
27	Predictive Neural Coding of Reward Preference Involves Dissociable Responses in Human Ventral Midbrain and Ventral Striatum. Neuron, 2006, 49, 157-166.	3.8	286
28	The Decision Value Computations in the vmPFC and Striatum Use a Relative Value Code That is Guided by Visual Attention. Journal of Neuroscience, 2011, 31, 13214-13223.	1.7	272
29	Contributions of the striatum to learning, motivation, and performance: an associative account. Trends in Cognitive Sciences, 2012, 16, 467-475.	4.0	261
30	Neural computations underlying action-based decision making in the human brain. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17199-17204.	3.3	257
31	Decoding the neural substrates of reward-related decision making with functional MRI. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1377-1382.	3.3	243
32	Calculating Consequences: Brain Systems That Encode the Causal Effects of Actions. Journal of Neuroscience, 2008, 28, 6750-6755.	1.7	223
33	What We Know and Do Not Know about the Functions of the Orbitofrontal Cortex after 20 Years of Cross-Species Studies: Figure 1.. Journal of Neuroscience, 2007, 27, 8166-8169.	1.7	217
34	The Neural Representation of Unexpected Uncertainty during Value-Based Decision Making. Neuron, 2013, 79, 191-201.	3.8	212
35	Contributions of the ventromedial prefrontal cortex to goalâ€directed action selection. Annals of the New York Academy of Sciences, 2011, 1239, 118-129.	1.8	188
36	Category-dependent and category-independent goal-value codes in human ventromedial prefrontal cortex. Nature Neuroscience, 2013, 16, 479-485.	7.1	186

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37	Contributions of the Amygdala to Reward Expectancy and Choice Signals in Human Prefrontal Cortex. Neuron, 2007, 55, 545-555.	3.8	183
38	Human Neural Learning Depends on Reward Prediction Errors in the Blocking Paradigm. Journal of Neurophysiology, 2006, 95, 301-310.	0.9	175
39	Lights, Camembert, Action! The Role of Human Orbitofrontal Cortex in Encoding Stimuli, Rewards, and Choices. Annals of the New York Academy of Sciences, 2007, 1121, 254-272.	1.8	169
40	Risk-dependent reward value signal in human prefrontal cortex. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7185-7190.	3.3	160
41	Elucidating the underlying components of food valuation in the human orbitofrontal cortex. Nature Neuroscience, 2017, 20, 1780-1786.	7.1	158
42	Overlapping Responses for the Expectation of Juice and Money Rewards in Human Ventromedial Prefrontal Cortex. Cerebral Cortex, 2011, 21, 769-776.	1.6	156
43	The Neural Mechanisms Underlying the Influence of Pavlovian Cues on Human Decision Making. Journal of Neuroscience, 2008, 28, 5861-5866.	1.7	150
44	Neural Correlates of Specific and General Pavlovian-to-Instrumental Transfer within Human Amygdalar Subregions: A High-Resolution fMRI Study. Journal of Neuroscience, 2012, 32, 8383-8390.	1.7	148
45	Direct Instrumental Conditioning of Neural Activity Using Functional Magnetic Resonance Imaging-Derived Reward Feedback. Journal of Neuroscience, 2007, 27, 7498-7507.	1.7	130
46	Temporal isolation of neural processes underlying face preference decisions. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18253-18258.	3.3	128
47	Testosterone causes both prosocial and antisocial status-enhancing behaviors in human males. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11633-11638.	3.3	127
48	A causal account of the brain network computations underlying strategic social behavior. Nature Neuroscience, 2017, 20, 1142-1149.	7.1	126
49	Economic choices can be made using only stimulus values. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15005-15010.	3.3	122
50	The problem with value. Neuroscience and Biobehavioral Reviews, 2014, 43, 259-268.	2.9	115
51	Neural Correlates of Instrumental Contingency Learning: Differential Effects of Actionâ€“Reward Conjunction and Disjunction. Journal of Neuroscience, 2011, 31, 2474-2480.	1.7	107
52	Human Dorsal Striatum Encodes Prediction Errors during Observational Learning of Instrumental Actions. Journal of Cognitive Neuroscience, 2012, 24, 106-118.	1.1	104
53	Selective impairment of goal-directed decision-making following lesions to the human ventromedial prefrontal cortex. Brain, 2017, 140, 1743-1756.	3.7	102
54	In the Mind of the Market: Theory of Mind Biases Value Computation during Financial Bubbles. Neuron, 2013, 79, 1222-1231.	3.8	101

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55	Stimulus Value Signals in Ventromedial PFC Reflect the Integration of Attribute Value Signals Computed in Fusiform Gyrus and Posterior Superior Temporal Gyrus. Journal of Neuroscience, 2013, 33, 8729-8741.	1.7	98
56	Overlapping Prediction Errors in Dorsal Striatum During Instrumental Learning With Juice and Money Reward in the Human Brain. Journal of Neurophysiology, 2009, 102, 3384-3391.	0.9	97
57	Neural Mechanisms Underlying Paradoxical Performance for Monetary Incentives Are Driven by Loss Aversion. Neuron, 2012, 74, 582-594.	3.8	97
58	The Behavioral and Neural Mechanisms Underlying the Tracking of Expertise. Neuron, 2013, 80, 1558-1571.	3.8	97
59	Human Medial Orbitofrontal Cortex Is Recruited During Experience of Imagined and Real Rewards. Journal of Neurophysiology, 2010, 103, 2506-2512.	0.9	89
60	Anterior Prefrontal Cortex Contributes to Action Selection through Tracking of Recent Reward Trends. Journal of Neuroscience, 2012, 32, 8434-8442.	1.7	88
61	Neuronal Distortions of Reward Probability without Choice. Journal of Neuroscience, 2008, 28, 11703-11711.	1.7	83
62	Modelâ€based approaches to neuroimaging: combining reinforcement learning theory with fMRI data. Wiley Interdisciplinary Reviews: Cognitive Science, 2010, 1, 501-510.	1.4	82
63	Characterizing the Associative Content of Brain Structures Involved in Habitual and Goal-Directed Actions in Humans: A Multivariate fMRI Study. Journal of Neuroscience, 2015, 35, 3764-3771.	1.7	79
64	Selective impairment of prediction error signaling in human dorsolateral but not ventral striatum in Parkinson's disease patients: evidence from a model-based fMRI study. NeuroImage, 2010, 49, 772-781.	2.1	78
65	Neural Computations Mediating One-Shot Learning in the Human Brain. PLoS Biology, 2015, 13, e1002137.	2.6	69
66	Behavioral contagion during learning about another agentâ€™s risk-preferences acts on the neural representation of decision-risk. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3755-3760.	3.3	66
67	Evidence for Model-based Computations in the Human Amygdala during Pavlovian Conditioning. PLoS Computational Biology, 2013, 9, e1002918.	1.5	65
68	Distinct Contributions of Ventromedial and Dorsolateral Subregions of the Human Substantia Nigra to Appetitive and Aversive Learning. Journal of Neuroscience, 2015, 35, 14220-14233.	1.7	62
69	A neural basis for the effect of candidate appearance on election outcomes. Social Cognitive and Affective Neuroscience, 2008, 3, 344-352.	1.5	61
70	Neural Mechanisms Underlying Human Consensus Decision-Making. Neuron, 2015, 86, 591-602.	3.8	61
71	Differentiating neural systems mediating the acquisition vs. expression of goalâ€directed and habitual behavioral control. European Journal of Neuroscience, 2015, 41, 1358-1371.	1.2	55
72	A Neuro-computational Account of Arbitration between Choice Imitation and Goal Emulation during Human Observational Learning. Neuron, 2020, 106, 687-699.e7.	3.8	51

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73	Differentiable contributions of human amygdalar subregions in the computations underlying reward and avoidance learning. European Journal of Neuroscience, 2011, 34, 134-145.	1.2	48
74	Stimulus devaluation induced by stopping action.. Journal of Experimental Psychology: General, 2014, 143, 2316-2329.	1.5	48
75	Insights from the application of computational neuroimaging to social neuroscience. Current Opinion in Neurobiology, 2013, 23, 387-392.	2.0	47
76	The value of whatâ€™s to come: Neural mechanisms coupling prediction error and the utility of anticipation. Science Advances, 2020, 6, eaba3828.	4.7	47
77	The application of computational models to social neuroscience: promises and pitfalls. Social Neuroscience, 2018, 13, 637-647.	0.7	45
78	Aesthetic preference for art can be predicted from a mixture of low- and high-level visual features. Nature Human Behaviour, 2021, 5, 743-755.	6.2	41
79	Reinforcement-learning in fronto-striatal circuits. Neuropsychopharmacology, 2022, 47, 147-162.	2.8	41
80	Multiple Forms of Value Learning and the Function of Dopamine. , 2009, , 367-387.		38
81	Dorsomedial Prefrontal Cortex Mediates Rapid Evaluations Predicting the Outcome of Romantic Interactions. Journal of Neuroscience, 2012, 32, 15647-15656.	1.7	36
82	Behavioural evidence for parallel outcome-sensitive and outcome-insensitive Pavlovian learning systems in humans. Nature Human Behaviour, 2019, 3, 284-296.	6.2	34
83	Beyond simple reinforcement learning: the computational neurobiology of rewardâ€learning and valuation. European Journal of Neuroscience, 2012, 35, 987-990.	1.2	33
84	Neural Correlates of the Divergence of Instrumental Probability Distributions. Journal of Neuroscience, 2013, 33, 12519-12527.	1.7	33
85	The Role of the Posterior Temporal and Medial Prefrontal Cortices in Mediating Learning from Romantic Interest and Rejection. Cerebral Cortex, 2014, 24, 2502-2511.	1.6	33
86	Human Dorsal Striatal Activity during Choice Discriminates Reinforcement Learning Behavior from the Gambler's Fallacy. Journal of Neuroscience, 2011, 31, 6296-6304.	1.7	32
87	The Effects of Incentive Framing on Performance Decrements for Large Monetary Outcomes: Behavioral and Neural Mechanisms. Journal of Neuroscience, 2014, 34, 14833-14844.	1.7	32
88	The human prefrontal cortex mediates integration of potential causes behind observed outcomes. Journal of Neurophysiology, 2011, 106, 1558-1569.	0.9	31
89	Uncovering the spatio-temporal dynamics of value-based decision-making in the human brain: a combined fMRIâ€“EEG study. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130473.	1.8	31
90	Evidence for model-based encoding of Pavlovian contingencies in the human brain. Nature Communications, 2019, 10, 1099.	5.8	31

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91	Multiple Systems for the Motivational Control of Behavior and Associated Neural Substrates in Humans. Current Topics in Behavioral Neurosciences, 2015, 27, 291-312.	0.8	29
92	Breaking human social decision making into multiple components and then putting them together again. Cortex, 2020, 127, 221-230.	1.1	28
93	Distinguishing informational from valueâ€related encoding of rewarding and punishing outcomes in the human brain. European Journal of Neuroscience, 2014, 39, 2014-2026.	1.2	26
94	Neural substrates of social facilitation effects on incentive-based performance. Social Cognitive and Affective Neuroscience, 2018, 13, 391-403.	1.5	25
95	Using deep reinforcement learning to reveal how the brain encodes abstract state-space representations in high-dimensional environments. Neuron, 2021, 109, 724-738.e7.	3.8	25
96	Risk contagion by peers affects learning and decision-making in adolescents.. Journal of Experimental Psychology: General, 2019, 148, 1494-1504.	1.5	25
97	Determining the effects of training duration on the behavioral expression of habitual control in humans: a multilaboratory investigation. Learning and Memory, 2022, 29, 16-28.	0.5	25
98	Anterior Insula Activity Reflects the Effects of Intentionality on the Anticipation of Aversive Stimulation. Journal of Neuroscience, 2014, 34, 11339-11348.	1.7	24
99	How representative are neuroimaging samples? Large-scale evidence for trait anxiety differences between fMRI and behaviour-only research participants. Social Cognitive and Affective Neuroscience, 2021, 16, 1057-1070.	1.5	24
100	The involvement of model-based but not model-free learning signals during observational reward learning in the absence of choice. Journal of Neurophysiology, 2016, 115, 3195-3203.	0.9	22
101	Neurostimulation Reveals Context-Dependent Arbitration Between Model-Based and Model-Free Reinforcement Learning. Cerebral Cortex, 2019, 29, 4850-4862.	1.6	21
102	Value-Related Neuronal Responses in the Human Amygdala during Observational Learning. Journal of Neuroscience, 2020, 40, 4761-4772.	1.7	21
103	Why and how the brain weights contributions from a mixture of experts. Neuroscience and Biobehavioral Reviews, 2021, 123, 14-23.	2.9	21
104	Dissociable Brain Systems Mediate Vicarious Learning of Stimulus-Response and Action-Outcome Contingencies. Journal of Neuroscience, 2012, 32, 9878-9886.	1.7	20
105	Progress and Promise in Neuroaesthetics. Neuron, 2020, 108, 594-596.	3.8	19
106	Stressful Events as Teaching Signals for the Brain. Trends in Cognitive Sciences, 2018, 22, 475-478.	4.0	17
107	The cost of obtaining rewards enhances the reward prediction error signal of midbrain dopamine neurons. Nature Communications, 2019, 10, 3674.	5.8	17
108	Toward a Mechanistic Understanding of Human Decision Making. Current Directions in Psychological Science, 2008, 17, 119-123.	2.8	16

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109	Impaired reward processing in the human prefrontal cortex distinguishes between persistent and remittent attention deficit hyperactivity disorder. Human Brain Mapping, 2015, 36, 4648-4663.	1.9	16
110	Distinct prediction errors in mesostriatal circuits of the human brain mediate learning about the values of both states and actions: evidence from high-resolution fMRI. PLoS Computational Biology, 2017, 13, e1005810.	1.5	16
111	The hierarchical construction of value. Current Opinion in Behavioral Sciences, 2021, 41, 71-77.	2.0	15
112	Anything You Can Do, You Can Do Better: Neural Substrates of Incentive-Based Performance Enhancement. PLoS Biology, 2012, 10, e1001272.	2.6	8
113	White matter tracts characteristics in habitual decision-making circuit underlie ritual behaviors in anorexia nervosa. Scientific Reports, 2021, 11, 15980.	1.6	8
114	Mesolimbic Neurobehavioral Mechanisms of Reward Motivation in Anorexia Nervosa: A Multimodal Imaging Study. Frontiers in Psychiatry, 2022, 13, 806327.	1.3	7
115	Decision Neuroscience: Choices ofÂDescription and of Experience. Current Biology, 2010, 20, R881-R883.	1.8	5
116	Reappraisal of incentives ameliorates choking under pressure and is correlated with changes in the neural representations of incentives. Social Cognitive and Affective Neuroscience, 2019, 14, 13-22.	1.5	5
117	Relief from incidental fear evokes exuberant risk taking. PLoS ONE, 2019, 14, e0211018.	1.1	4
118	Neurocircuit dynamics of arbitration between decision-making strategies across obsessive-compulsive and related disorders. NeuroImage: Clinical, 2022, 35, 103073.	1.4	3
119	It Was Nice Not Seeing You: Perceptual Learning with Rewards in the Absence of Awareness. Neuron, 2009, 61, 649-650.	3.8	2
120	Hippocampus Is What Happens while Youâ€™re Busy Making Other Plans. Neuron, 2019, 102, 517-519.	3.8	2
121	Choosing for Me or Choosing for You: Value in Medial Prefrontal Cortex. Neuron, 2012, 75, 942-944.	3.8	1
122	Neural, physiological, and psychological markers of appetitive conditioning in anorexia nervosa: a study protocol. Journal of Eating Disorders, 2022, 10, 68.	1.3	1
123	Dopamine and the Adolescent Brain: Do Errors in Prediction Make the Difference?. Biological Psychiatry, 2016, 79, 870-871.	0.7	0