Elizabeth M Brannon

List of Publications by Year
in descending order

105 papers	9,966 citations	36271 51 h-index	36008 97 g-index
105 all docs	105 docs citations	105 times ranked	4078 citing authors

#	Article	IF	Citations
1	The evolution of self-control. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2140-8.	3.3	602
2	Beyond the number domain. Trends in Cognitive Sciences, 2009, 13, 83-91.	4.0	483
3	Shared System for Ordering Small and Large Numbers in Monkeys and Humans. Psychological Science, 2006, 17, 401-406.	1.8	474
4	Functional Imaging of Numerical Processing in Adults and 4-y-Old Children. PLoS Biology, 2006, 4, e125.	2.6	457
5	Training the Approximate Number System Improves Math Proficiency. Psychological Science, 2013, 24, 2013-2019.	1.8	311
6	Number sense in infancy predicts mathematical abilities in childhood. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18116-18120.	3.3	271
7	Re-visiting the competence/performance debate in the acquisition of the counting principles. Cognitive Psychology, 2006, 52, 130-169.	0.9	251
8	The representation of numerical magnitude. Current Opinion in Neurobiology, 2006, 16, 222-229.	2.0	243
9	Electrophysiological evidence for notation independence in numerical processing. Behavioral and Brain Functions, 2007, 3, 1.	1.4	237
10	The development of ordinal numerical knowledge in infancy. Cognition, 2002, 83, 223-240.	1.1	231
11	Numerical Subtraction in the Pigeon: Evidence for a Linear Subjective Number Scale. Psychological Science, 2001, 12, 238-243.	1.8	209
12	How does cognition evolve? Phylogenetic comparative psychology. Animal Cognition, 2012, 15, 223-238.	0.9	207
13	The multisensory representation of number in infancy. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3486-3489.	3.3	206
14	Number bias for the discrimination of large visual sets in infancy. Cognition, 2004, 93, B59-B68.	1.1	202
15	Monotonic Coding of Numerosity in Macaque Lateral Intraparietal Area. PLoS Biology, 2007, 5, e208.	2.6	198
16	The Neural Development of an Abstract Concept of Number. Journal of Cognitive Neuroscience, 2009, 21, 2217-2229.	1.1	193
17	Modeling the approximate number system to quantify the contribution of visual stimulus features. Cognition, 2015, 142, 247-265.	1.1	187
18	Basic Math in Monkeys and College Students. PLoS Biology, 2007, 5, e328.	2.6	174

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19	Improving arithmetic performance with number sense training: An investigation of underlying mechanism. Cognition, 2014, 133, 188-200.	1.1	170
20	The development of area discrimination and its implications for number representation in infancy. Developmental Science, 2006, 9, F59-F64.	1.3	164
21	Monkeys Match the Number of Voices They Hear to the Number of Faces They See. Current Biology, 2005, 15, 1034-1038.	1.8	159
22	How much does number matter to a monkey (Macaca mulatta)?. Journal of Experimental Psychology, 2007, 33, 32-41.	1.9	156
23	Temporal discrimination increases in precision over development and parallels the development of numerosity discrimination. Developmental Science, 2007, 10, 770-777.	1.3	153
24	Malleability of the approximate number system: effects of feedback and training. Frontiers in Human Neuroscience, 2012, 6, 68.	1.0	145
25	Representation of the numerosities 1â€“9 by rhesus macaques (Macaca mulatta).. Journal of Experimental Psychology, 2000, 26, 31-49.	1.9	140
26	Stable individual differences in number discrimination in infancy. Developmental Science, 2010, 13, 900-906.	1.3	140
27	The Development of Ordinal Numerical Competence in Young Children. Cognitive Psychology, 2001, 43, 53-81.	0.9	135
28	Intersensory redundancy accelerates preverbal numerical competence. Cognition, 2008, 108, 210-221.	1.1	135
29	Monkeys match and tally quantities across senses. Cognition, 2008, 108, 617-625.	1.1	133
30	Do monkeys think in metaphors? Representations of space and time in monkeys and humans. Cognition, 2010, 117, 191-202.	1.1	130
31	Crossing the divide: Infants discriminate small from large numerosities.. Developmental Psychology, 2009, 45, 1583-1594.	1.2	128
32	The Difficulties of Representing Continuous Extent in Infancy: Using Number Is Just Easier. Child Development, 2008, 79, 476-489.	1.7	123
33	Social complexity predicts transitive reasoning in prosimian primates. Animal Behaviour, 2008, 76, 479-486.	0.8	121
34	Non-symbolic approximate arithmetic training improves math performance in preschoolers. Journal of Experimental Child Psychology, 2016, 152, 278-293.	0.7	119
35	Rapid and Direct Encoding of Numerosity in the Visual Stream. Cerebral Cortex, 2016, 26, bhv017.	1.6	111
36	The relative salience of discrete and continuous quantity in young infants. Developmental Science, 2009, 12, 453-463.	1.3	110

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37	Rhesus monkeys (Macaca mulatta) map number onto space. Cognition, 2014, 132, 57-67.	1.1	94
38	Behavioral and Neural Basis of Number Sense in Infancy. Current Directions in Psychological Science, 2009, 18, 346-351.	2.8	89
39	Quantitative competencies in infancy. Developmental Science, 2008, 11, 803-808.	1.3	87
40	Electrophysiological Measures of Time Processing in Infant and Adult Brains: Weber's Law Holds. Journal of Cognitive Neuroscience, 2008, 20, 193-203.	1.1	85
41	Timing in the baby brain. Cognitive Brain Research, 2004, 21, 227-233.	3.3	83
42	Semantic congruity affects numerical judgments similarly in monkeys and humans. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16507-16511.	3.3	78
43	Weber's Law influences numerical representations in rhesus macaques (Macaca mulatta). Animal Cognition, 2006, 9, 159-172.	0.9	78
44	Numerosity processing in early visual cortex. NeuroImage, 2017, 157, 429-438.	2.1	78
45	Adding up the effects of cultural experience on the brain. Trends in Cognitive Sciences, 2007, 11, 1-4.	4.0	66
46	Heterogeneity impairs numerical matching but not numerical ordering in preschool children. Developmental Science, 2007, 10, 431-440.	1.3	66
47	Number trumps area for 7-month-old infants.. Developmental Psychology, 2014, 50, 108-112.	1.2	59
48	Changes in the Ability to Detect Ordinal Numerical Relationships Between 9 and 11 Months of Age. Infancy, 2008, 13, 308-337.	0.9	58
49	Numerical encoding in early visual cortex. Cortex, 2019, 114, 76-89.	1.1	58
50	Comment on "Log or Linear? Distinct Intuitions of the Number Scale in Western and Amazonian Indigene Cultures". Science, 2009, 323, 38-38.	6.0	57
51	Analog number representations in mongoose lemurs (Eulemur mongoz): evidence from a search task. Animal Cognition, 2005, 8, 247-252.	0.9	54
52	Infants Show Ratioâ€dependent Number Discrimination Regardless of Set Size. Infancy, 2013, 18, 927-941.	0.9	54
53	Does the Approximate Number System Serve as a Foundation for Symbolic Mathematics?. Language Learning and Development, 2017, 13, 171-190.	0.7	54
54	The contributions of numerical acuity and non-numerical stimulus features to the development of the number sense and symbolic math achievement. Cognition, 2017, 168, 222-233.	1.1	54

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55	Differences in feeding ecology predict differences in performance between golden lion tamarins (Leontopithecus rosalia) and Wiedâ€™s marmosets (Callithrix kuhli) on spatial and visual memory tasks. Learning and Behavior, 1996, 24, 384-393.	3.4	51
56	Nonverbal representation of time and number in adults. Acta Psychologica, 2007, 124, 296-318.	0.7	51
57	Empty sets as part of the numerical continuum: Conceptual precursors to the zero concept in rhesus monkeys.. Journal of Experimental Psychology: General, 2009, 138, 258-269.	1.5	51
58	Spontaneous analog number representations in 3â€yearâ€old children. Developmental Science, 2010, 13, 289-297.	1.3	51
59	Neurocognitive Development of Risk Aversion from Early Childhood to Adulthood. Frontiers in Human Neuroscience, 2011, 5, 178.	1.0	51
60	Induced Alpha-band Oscillations Reflect Ratio-dependent Number Discrimination in the Infant Brain. Journal of Cognitive Neuroscience, 2009, 21, 2398-2406.	1.1	45
61	How to interpret cognitive training studies: A reply to Lindskog & Winman. Cognition, 2016, 150, 247-251.	1.1	41
62	The independence of language and mathematical reasoning. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3177-3178.	3.3	39
63	Developmental changes in category-specific brain responses to numbers and letters in a working memory task. NeuroImage, 2009, 44, 1404-1414.	2.1	38
64	Evolutionary Foundations of the Approximate Number System. , 2011, , 207-224.		38
65	Significant Inter-Test Reliability across Approximate Number System Assessments. Frontiers in Psychology, 2016, 7, 310.	1.1	38
66	The role of reference points in ordinal numerical comparisons by rhesus macaques (macaca mulatta).. Journal of Experimental Psychology, 2006, 32, 120-134.	1.9	33
67	Representation of numerosity in posterior parietal cortex. Frontiers in Integrative Neuroscience, 2012, 6, 25.	1.0	32
68	Attending to One of Many: When Infants are Surprisingly Poor at Discriminating an Item's Size. Frontiers in Psychology, 2011, 2, 65.	1.1	28
69	The Effect of Heterogeneity on Numerical Ordering in Rhesus Monkeys. Infancy, 2006, 9, 173-189.	0.9	27
70	Individual differences in nonverbal number discrimination correlate with event-related potentials and measures of probabilistic reasoning. Neuropsychologia, 2010, 48, 3687-3695.	0.7	27
71	Neural connectivity patterns underlying symbolic number processing indicate mathematical achievement in children. Developmental Science, 2014, 17, 187-202.	1.3	27
72	Prosimian Primates Show Ratio Dependence in Spontaneous Quantity Discriminations. Frontiers in Psychology, 2012, 3, 550.	1.1	25

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73	Comparison of discrete ratios by rhesus macaques (Macaca mulatta). Animal Cognition, 2016, 19, 75-89.	0.9	24
74	Inter-parietal white matter development predicts numerical performance in young children. Learning and Individual Differences, 2011, 21, 672-680.	1.5	23
75	Numerical Rule-Learning in Ring-Tailed Lemurs (Lemur Catta). Frontiers in Psychology, 2011, 2, 23.	1.1	23
76	Lemurs and macaques show similar numerical sensitivity. Animal Cognition, 2014, 17, 503-515.	0.9	23
77	Using cognitive training studies to unravel the mechanisms by which the approximate number system supports symbolic math ability. Current Opinion in Behavioral Sciences, 2016, 10, 73-80.	2.0	23
78	Monkeys display classic signatures of human symbolic arithmetic. Animal Cognition, 2016, 19, 405-415.	0.9	22
79	Failure to replicate the benefit of approximate arithmetic training for symbolic arithmetic fluency in adults. Cognition, 2021, 207, 104521.	1.1	20
80	Evidence against continuous variables driving numerical discrimination in infancy. Frontiers in Psychology, 2015, 6, 923.	1.1	19
81	Number sense biases children's area judgments. Cognition, 2020, 204, 104352.	1.1	18
82	Children do not exhibit ambiguity aversion despite intact familiarity bias. Frontiers in Psychology, 2014, 5, 1519.	1.1	17
83	Visuospatial working memory influences the interaction between space and time. Psychonomic Bulletin and Review, 2016, 23, 1839-1845.	1.4	17
84	Approximate Arithmetic Training Improves Informal Math Performance in Low Achieving Preschoolers. Frontiers in Psychology, 2018, 9, 606.	1.1	17
85	Number knows no bounds. Trends in Cognitive Sciences, 2003, 7, 279-281.	4.0	16
86	Parallels in Stimulus-Driven Oscillatory Brain Responses to Numerosity Changes in Adults and Seven-Month-Old Infants. Developmental Neuropsychology, 2011, 36, 651-667.	1.0	16
87	Context affects the numerical semantic congruity effect in rhesus monkeys (Macaca mulatta). Behavioural Processes, 2010, 83, 191-196.	0.5	15
88	Electrophysiological Evidence for the Involvement of the Approximate Number System in Preschoolers' Processing of Spoken Number Words. Journal of Cognitive Neuroscience, 2014, 26, 1891-1904.	1.1	14
89	Shared and distinct neural circuitry for nonsymbolic and symbolic doubleâ€digit addition. Human Brain Mapping, 2019, 40, 1328-1343.	1.9	14
90	Developmental trajectory of neural specialization for letter and number visual processing. Developmental Science, 2018, 21, e12578.	1.3	13

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91	Developmental Continuity in the Link Between Sensitivity to Numerosity and Physical Size. Journal of Numerical Cognition, 2015, 1, 7-20.	0.6	10
92	Direct and rapid encoding of numerosity in the visual stream. Behavioral and Brain Sciences, 2017, 40, e185.	0.4	8
93	Commentary on: Ã¢â,¬Å“Number-space mapping in the newborn chick resembles humans' mental number lineÃ¢â,¬Â• Frontiers in Psychology, 2015, 6, 352.	1.1	7
94	Approximate multiplication in young children prior to multiplication instruction. Journal of Experimental Child Psychology, 2021, 207, 105116.	0.7	7
95	Implicit sequence learning in ringâ€tailed lemurs (<i>Lemur catta</i>). Journal of the Experimental Analysis of Behavior, 2016, 105, 123-132.	0.8	6
96	Five-year-olds do not show ambiguity aversion in a risk and ambiguity task with physical objects. Journal of Experimental Child Psychology, 2017, 159, 319-326.	0.7	6
97	Response to Dehaene. Psychological Science, 2001, 12, 247-247.	1.8	5
98	Numerical abstraction: It ain't broke. Behavioral and Brain Sciences, 2009, 32, 331-332.	0.4	5
99	The Acuity and Manipulability of the ANS Have Separable Influences on Preschoolersâ€™ Symbolic Math Achievement. Frontiers in Psychology, 2018, 9, 2554.	1.1	5
100	Increasing entropy reduces perceived numerosity throughout the lifespan. Cognition, 2022, 225, 105096.	1.1	5
101	Evolutionary and Developmental Continuities in Numerical Cognition. Advances in Mathematical Cognition and Learning, 2015, 1, 123-144.	0.5	4
102	Middle identification for rhesus monkeys is influenced by number but not extent. Scientific Reports, 2020, 10, 17402.	1.6	3
103	Pharmacological inactivation does not support a unique causal role for intraparietal sulcus in the discrimination of visual number. PLoS ONE, 2017, 12, e0188820.	1.1	3
104	Young Children Intuitively Divide Before They Recognize the Division Symbol. Frontiers in Human Neuroscience, 2022, 16, 752190.	1.0	3
105	Relative numerical middle in rhesus monkeys. Biology Letters, 2022, 18, 20210426.	1.0	2