

## Curriculum Vitae

Stanislas Dehaene

Born May 12<sup>th</sup> 1965 in Roubaix (France)  
Married to Ghislaine Dehaene-Lambertz, 3  
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Websites for additional information and publications:

Research : [www.unicog.org](http://www.unicog.org)

Teaching : [http://www.college-de-france.fr/default/EN/all/psy\\_cog/index.htm](http://www.college-de-france.fr/default/EN/all/psy_cog/index.htm)

## Education/Training

Year	Institution and Location	Degree	Field of study
1999	Ecole des Hautes Etudes en Sciences Sociales (EHESS), Paris	Habilitation to direct research	Cognitive neuroscience
1989	Ecole des Hautes Etudes en Sciences Sociales (EHESS), Paris	PhD	Cognitive science
1985	University of Paris VI	Masters	Applied mathematics and computer science
1984-1989	Ecole Normale Supérieure, Paris		Mathematics

## Research and professional experience

2005-2002	Professor at the Collège de France, chair of Experimental Cognitive Psychology Director of the INSERM-CEA Cognitive Neuroimaging Unit, Service Hospitalier Frédéric Joliot, Orsay, France
1997-2005	Research Director at INSERM (French National Institute of Health and Medical Research)
1992-1994	Post-doctoral Fellow, Institute of Cognitive and Decision Sciences, University of Oregon (USA), director Michael Posner
1989-1999	Research Scientist, Institut National de la Santé et de la Recherche Médicale (INSERM), Laboratoire de Sciences Cognitives et Psycholinguistique, Paris, France
1984-1989	Ecole Normale Supérieure, Mathematics sections
1982-1984	Ecole préparatoire Ste Geneviève, Versailles (Mathematics section)

## Honors and major grants

2008	Dr A.H. Heineken Prize for Cognitive Science
2008	Member, Pontifical Academy of Sciences
2008	French National Order of Merit
2007	Gold medal, French Association Arts-Sciences-Lettres
2005	Member, French Academy of Sciences
2003	Louis D. Prize, Institut de France (with D. Le Bihan)
2002	Pius XI medal, Pontifical Academy of Sciences
2002	Boehringer-Ingelheim award, Federation of European Neuroscience Societies
2001	Jean-Louis Signoret Prize, IPSEN Foundation
2000	Villemot Prize, French Academy of Sciences
1999	James S. McDonnell Centennial Fellowship
1997	Jean Rostand Award for best general-audience scientific book for <i>La Bosse des Maths</i> (French version of <i>The Number Sense</i> )
1996	Fanny Emden Prize, French Academy of Sciences

### **Administrative responsibilities**

- 2008- Member, UCL Neuroscience Scientific Advisory Board  
2008- Member, INSERM scientific council  
2005-2007 Piloting committee, Neuroscience funding program of ANR (French NSF)  
2001- Advisory Council, International Association For The Study Of Attention And Performance  
2001-2005 Administration Council, French Society for Neuroscience  
2001-2005 Scientific council, program « Avenir » of INSERM  
1999- Scientific Council, Institut Fédératif de Recherches 49  
1999-2005 Scientific counselor, program “Brain and Education” of OECD  
1997-2005 Scientific Council, Fyssen Foundation, Paris  
1990-2000 Founder and co-organizer with L. Cohen of the Parisian Club of Neuropsychology at the hôpital de la Salpêtrière (monthly meetings)  
1990-1992 Lecturer in Cognitive Science

### **Editorial responsibilities**

- 2008- Board of Reviewing Editors, *Science*  
2006- Editorial board, *Mind Brain and Education*  
2003- Editorial board, *PLOS Biology*  
2001- Editorial board, *Neuroimage*  
1999-2005 Associate Editor, *Cognition*  
1998-2003 Action Editor, *Cognitive Neuropsychology*  
1996- Editorial Advisor, *Editions Odile Jacob*, Paris  
1991-1997 Editorial board, *Mathematical Cognition*

### **10 main publications**

DEHAENE-LAMBERTZ, G., & DEHAENE, S. Speed and cerebral correlates of syllable discrimination in infants. *Nature*, 1994, **370**, 292-295.

DEHAENE, S., NACCACHE, L., LE CLEC'H, G., KOECHLIN, E., MUELLER, M., DEHAENE-LAMBERTZ, G., VAN DE MOORTELE, P.F., & LE BIHAN, D. Imaging unconscious semantic priming. *Nature*, 1998, **395**, 597-600.

DEHAENE, S., KERSZBERG, M., & CHANGEUX, J.P. A neuronal model of a global workspace in effortful cognitive tasks. *Proceedings of the National Academy of Sciences USA*, 1998, **95**, 14529-14534.

DEHAENE, S., SPELKE, L., PINEL, P., STANESCU, R., & TSIVKIN, S. Sources of mathematical thinking: Behavioral and brain-imaging evidence. *Science*, 1999, **284**, 970-974.

DEHAENE, S., NACCACHE, L., COHEN, L., LE BIHAN, D., MANGIN, J. F., POLINE, J. B., & RIVIERE, D. Cerebral mechanisms of word masking and unconscious repetition priming. *Nature Neuroscience*, 2001, **4**, 752-758.

DEHAENE-LAMBERTZ, G., DEHAENE, S., & HERTZ-PANNIER, L. Functional neuroimaging of speech perception in infants. *Science*, 2002, **298**, 2013-2015.

PICA, P., LEMER, C., IZARD, V., & DEHAENE, S. Exact and approximate arithmetic in an Amazonian indigene group. *Science*, 2004, 306, 499-503.

SERGENT, C., BAILLET, S., & DEHAENE, S. Timing of the brain events underlying access to consciousness during the attentional blink. *Nature Neuroscience*, 2005, **8**, 1391-1400.

DEL CUL, A., BAILLET, S., DEHAENE, S. Brain dynamics underlying the non-linear threshold for access to consciousness. *PLOS Biology*, 2007, 5(10), e260

DEHAENE, S., IZARD, V., SPELKE, E., PICA, P. Log or Linear? Distinct intuitions of the number scale in western and Amazonian indigene cultures. *Science*, 2008, **320**,1217-1220.

## **Complete list of publications**

### **Original articles in peer-reviewed journals**

1. NADAL, J.P., TOULOUSE, G., CHANGEUX, J.P., DEHAENE, S. Networks of formal neurons and memory palimpsests. *Europhysics Letters*, 1986, **1**, 535-542.
2. DEHAENE, S., CHANGEUX, J.P., NADAL, J.P. Neural networks that learn temporal sequences by selection. *Proceedings of the National Academy of Sciences, USA*, 1987, **84**, 2727-2731.
3. TOULOUSE, G., DEHAENE, S., CHANGEUX, J.P. Spin-glass models of learning by selection. *Proceedings of the National Academy of Sciences, USA*, 1986, **83**, 1695-1698. Reproduit dans *Spin glass theory and beyond*. Mézard, M., Parisi, G., & Virasoro, M.A. (Eds.). World Scientific Publishing (Singapour), 1988, pp. 432-435.
4. DEHAENE, S. Discriminability and Dimensionality effects in visual search for featural conjunctions: A functional pop-out. *Perception & Psychophysics*, 1989, **46**, 72-80.
5. DEHAENE, S. The psychophysics of numerical comparison: a reexamination of apparently incompatible data. *Perception & Psychophysics*, 1989, **45**, 557-566.
6. DEHAENE, S., CHANGEUX, J.P. A simple model of prefrontal cortex function in delayed-response tasks. *Journal of Cognitive Neuroscience*, 1989, **1**, 244-261.
7. DEHAENE, S., DUPOUX, E., MEHLER, J. Is numerical comparison digital? Analogical and symbolic effects in two-digit number comparison. *Journal of Experimental Psychology: Human Perception and Performance*, 1990, **16**, 626-641.
8. COHEN, L., DEHAENE, S. Neglect dyslexia for numbers? A case report. *Cognitive Neuropsychology*, 1990, **8**, 39-58.
9. DEHAENE, S., CHANGEUX, J.P. The Wisconsin Card Sorting Test: Theoretical analysis and modelling in a neuronal network. *Cerebral cortex*, 1991, **1**, 62-79.
10. DEHAENE, S., COHEN, L. Two mental calculation systems. *Neuropsychologia*, 1991, **29**, 1045-1074.
11. DEHAENE, S., MEHLER, J. Cross-linguistic regularities in the frequency of number words. *Cognition*, 1992, **43**, 1-29.
12. KERSZBERG, M., DEHAENE, S., CHANGEUX, J.P. Stabilization of complex input-output functions in neural clusters formed by synapse selection. *Neural Networks*, 1992, **5**, 403-413.
13. DEHAENE, S. Temporal oscillations in human perception. *Psychological Science*, 1993, **4**, 264-270.
14. DEHAENE, S., BOSSINI, S., GIRAUX, P. The mental representation of parity and numerical magnitude. *Journal of Experimental Psychology: General*, 1993, **122**, 371-396.
15. DEHAENE, S., CHANGEUX, J.P. Development of elementary numerical abilities: A neuronal model. *Journal of Cognitive Neuroscience*, 1993, **5**, 390-407.

16. MAZOYER, B.M., DEHAENE, S., TZOURIO, N., MURAYAMA, N., COHEN, L., LEVRIER, O., SALAMON, G., SYROTA, A., MEHLER, J. The cortical representation of speech. *Journal of Cognitive Neuroscience*, 1993, **5**, 467-479.
17. COHEN, L., DEHAENE, S. Amnesia for arithmetic facts: a single case study. *Brain and Language*, 1994, **47**, 214-232.
18. COHEN, L., DEHAENE, S., VERSTICHEL, P. Number words and number non-words: A case of deep dyslexia extending to arabic numerals. *Brain*, 1994, **117**, 267-279.
19. COHEN, L., GRAY, F., MEYRIGNAC, C., DEHAENE, S., DEGOS, J.D. Selective deficit of visual size perception: Two cases of hemimicropsia. *Journal of Neurology, Neurosurgery, and Psychiatry*, 1994, **57**, 73-78.
20. DEHAENE, S., COHEN, L. Dissociable mechanisms of subitizing and counting: Neuropsychological evidence from simultanagnosic patients. *Journal of Experimental Psychology: Human Perception and Performance*, 1994, **20**, 958-975.
21. DEHAENE, S., POSNER, M.I., TUCKER, D.M. Localization of a neural system for error detection and compensation. *Psychological Science*, 1994, **5**, 303-305.
22. DEHAENE-LAMBERTZ, G., DEHAENE, S. Speed and cerebral correlates of syllable discrimination in infants. *Nature*, 1994, **370**, 292-295.
23. COHEN, L., DEHAENE, S. La lecture des nombres dans l'alexie pure: Effets de la tâche et de la spécialisation hémisphérique. *Revue Neurologique (Paris)*, 1995, **151**, 480-485.
24. COHEN, L., DEHAENE, S. Number reading in pure alexia: The effect of hemispheric asymmetries and task demands. *NeuroCase*, 1995, **1**, 121-137.
25. DEHAENE, S. Electrophysiological evidence for category-specific word processing in the normal human brain. *NeuroReport*, 1995, **6**, 2153-2157.
26. DEHAENE, S., AKHAVEIN, R. Attention, automaticity, and levels of representation in number processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 1995, **21**, 314-326.
27. COHEN, L., DEHAENE, S. Cerebral networks for number processing: Evidence from a case of posterior callosal lesion. *NeuroCase*, 1996, **2**, 155-174.
28. DEHAENE, S. The organization of brain activations in number comparison: Event-related potentials and the additive-factors method. *Journal of Cognitive Neuroscience*, 1996, **8**, 47-68.
29. DEHAENE, S., TZOURIO, N., FRAK, V., RAYNAUD, L., COHEN, L., MEHLER, J., MAZOYER, B. Cerebral activations during number multiplication and comparison: A PET study. *Neuropsychologia*, 1996, **34**, 1097-1106.
30. KOPERA-FRYE, K., DEHAENE, S., STREISSGUTH, A.P. Impairments of number processing induced by prenatal alcohol exposure. *Neuropsychologia*, 1996, **34**, 1187-1196.
31. PERANI, D., DEHAENE, S., GRASSI, F., COHEN, L., CAPPÀ, S.F., DUPOUX, E., FAZIO, F., MEHLER, J. Brain processing of native and foreign languages. *NeuroReport*, 1996, **7**, 2439-2444.

32. COHEN, L., VERSTICHEL, P., DEHAENE, S. Neologistic jargon sparing numbers: A category-specific phonological impairment. *Cognitive Neuropsychology*, 1997, **14**, 1029-1061.
33. DEHAENE, S., CHANGEUX, J.P. A hierarchical neuronal network for planning behaviour. *Proceedings of the National Academy of Sciences USA*, 1997, **94**, 13293-13298.
34. DEHAENE, S., COHEN, L. Cerebral pathways for calculation: double dissociation between Gerstmann's acalculia and subcortical acalculia. *Cortex*, 1997, **33**, 219-250.
35. DEHAENE, S., DUPOUX, E., MEHLER, J., COHEN, L., PAULESU, E., PERANI, D., VAN DE MOORTELE, P.F., LEHERICY, S., LE BIHAN, D. Anatomical variability in the cortical representation of first and second languages. *NeuroReport*, 1997, **8**, 3809-3815.
36. KIEFER, M., DEHAENE, S. The time course of parietal activation in single-digit multiplication: Evidence from event-related potentials. *Mathematical cognition*, 1997, **3**, 1-30.
37. KOECHLIN, E., DEHAENE, S., MEHLER, J. Numerical transformations in five month old human infants. *Mathematical Cognition*, 1997, **3**, 89-104.
38. COHEN, L., DEHAENE, S. Competition between past and present. Assessing and explaining verbal perseverations. *Brain*, 1998, **121**, 1641-1659.
39. DEHAENE, S., KERSZBERG, M., CHANGEUX, J.P. A neuronal model of a global workspace in effortful cognitive tasks. *Proceedings of the National Academy of Sciences USA*, 1998, **95**, 14529-14534.
40. DEHAENE, S., LE CLEC'H, G., COHEN, L., VAN DE MOORTELE, E., LE BIHAN, D. Inferring behaviour from functional brain images. *Nature Neuroscience*, 1998, **1**, 549-550.
41. DEHAENE, S., NACCACHE, L., LE CLEC'H, G., KOECHLIN, E., MUELLER, M., DEHAENE-LAMBERTZ, G., VAN DE MOORTELE, P.F., LE BIHAN, D. Imaging unconscious semantic priming. *Nature*, 1998, **395**, 597-600.
42. PERANI, D., PAULESU, E., SEBASTIAN GALLES, N., DUPOUX, E., DEHAENE, S., BETTINARDI, V., CAPP, S.F., FAZIO, F., MEHLER, J. The bilingual brain: Proficiency and age of acquisition of the second language. *Brain*, 1998, **121**, 1841-1852.
43. CHOCHON, F., COHEN, L., VAN DE MOORTELE, P.F., DEHAENE, S. Differential contributions of the left and right inferior parietal lobules to number processing. *Journal of Cognitive Neuroscience*, 1999, **11**, 617-630.
44. DEHAENE, S., SPELKE, L., PINEL, P., STANESCU, R., TSIVKIN, S. Sources of mathematical thinking : behavioral and brain-imaging evidence. *Science*, 1999, **284**, 970-974.
45. KOECHLIN, E., NACCACHE, L., BLOCK, E., & DEHAENE, S. Primed numbers : Exploring the modularity of numerical representations with masked and unmasked semantic priming. *Journal of Experimental Psychology : Human Perception and Performance*, 1999, **25**, 1882-1905.
46. PINEL, P., LE CLEC'H, G., VAN DE MOORTELE, P.F., NACCACHE, L., LE BIHAN, D., DEHAENE, S. Event-related fMRI analysis of the cerebral circuit for number comparison. *NeuroReport*, 1999, **10**, 1473-1479.
47. SPELKE, E., DEHAENE, S. Biological foundations of numerical thinking. *Trends in Cognitive Sciences*, 1999, **3**, 365-366.

48. COHEN, L., DEHAENE, S. Calculating without reading: Unsuspected residual abilities in pure alexia. *Cognitive Neuropsychology*, 2000, **17**, 563-583.
49. COHEN, L., DEHAENE, S., CHOCHON, F., LEHERICY, S., NACCACHE, L. Language and calculation within the parietal lobe: A combined cognitive, anatomical and fMRI study. *Neuropsychologia*, 2000, **38**, 1426-1440.
50. COHEN, L., DEHAENE, S., NACCACHE, L., LEHERICY, S., DEHAENE-LAMBERTZ, G., HENAFF, M.A., MICHEL, F. The visual word form area: Spatial and temporal characterization of an initial stage of reading in normal subjects and posterior split-brain patients. *Brain*, 2000, **123**, 291-307.
51. LE CLEC'H, G., DEHAENE, S., COHEN, L., MEHLER, J., DUPOUX, E., POLINE, J.B., LEHERICY, S., VAN DE MOORTELE, P.F., LE BIHAN, D. Distinct cortical areas for names of numbers and body parts independent of language and input modality. *NeuroImage*, 2000, **12**, 381-391.
52. STANESCU, R., PINEL, P., VAN DE MOORTELE, P.F., LE BIHAN, D., COHEN, L., DEHAENE, S. Understanding dissociations in dyscalculia. A brain imaging study of the impact of number size on the cerebral network for exact and approximate calculation. *Brain*, 2000, **123**, 2240-2255.
53. ANDRADE, A., KHERIF, F., MANGIN, J. F., WORSLEY, K. J., PARADIS, A. L., SIMON, O., DEHAENE, S., LE BIHAN, D., POLINE, J. B. Detection of fMRI activation using cortical surface mapping. *Human Brain Mapping*, 2001, **12**, 79-93.
54. DEHAENE, S. Subtracting pigeons : Logarithmic or linear ? *Psychological Science*, 2001, **12**, 244-246.
55. DEHAENE, S., NACCACHE, L. Towards a cognitive neuroscience of consciousness : Basic evidence and a workspace framework. *Cognition*, 2001, **79**, 1-37.
56. DEHAENE, S., NACCACHE, L., COHEN, L., LE BIHAN, D., MANGIN, J.F., POLINE, J. B., RIVIERE, D. Cerebral mechanisms of word masking and unconscious repetition priming. *Nature Neuroscience*, 2001, **4**, 752-758.
57. NACCACHE, L., DEHAENE, S. The Priming Method: Imaging Unconscious Repetition Priming Reveals an Abstract Representation of Number in the Parietal Lobes. *Cerebral Cortex*, 2001, **11**, 966-74.
58. NACCACHE, L., DEHAENE, S. Unconscious semantic priming extends to novel unseen stimuli. *Cognition*, 2001, **80**, 215-229.
59. PINEL, P., RIVIERE, D., LE BIHAN, D., DEHAENE, S. Modulation of parietal activation by semantic distance in a number comparison task. *Neuroimage*, 2001, **14**, 1013-1026.
60. SIMON, O., MANGIN, J. F., COHEN, L., BRUANDET, M., PINEL, P., HENNEL, F., POLINE, J. B., BIHAN, D. L., DEHAENE, S. Topographical arrangement of hand, eye, calculation, and language related areas in the human intraparietal sulcus. *Neuron*, 2001, **33**, 475-487.
61. COHEN, L., LEHERICY, S., CHOCHON, F., LEMER, C., RIVAUD, S., DEHAENE, S. Language-specific tuning of visual cortex? Functional properties of the Visual Word Form Area. *Brain*, 2002, **125**, 1054-69.

62. DEHAENE, S., LE CLEC'H, G., POLINE, J. B., LE BIHAN, D., COHEN, L. The visual word form area: A prelexical representation of visual words in the fusiform gyrus. *NeuroReport*, 2002, **13** (3), 1-5.
63. DEHAENE, S., MARQUES, J. F. Cognitive Euroscience: Scalar variability in price estimation and the cognitive consequences of switching to the Euro. *Quarterly Journal of Experimental Psychology*, 2002, **55**, 705-731.
64. DEHAENE-LAMBERTZ, G., DEHAENE, S., HERTZ-PANNIER, L. Functional neuroimaging of speech perception in infants. *Science*, 2002, **298**, 2013-2015.
65. HAUSER, M.D., DEHAENE, S., DEHAENE-LAMBERTZ, G., PATALANO A.L. Spontaneous number discrimination of multi-format auditory stimuli in cotton-top tamarins (*Saguinus oedipus*). *Cognition*, 2002, **86**, B23-B32.
66. MOLKO, N., COHEN, L., MANGIN, J. F., CHOCHON, F., LEHERICY, S., BIHAN, D. L., DEHAENE, S. Visualizing the neural bases of a disconnection syndrome with diffusion tensor imaging. *Journal of Cognitive Neuroscience*, 2002, **14**, 629-636, 2002.
67. NACCACHE, L., BLANDIN, E., DEHAENE, S. Unconscious masked priming depends on temporal attention. *Psychological Science*, 2002, **13**, 416-424.
68. PAPPATA, S., DEHAENE, S., POLINE, J. B., GREGOIRE, M.C., JOBERT, A., DELFORGE, J., FROUIN, V., BOTTLAENDER, M., DOLLE, F., DIGIAMBERARDINO, L., SYROTA, A. In vivo detection of striatal dopamine release during reward: a PET study with <sup>11</sup>C-Raclopride and a single dynamic scan approach. *NeuroImage*, 2002, **16**, 1015-1027.
69. SIMON, O., MANGIN, J. F., COHEN, L., DEHAENE, S. Topographical layout of hand, Eye, calculation, and language-related areas in the human parietal lobe. *Neuron*, 2002, **33**, 475-487.
70. COHEN, L., MARTINAUD, O., LEMER, C., LEHERICY, S., SAMSON, Y., OBADIA, M. SLACHEVSKY, A., DEHAENE, S. Visual word recognition in the left and right hemispheres: Anatomical and functional correlates of peripheral alexias. *Cerebral Cortex*, 2003, **13**, 1313-1333.
71. DEHAENE, S., ARTIGES, E., NACCACHE, L., MARTELLI, C., VIARD, A., SCHÜRHOFF, F., RECASENS, C., PAILLERE-MARTINOT, M.L., LEBOYER, M., MARTINOT, J.L. Conscious and subliminal conflicts in normal subjects and patients with schizophrenia: The role of the anterior cingulate. *Proceedings of the National Academy of Sciences, USA*, 2003, **100**, 13722-13727.
72. DEHAENE, S., PIAZZA, M., PINEL, P., COHEN, L. Three parietal circuits for number processing. *Cognitive Neuropsychology*, 2003, **20**, 487-506.
73. DEHAENE, S., SERGENT, C., CHANGEUX, J.P. A neuronal network model linking subjective reports and objective physiological data during conscious perception. *Proceedings of the National Academy of Sciences USA*, 2003, **100**, 8520-8525.
74. GREENWALD, A.J., ABRAMS, R.L., NACCACHE, L., DEHAENE, S. Long-term semantic memory versus contextual memory in unconscious number processing. *Journal of Experimental Psychology: Learning Memory and Cognition*, 2003, **29**, 235-247.

75. JACQUEMOT, C., PALLIER, C., LE BIHAN, D., DEHAENE, S., DUPOUX, E. Phonological grammar shapes the auditory cortex: Functional magnetic resonance imaging study. *Journal of Neuroscience*, 2003, **23**, 9541-9546.
76. LEMER, C., DEHAENE, S., SPELKE, E., COHEN, L. Approximate quantities and exact number words: Dissociable systems. *Neuropsychologia*, 2003, **41**, 1942-1958.
77. MOLKO, N., CACHIA, A., RIVIERE, D., MANGIN, J.F., BRUANDET, M., LE BIHAN, D., COHEN, L., DEHAENE, S. Functional and structural alterations of the intraparietal sulcus in a developmental dyscalculia of genetic origin. *Neuron*, 2003, **40**, 847-858.
78. PALLIER, C., DEHAENE, S., POLINE, J.B., LEBIHAN, D., ARGENTI, A.M., DUPOUX, E., MEHLER, J. Brain imaging of language plasticity in adopted adults: can a second language replace the first? *Cerebral Cortex*, 2003, **13**, 155-161.
79. PIAZZA, M., GIACOMINI, E., LE BIHAN, D., DEHAENE, S. Single-trial classification of parallel pre-attentive and serial attentive processes using functional magnetic resonance imaging. *Proceeding of the Royal Society, London B*, 2003, **270**, 1237-1245.
80. BRUANDET, M., MOLKO, N., COHEN, L., DEHAENE, S. A cognitive characterization of dyscalculia in Turner syndrome. *Neuropsychologia*, 2004, **42**, 288-298.
81. COHEN, L., DEHAENE, S. Specialization within the ventral stream: the case for the visual word form area. *NeuroImage*, 2004, **22**, 466-476.
82. COHEN, L., HENRY, C., DEHAENE, S., MARTINAUD, O., LEHERICY, S., LEMER, C., FERRIEUX, S. The pathophysiology of letter-by-letter reading. *Neuropsychologia*, 2004, **42**, 1768-1780.
83. COHEN, L., JOBERT, A., LE BIHAN, D., DEHAENE, S. Distinct unimodal and crossmodal regions for word processing in the left temporal cortex. *Neuroimage*, 2004, **23**, 1256-1270.
84. COHEN, L., LEHERICY, S., HENRY, C., BOURGEOIS, M., LARROQUE, C., SAINTE-ROSE, C., DEHAENE, S., HERTZ-PANNIER, L. Learning to read without a left occipital lobe: A single case of right-hemispheric shift of the visual word form area. *Annals of Neurology*, 2004, **56**, 890-894.
85. DEHAENE, S., JOBERT, A., NACCACHE, L., CIUCIU, P., POLINE, J.B., LE BIHAN, D., COHEN, L. Letter binding and invariant recognition of masked words: Behavioral and neuroimaging evidence. *Psychological Science*, 2004, **15**, 307-313.
86. FEIGENSON, L., DEHAENE, S., SPELKE, E. Core systems of number. *Trends In Cognitive Sciences*, 2004, **8**, 307-314.
87. MARQUES, J.F., DEHAENE, S. Developing intuition for prices in Euros: Rescaling or relearning prices? *Journal of Experimental Psychology: Applied*, 2004, **10**, 148-155.
88. MOLKO, N., CACHIA, A., RIVIERE, D., MANGIN, J.F., BRUANDET, M., LE BIHAN, D., COHEN, L., DEHAENE, S. Brain anatomy in Turner syndrome: Evidence for impaired social and spatial-numerical networks. *Cerebral Cortex*, 2004, **14**, 840-850.
89. PIAZZA, M., IZARD, V., PINEL, P., LE BIHAN, D., DEHAENE, S. Tuning curves for numerosity in the human intraparietal sulcus. *Neuron*, 2004, **44**, 547-555.

90. PICA, P., LEMER, C., IZARD, V., DEHAENE, S. Exact and approximate arithmetic in an Amazonian indigene group. *Science*, 2004, **306**,499-503.
91. PINEL, P., PIAZZA, M., LE BIHAN, D., DEHAENE, S. Distributed and overlapping cerebral representations of number, size, and luminance during comparative judgments. *Neuron*, 2004, **41**, 983-993.
92. SERGENT, C., DEHAENE, S. Is consciousness a gradual phenomenon? Evidence for an all-or-none bifurcation during the attentional blink. *Psychological Science*, 2004, **15**, 720-728.
93. SERGENT, C., DEHAENE, S. Neural processes underlying conscious perception: Experimental findings and a global neuronal workspace framework. *Journal of Physiology Paris*, 2004, **98**, 374-384.
94. SIMON, O., KHERIF, F., FLANDIN, G., POLINE, J.B., RIVIERE, D., MANGIN, J.F., LE BIHAN, D., DEHAENE, S. Automated clustering and functional geometry of human parietofrontal networks for language, space, and number. *NeuroImage*, 2004, **23**, 1192-1202.
95. DEHAENE, S., CHANGEUX, J.P. Ongoing Spontaneous Activity Controls Access to Consciousness: A Neuronal Model for Inattentional Blindness, *PLOS: Biology*, 2005, **3**, 910-927.
96. DEHAENE, S., COHEN, L., SIGMAN, M., VINCKIER, F. The neural code for written words: a proposal. *Trends in Cognitive Neurosciences*, 2005, **9**, 335-341.
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### Diffusion of knowledge

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15. DEHAENE, S. Le cerveau subliminal: Imagerie Cérébrale des opérations conscientes et inconscientes. *La lettre du neurologue*, n°1, Vol. VI, Janvier 2002, pp 18-19
16. SIMON, O., & DEHAENE, S. L'organisation fonctionnelle du lobe pariétal: du singe à l'homme. *Médecine/Sciences*, 2002, pp 535-537.
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20. DEHAENE, S. Les bases biologiques de l'arithmétique élémentaire. *Pour la Science*, Avril 2005, pp 70-75.
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### **Films**

1. DEHAENE, S., & GIBRAT, J.P. *La bosse des maths*. Film documentaire de 52 minutes coproduit par ARTE/Transeurope Film, diffusé sur ARTE en 2000.
2. DEHAENE, S., & GIBRAT, J.P. *Dans le secret de nos émotions*. Film documentaire de 52 minutes, coproduit par ARTE/Transeurope Film, diffusé sur ARTE le 2 avril 2004 (Primé au festival international Telecienca 2003 de Vila Real, Portugal; Premier prix au Festival International 2004 du Film de Santé de Liège, Belgique); Prix de la réalisation au 17<sup>ème</sup> Festival International du Film Scientifique d'Orsay 2004.

### **Main invited lectures**

Stanislas Dehaene a donné des conférences dans la plupart des grandes universités et instituts de recherche. Seules les plus importantes sont listées ici.

Conference "Studies of language comprehension with PET scanning: Processing of French and Tamil stories by monolingual French subjects (J. Mehler & S. Dehaene). American Association for the Advancement of Science, Chicago, 8-10 February 1992.

Invited lecture "A model of acalculia and elementary number processing". World Congress on Neural Networks, Portland, Oregon, 14 July 1993.

Invited lecture "Neuronal models of prefrontal cortical functions". New Academy of Sciences meeting on "Structure and function of the human prefrontal cortex", New York, 2-4 March 1995.

Conference « The number sense ». The Smithsonian Institute, Washington D.C., 29 October 1997.

Plenary lecture “Cerebral bases of number sense”. CNRS Institute for Cognitive Science, Inauguration Meeting, Lyon, April 23-25 1998.

Two invited lectures on « Imaging conscious and unconscious arithmetic computations », Rutgers University, USA, October 19-21, 1998.

James S. McDonnell Centennial Fellowship Lecture on « The cognitive neuroscience of numeracy », National Academy of Sciences, Washington, April 8, 1999.

Invited Lecture on « Present and future of human neuro-imaging », European Molecular Biology Organization (EMBO), Heidelberg, Germany, June 12, 1999.

Plenary Lecture on « Contributions of brain imaging to the cognitive neuroscience of number processing », European Society for Cognitive Psychology (ESCAP), Gent, Belgium, September 3, 1999.

Invited Lecture on « New images of the calculating brain: conscious and unconscious computations », Vatican Jubilee Conference « Architectures of the mind, Architectures of the brain », Rome, September 8, 2000.

Invited Lecture on « Advances in cognitive neuroimaging: visualizing the cerebral circuits for conscious and subliminal reading ». Riken Institute, Tokyo, September 21, 2001

Two invited lectures at Harvard University (« Cerebral bases of number sense » and « Cerebral substrates of conscious and unconscious computations : the workspace hypothesis » ). Boston, March 4-5, 2002.

4<sup>th</sup> Pinkel Lecture « Cerebral bases of number sense in the parietal lobe », University of Pennsylvania, Philadelphia, March 7, 2002.

Plenary lecture on “Visual masking and consciousness : Investigations with functional neuroimaging”. Federation of European Neuroscience Societies (FENS), Paris, July 14, 2002.

Invited lecture on “The neural bases of subliminal word priming and conscious word recognition”. MIND lectures series, Dartmouth University, Hanover, January 18, 2003.

Invited lecture on “Cerebral constraints on reading and arithmetic: Education as a “neuronal recycling” process”. Conference on Mind, Brain and Education, 400<sup>th</sup> anniversary of the Pontifical Academy of Sciences, Vatican, November 7-8 2003.

Two 4-hour invited courses on “Reading and calculating” et “Access to consciousness”. National Yang-Min University, Taipei, Taiwan, 8-13 May 2004.

Course on “The organization of the human non-verbal number system: Towards a complete mathematical theory”. 2004 Summer Institute in Cognitive Neuroscience, Hanover, New Hampshire, 28 June – 3 July 2004.

Two invited lectures on “The visual word form area” et “The number sense”. International Dyslexia Association meeting, Philadelphia, 3-5 Novembre 2004.

Invited lecture on “The sense of number in animals and humans”. Neuroscience Colloquium Series, University of Tübingen, Germany, 13 January 2005.

Presidential lecture “Timing conscious access”, Association for the Scientific Study of Consciousness, CalTech, 24 June 2005.

Invited address “Can cognitive neuroscience help design innovative education protocols? The case of arithmetic”, Joint colloquium of OCDE and the French Academy of Sciences on Brain and education, Paris, 9 November 2005.

Series of three invited lectures “Three conversations in mind, brain and behavior with Stanislas Dehaene and critics”, Harvard University, 3-4-5 April 2007.

Alfred Fessard annual lecture “Putting neurons in culture: explorations of the neuronal architecture for reading”. French Society for Neuroscience, Montpellier, France, 24 May 2007.

Two invited lectures “Recycling the visual brain for reading”, Carnegie-Mellon University, 7-8 November 2007.

Invited lecture “Human brain mechanisms of subliminal processing and conscious access”, 200<sup>th</sup> anniversary lecture series “The Enlightened Brain”, Nobel auditorium, Karolinska Institute, Stockholm, 21 November 2007.

Invited lecture “From animal number sense to human arithmetic: the cerebral foundations of mathematics”. Duke University, January 25<sup>th</sup>, 2008.

Series of three invited lectures on « Reading in the brain », University of Chicago, 27 January-2 February 2008.

11<sup>th</sup> Annual Brenda Milner Lecture in Cognitive Neuroscience “Frontal lobe, dual task and the limits of human consciousness”. Montreal Neurological Institute, May 26<sup>th</sup> 2008.

Invited lecture at the International Neuropsychological Society: “Cultural recycling of cortical maps: the example of reading and the visual word form area”. Tenerife, June 26<sup>th</sup>, 2008.

Heineken Prize in Cognitive Science lecture “Signatures of conscious access in the human brain: Ignition, oscillation, synchrony, causality”. Nijmegen University, September 30<sup>th</sup> 2008.

Pontifical Academy of Sciences lecture on “Cognition, consciousness, and culture: understanding human specificity and its grounding in a primate brain”. City of the Vatican, Oct 3<sup>rd</sup> 2008.