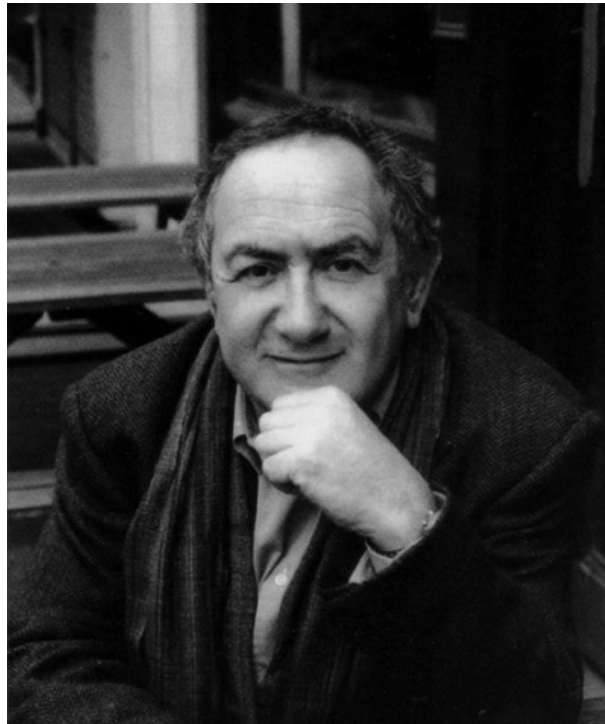


The Mathematical BRAIN

Brian Butterworth



Author

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Brian Butterworth

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disrupts finger gnosis and number processing.**

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brain development, culture and remediation.**

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How many lexicons? Static and dynamic approaches to an answer. (Invited opening address).

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Butterworth, B.

Neural organisation and writing systems. (PDF)

European Science Foundation Second Workshop on Written Language and Literacy. Wassenaar, The Netherlands, October 1993.

Conference Contributions : 2

Butterworth, B.

Disorders of sentence production.

Royal Society Discussion Meeting,
Language Acquisition and Dissolution.
London, April 1994.

Butterworth, B.

Trying to bridge the gap between phonological representations and phonetic realisation.

1st Annual Innsbruck Neuropsychology Conference on
Language and Language Disorders.
Innsbruck, Austria, January 21, 1995

Butterworth, B.

**Acquired dyslexia in Chinese speakers.
New Methods in Comparative Aphasiology.**

1995 Linguistic Institute.
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**Mathematical development in individuals
with Turner's Syndrome. (Keynote).**

Language, reasoning and early mathematical development.
London, September, 1999.

Butterworth, B.

The origins of our mathematical intelligence.

International Meeting "La Mente".
Urbino, Italy, April, 2000.

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British Dyslexia Association: Training for Trainers
Manchester, 20 May 2000.

Butterworth, B.

Deterioro de las funciones de cálculo.

Aportaciones de la neuropsicología al diagnóstico
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Universidad Complutense de Madrid. June 2000.

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Dyslexia and dyscalculia.

The 5th British Dyslexia Association International
Conference: Dyslexia: At the Dawn of the New Century.
York, May, 2001

Butterworth, B.

Number words and other words.

The Science of Aphasia: From theory to therapy.

Euresco Conference.
Giens, France. September. 2001

Butterworth, B.

The architecture of mathematical cognition:

Evidence from neurological patients.

Autumn School of Neuroscience, October, 2001

Conference Contributions : 4

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**Theories of Dyslexia and Dyscalculia:
Tallskek og skrivevegring: Internasjonal konferanse
om lese-skrive-og matemaikkvansker for voksne (PDF).**

VOX Voksenopplæringsinstituttet,
Oslo. April, 2002

Butterworth, B.

**Mathematics and the Brain:
Opening Address to the Mathematical Association (PDF).**

Reading, April, 2002.

Butterworth, B.

Neural representations of cardinality, ordinality and quantity.

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Rome, September 2002.

Butterworth, B.

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Psychology, Neuroscience and Interventions.
Oxford, September 2002.

Butterworth, B.

**Dyscalculia - Introduction to specific learning
difficulties with number concepts.**

Special Needs London.
London, October 2002.

Butterworth, B.

Dyscalculia: diagnosis and intervention.

First International Symposium on Learning Therapy.
Kyoto, December 2002.

Bevan, A. & Butterworth, B.

The London Dyscalculia Study.

OECD Brain Research & Learning Sciences Workshop,
Boston, MA, January 2003

Butterworth, B.

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AHRB Conference Culture and the Innate Mind.
Sheffield, July 2003

Butterworth, B.

Dyscalculia: diagnosis and intervention.

OECD Educational Neuroscience Meeting,
Orsay, September 2003

Conference Contributions : 5

Butterworth, B.

Brain systems of numerosity and the origins of dyscalculia.

Workshop on the Educational Neurosciences.
Utrecht, September 2003

Butterworth, B.

Brain systems of numerosity and the origins of dyscalculia.

RWTH
Aachen, September, 2003

Butterworth, B.

**The development of basic numeracy :
Evidence from a very large scale study.**

NTT-UCL Joint Workshop.
Kyoto, October, 2003

Butterworth, B.

**The development of basic numeracy :
Evidence from a very large scale study.**

British Association for the Advancement of Science.
Salford, October 2003

Butterworth, B.

Math in Motion.

TERC Conference: Interdisciplinary Seminar on
Perception, Body Motion, and Mathematics Learning.
Sturbridge, MA. October, 2003

Butterworth, B.

Where do numbers come from?

Leverhulme Centre for Human Evolutionary Studies,
Cambridge. November, 2003.

Butterworth, B.

Functional anatomy of mathematical processing.

Anatomy Society Annual Meeting,
Egham, January 2004

Butterworth, B.

Is dyscalculia due to a “defective number module”?

OECD-Ceri Second Literacy and Numeracy Network Meeting.
El Escorial, Spain. March 2004

Butterworth, B.

Architecture of mathematical Cognition.

First Congress of the European Neuropsychological Societies,
Modena (Italy), April 2004

Conference Contributions : 6

Butterworth, B.

Functional anatomy of numerical processing.

ASIC,
Italy, July 2004

Butterworth, B.

Biological origins of mathematical knowledge.

Mathematical Knowledge Conference,
Cambridge, July 2004

Butterworth, B.

Dyscalculia: an example of neuroscience applied to education.

BPS-Nuffield Foundation Psychology's input into maths education.
London. June 2005

Butterworth, B.

The neuropsychological approach to numerical competences.

Numbra Summer School. Erice,
Italy, June 2005

Butterworth, B.

Dyscalculia as a cognitive endophenotype.

ICON 9,
Havana, Cuba. September 2005

Butterworth, B.

Dyscalculia: an example of neuroscience applied to education.

ESRC-TLRP Meeting on Neuroscience and Education.
Oxford. October 2005

Butterworth, B.

Dyscalculia: a practical application of neuroscience to education.

The Third Nordic Research Conference on Special
Needs Education in Mathematics.
Aalborg, Denmark, November 2005 (Keynote)

Butterworth, B.

Dyscalculia: Strategies for Success.

PATOSS (Professional Association of Teachers of Students
with Specific Learning Difficulties) Annual Conference.
London, March 2006 (Keynote)

Butterworth, B.

Numbers in the brain and maths education.

American Educational Research Association, Annual
Conference, Presidential Symposium.
San Francisco, USA. April 2006

Conference Contributions : 7

Butterworth, B.

**Se l'aritmetica è innata, perché insegnarla?
Le difficoltà di apprendimento in matematica.**

Reggio Emilia, Italy, April 2006 (Keynote)

Butterworth, B.

Do numerical concepts depend on possession of language?

Workshop on Philosophical and Psychological
Perspectives on Number.

Vrije Universiteit Brussel. May 2006.

Butterworth, B.

**Arithmetic and the brain: Dyscalculia,
an unrecognised handicap.**

International Child Neurology Congress.
Montreal, Canada. June, 2006

Butterworth, B.

Neuroscience and education.

Japan Psychological Association.

Fukuoka, Japan, November, 2006 (Keynote)

Butterworth, B.

**Neuroimaging and cognitive development:
an important topic for the future.**

First British-Cuban Workshop on Neuroimaging:
Techniques and Applications.

Havana, Cuba, November, 2006 (Keynote)

Butterworth, B.

**Number vocabulary and the concept of number:
evidence from indigenous Australia.**

Language in Cognition - Cognition in Language.
Aarhus, Denmark, November 2007 (Keynote)

Butterworth, B.

**Bridging the Gap between Findings about Children's
Mathematical Development and their Application to
Educational Practice.**

Conference: Neuroscience ~ Instruction ~ Learning,
German Federal Ministry of Education & Research.
Berlin, November 2007 (Keynote)

Butterworth, B.

**Numeracy and the Brain. Understanding the Brain:
The birth of a learning science.**

Department for Children Schools and Families
(DCSF), the UK and Centre for Educational
Research and Innovation (CERI),
OECD. London, December 2007 (Keynote)

Conference Contributions : 8

Butterworth, B.

Dyscalculia: Theory, diagnosis and intervention.

2008 Nordic Dyslexia Congress.
Stockholm, August 2008.

Butterworth, B.

Neurobiology of Dyslexia and Dyscalculia.

Berlin, September, 2008.

Butterworth, B.

Dyscalculia. Assessment of learning barriers in Mathematics.

Sørlandet Centre for Special Needs Support.
Kristiansand, Norway. November, 2008.

Butterworth, B.

Music, language and number.

International Neuropsychology Symposium.
Dubrovnik, Croatia, June, 2009.

Butterworth, B. & Laurillard, D.

Low numeracy and dyscalculia: Identification and intervention.

International Workshop on "Education, Cognition &
Neuroscience: A cognitive science approach to
knowledge acquisition and Schooling."
Rovereto, Italy, October, 2009.

Butterworth, B.

Studies of enumeration and arithmetic in indigenous Australia,

Trieste, Italy, November, 2009.

B. Butterworth & T. Iuculano.

Understanding the real value of fractions,

SEPEX joint conference,

B. Butterworth & D. Laurillard.

**A New Approach to Dyscalculia Intervention Using
Adaptive Learning Technologies,**

American Educational Research Association,
Denver, Colorado, April, 2010.

B. Butterworth.

**Developmental dyscalculia: causes, identification,
recognition and intervention,**

European Educational Research in Learning and Instruction,
Zurich, Switzerland. June, 2010 (Keynote).

Conference Contributions : 9

B. Butterworth.

Low numeracy and dyscalculia: cognitive theory, neuroscience, and intervention,

British Journal of Educational Psychology Current Trends
Conference Series 2010: Educational Neuroscience,
London, June 2010 (Keynote).

B. Butterworth.

Numerical development and dyscalculia,

Attention & Performance: Space, Time, and Number:
Cerebral Foundations of Mathematical Intuitions,
Paris, France. July 2010 (Keynote).

B. Butterworth.

(1) Neural and genetic basis of dyscalculia

(2) Dyscalculia: identification, intervention and educational policy

Symposium: Mathematics Education and the Brain,
Taipei, Taiwan. July 2010 (Keynote).

B. Butterworth.

Number and space in the parietal lobes and elsewhere

ESF International Symposium on Parietal Lobe Functions,
Amsterdam, September 2010 (Keynote).

B. Butterworth.

**Stability and Change in Basic Numerical Capacities and
the Foundations of Arithmetic,**

KogWis 2010,
Potsdam, Germany, October 2010 (Keynote).

Invited Talks : 1

Butterworth, B.

The developmental dyscalculia.

Associazione Italiana Dislessia.

Convegno: La Discalculia Evolutiva.

Milan, October 1999

Butterworth, B.

Numeracy and dyscalculia.

Montessori National Conference.

October 1999.

Butterworth, B.

Our mathematical brain.

MRC Cognition and Brain Unit,

Cambridge. November, 1999.

Butterworth, B.

Number and language.

Max Planck Institute for Psycholinguistics..

December, 1999.

Butterworth, B.

Our mathematical brains.

Imperial College London, December, 1999.

Butterworth, B.

Brain imaging of basic numerical processes.

University of Melbourne, November 2000.

Butterworth, B.

Mathematics and the brain.

London Guildhall University, November 2000.

Butterworth, B.

Mathematics and the brain.

NTT Communication Science Laboratories,

Atsugi, Japan. April, 2001

Butterworth, B.

Mathematics and the brain.

LaTrobe University,

Victoria, Australia. July, 2001

Butterworth, B.

Interdisciplinary cognitive neuroscience.

Royal Children's Hospital,

Melbourne, Victoria, Australia. July, 2001.

Invited Talks : 2

Butterworth, B.

**The architecture of numerical cognition:
Evidence from neurological patients.**

Santa Lucia Hospital, Rome, September, 2002.

Butterworth, B.

The man who could read (and write) only numbers

Research Centre for Language Typology,
La Trobe University,
Melbourne, Australia, October, 2002.

Butterworth, B.

Dyscalculia

Blackburn and Darwen Local Education Authority. March 2003

Butterworth, B.

Mathematics and the brain.

University of Manchester. March 2003

Butterworth, B.

Dyscalculia.

Department for Education and Skills. February 2004

Butterworth, B.

Dyscalculia.

Oxfordshire LEA Special Educational Needs. May 2004

Butterworth, B.

Dyscalculia,

University of Maastricht, Netherlands.. June 2004

Butterworth, B.

**The development of basic numeracy:
evidence from a very large scale study.**

University of Salzburg, Austria. June 2004

Butterworth, B.

Dyscalculia.

All Party Parliamentary Group, House of Commons.
London, November 2004

Butterworth, B.

Fear and loathing in mathematics.

OECD Learning Sciences and Brain Research:
Emotions & Learning and Education Seminar.
Copenhagen, Denmark. November 2004

Invited Talks : 3

Butterworth, B.

Dyscalculia Diagnosis and Intervention

Netherlands Dyslexia Institute, Annual Meeting. .
Arnhem, Netherlands, December 2004

Butterworth, B.

**Everybody counts but not everybody understands numbers:
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1983 -

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Working Party on Cognitive Science ,
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Numbers in the Brain

A Meeting in Honour of Professor Brian Butterworth

Programme

Lecture Theatre, Clinical Neuroscience Building,
33 Queen Square, London WC1

“Representations of number in the brain” and
“The role of the language systems in the brain in
the development of the concept of number”.

26th & 27th November 2010

The Mathematical BRAIN



Brian Butterworth

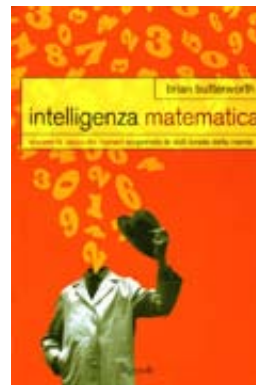
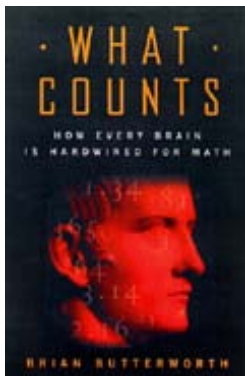
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Brian Butterworth