

THE BARONESS GREENFIELD, CBE

Curriculum Vitae



CONTACT DETAILS

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CONTENTS

SUMMARY	3
PERSONAL DETAILS.....	4
OVERVIEW OF RESEARCH.....	6
A Novel Approach to Neurodegeneration	
Patents.....	7
PUBLICATIONS.....	9
Books.....	9
Chapters and Reviews.....	14
Research Papers.....	16
PUBLIC ACTIVITIES.....	26
The Royal Institution, Achievements as Director 1998 – 2010	26
Speeches in House of Lords, of Direct Relevance to Science Outreach and Research	26

SUMMARY

Susan Greenfield was both an undergraduate and graduate at Oxford University, taking a DPhil in the Department of Pharmacology in 1977. She subsequently held research fellowships in the Department of Physiology Oxford, the College de France Paris, and NYU Medical Center New York. In 1985 she was appointed University Lecturer in Synaptic Pharmacology, and Fellow and Tutor in Medicine, Lincoln College, Oxford, before receiving a University Professorship in 1996. From 1998 to 2010 she served as Director of the Royal Institution of Great Britain, a post held jointly with her chair in Oxford. She currently is founder and CEO of a biotech company (www.neuro-bio.com) that is developing a novel anti-Alzheimer drug based on her research exploring novel brain mechanisms linked to neurodegeneration.

Greenfield has been awarded 32 Honorary Degrees from British and foreign universities and in 2000 was elected to an Honorary Fellowship of the Royal College of Physicians. Further international recognition of her work has included the 'Golden Plate Award' (2003) from the Academy of Achievement, Washington, the L'Ordre National de la Légion d'Honneur (2003), from the French Government, and the 2010 Australian Medical Research Society Medal. She was awarded a CBE in the Millennium New Year's Honours List, and was granted a non-political Life Peerage in 2001. In 2004 and 2005, she was 'Thinker in Residence' in Adelaide, reporting to the Premier of South Australia on applications of science for wealth creation. She served as Chancellor of Heriot Watt University 2005-2012, and in 2007 was elected into the Fellowship of the Royal Society of Edinburgh. Since 2014 she has held an annual Visiting Professor at the Medical School, University of Melbourne.

Greenfield also studies the physical basis of the mind: in 1995 she published her own theory of consciousness *Journey to the Centres of the Mind* (1995), which was developed substantially in *The Private Life of the Brain* (2000). Meanwhile, her book *The Human Brain: A Guided Tour* (1997) ranked in the British best-seller lists, and is still in print as a popular introduction to the brain for non-specialists. It was followed by *Tomorrow's People: How 21st Century technology is changing the way we think and feel* (2003), which explored human nature and its potential vulnerability in an age of technology. These ideas were expanded in her later book, *ID: The Quest for Identity in the 21st Century* (2009). In addition she has written a novel '2121: A Tale from the Next Century', published in 2013, which describes a dystopia century ahead in the future. The theme of unprecedented changes to contemporary human cognition, arguably comparable in its significance to Climate Change, was briefly explored in a monograph *You and Me* (2011), and has now been developed further in an in-depth exploration of the impact of technology on the brain in *Mind Change: How 21st Century Technology is leaving its mark on the brain* published in 2014 by Random House. Her latest book *A Day in the Life of the Brain: Consciousness from Dawn 'til Dusk* was published by Penguin in October 2016.

As a result of her original background in classics, Greenfield held the Presidency of the Classical Association for 2003 – 2004 and in 2010 was elected to a Fellowship of the Science Museum and from 2000 was a Forum Fellow at the World Economic Conference at Davos for ten years. In 2002 she authored the Greenfield Report *SET Fair: A Report on the Retention and Recruitment of Women in Science, Engineering, and Technology*. Greenfield has been profiled in a wide range of papers and magazines, voted one of the 100 most influential women in Britain by the Daily Mail in 2003, and 'Woman of the Year' by the Observer in 2000. In 2014 she was included in Debretts 'Top 500' of the most influential people in Britain today.

PERSONAL DETAILS

DATE AND PLACE OF BIRTH

1st October 1950, London, UK

NATIONALITY

British

EDUCATION

1962-1969 Godolphin and Latymer School for Girls, London

1970-1973 St Hilda's College, Oxford University

DEGREES

1973 BA (Hons) Oxon. Experimental Psychology
1974 MA, Oxon
1977 DPhil, Oxon. "The origin of acetyl cholinesterase in cerebrospinal fluid"
1996 DSc (Hon) Brookes University
1997 DSc (Hon) St Andrew's University
1998 DSc (Hon) Exeter University
1998 DSc (Hon) Sheffield Hallam University
1999 DSc (Hon) University of North London
1999 DSc (Hon) Royal Holloway University
2000 DSc (Hon) Heriot-Watt University
2000 DSc (Hon) University of Staffordshire
2000 DSc (Hon) Brunel University
2000 DSc (Hon) University of Buckingham
2001 DSc (Hon) University of Leicester
2001 DSc (Hon) Richmond American International University
2001 DSc (Hon) Open University
2001 DSc (Hon) University of Leeds
2001 DSc (Hon) University of Birmingham
2001 DSc (Hon) University of Liverpool
2002 DSc (Hon) University of Wales
2002 DSc (Hon) University of Southampton
2002 DSc (Hon) University of Glasgow
2002 DSc (Hon) University of Kent
2002 DSc (Hon) University of Nottingham
2004 DSc (Hon) University of East London
2004 DSc (Hon) Flinders University, Adelaide
2004 DSc (Hon) Thames Valley University
2005 DSc (Hon) University of Dundee
2005 DSc (Hon) Hebrew University of Jerusalem
2005 DSc (Hon) University of Haifa, Israel
2006 DSc (Hon) Queen's University, Belfast
2007 DSc (Hon) The Robert Gordon University, Aberdeen
2009 DSc (Hon) University of Delaware, USA
2014 DSc (Hon) Middlesex University
2015 DSc (Hon) Northumbria University

POSITIONS

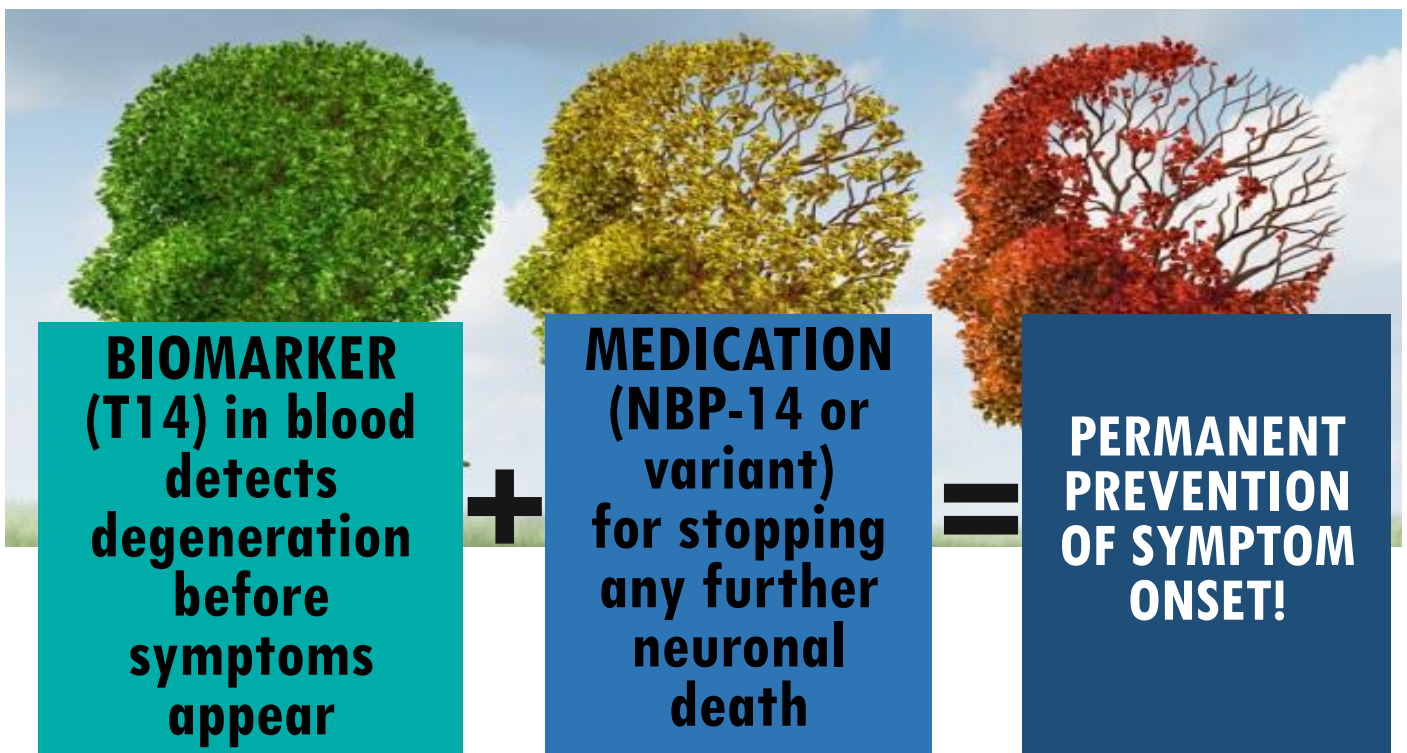
1973-1976 MRC Research Scholarship, Pharmacology Dept, Oxford
1974-1975 Dame Catherine Fulford Senior Scholarship, St Hugh's College, Oxford
1977-1978 J.H. Burn Trust Scholarship, Pharmacology Dept, Oxford
1977-1981 MRC Training Fellowship, Physiology Dept, Oxford
1978-1979 Royal Society Study Visit Award, College de France, Paris
1979-1980 MRC-INSERM Exchange Fellowship, College de France, Paris
1981-1984 Junior Research Fellowship, Green College, Oxford
1988-1995 Deputy Director, Squibb Projects
1985-1998 Tutorial Fellowship in Medicine, Lincoln College, Oxford
1985-1996 University Lectureship in Synaptic Pharmacology, Oxford
1995-1998 Gresham Professor of Physic, Gresham College, London
1995 Visiting Fellow, Neurosciences Institute, La Jolla, USA
1996 Distinguished Visiting Scholar, Queens' University, Belfast
1996- Professor of Pharmacology, Oxford University
1998- Senior Research Fellowship, Lincoln College
1998-2010 Director of the Royal Institution of Great Britain
1999 Honorary Fellowship, St Hilda's College, Oxford
2000 Honorary Fellowship, Cardiff University
2000 Woman of the Year, The Observer
2000 Commander of the British Empire (CBE)
2000 Honorary Fellowship, Royal College of Physicians
2000-2004 Member of Council of Weizman Foundation
2001 Life Peerage (Non-Political)
2002- President, Headway: Brain Injury Association
2003 Golden Plate Award, American Academy of Achievement, USA
2003 L'Ordre National de la Légion d'Honneur, France
2004-2005 President, the Classical Association
2004-2013 Elected to Board of Governors, Weizmann Institute of Science
2005-2012 Chancellor, Heriot Watt University
2005 Honorary Fellowship, The Royal Society of South Australia
2006 Alzheimer's Research Trust Patron
2006 Honorary Australian of the Year
2007- Fellow of the Royal Society of Edinburgh
2007 Senior Fellow, The Higher Education Academy
2010 Honorary Fellowship, The Science Museum
2010 Australian Society for Medical Research Medal
2010 Fellow, The Science Museum
2011- Senior Research Fellow, University Dept of Pharmacology Oxford
2012 Governor, The Florey Institute for Neuroscience and Mental Health
2014- Visiting Professor, Melbourne Medical School
2017- President's Visiting Fellowship scheme, University of Newcastle (UON) Australia

OVERVIEW OF RESEARCH: A NOVEL APPROACH TO NEURODEGENERATION (www.neuro-bio.com)

The remorseless cycle of progressive loss of brain cells that characterises Alzheimer's disease, is not a generic feature of the central nervous system: only certain groups of cells are vulnerable. We need to discover the special properties of these cells, and the specific mechanism that causes them to degenerate: we could then, at last, target that mechanism as an effective therapy. The key cells primarily lost in Alzheimer's disease are adjacent to those lost in Parkinson's, from a kind of 'hub' in the core of the brain. It turns out that these 'hub' brain cells have very different properties from all those elsewhere throughout the brain, and that these properties might make them uniquely vulnerable to neurodegeneration. In particular, unlike all other brain cells, those in the 'hub' have retained a sensitivity to chemicals usually only released in the developing brain. However, compared to foetal brain cells, mature brain cells respond completely differently to the same chemicals. If released for whatever reason, inappropriately in maturity, instead of helping brain cells to grow, the same chemical will in this different brain landscape, prove to be a killer.

Our idea therefore is that Alzheimer's disease, and indeed Parkinson's disease, are actually an aberrant form of development. Whenever most brain cells are damaged, say by a stroke, or blow to the head, normally recovery of function will occur to some extent. However, if the damage happens to be to the 'hub' cells, this triggers the release of the chemical that is only usually operative in the developing brain. Since the brain is now mature however, the chemical will kill the cells, creating still more damage, and causing more release of the now toxic chemical: the cycle of cell death we call neurodegeneration.

Neuro-Bio have identified this chemical now-turned-killer ('T14'), as well as the molecular target through which it acts. We now propose a two-pronged approach. First, to develop a means for monitoring the chemical in routine blood samples, ideally before the symptoms of Alzheimer's disease ever appear. Secondly, to devise a novel pharmaceutical means (cyclized T14, 'NBP-14') for intercepting the action of the killer chemical interacting with its target, thereby arresting any further cell death. Success with either of these goals would be a major advance, whilst a combination of both would represent a real turning-point. The combined strategy would be to detect raised levels of the killer chemical in the blood, before the symptoms appeared, and then immediately to start on the medication that arrested any further cell death. The symptoms then would never appear: an effective 'cure'.



PATENTS

<u>Country</u>	<u>Serial No</u>	<u>Filing Date</u>	<u>Title (Invention)</u>	<u>Status</u>
UK	1613999.0	16.08.16	Peptidomimetics for treating Alzheimer's disease FAMILY 3	Filed
UK	1601585.1	28.01.16	Use of T14 Inhibitor for treating metastasis FAMILY 6	Filed
UK	1600871.6	27.03.15	T14 Antibody FAMILY 5	Filed
UK	GB1508480.9	19.12.14	Cancer therapy using cyclic peptides FAMILY 4	Filed
UK	PCT/GB2015/05 3601	26.11.14	Linear Peptide Variants FAMILY 2	Filed
UK	70166PCT1 [V- S.FID1674076]	04.07. 14	Therapeutic molecule	Filed
UK UK	AXH/71898PCT 1	09.07.13	Biomarker for Alzheimer's Disease Neurodegenerative Disorders	Filed Filed
Australia	1312279.1 2014289001	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Brazil	11 2016 000565 1	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Canada	2917389	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
China	2014800395127	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Europe	14736948.2	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
UK	GB2516045	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
India	201617004543	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Japan	Not yet known	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
South Korea	10-2016- 7003432	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Mexico	MX/1/2016/0000 95	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
New Zealand	716647	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
Patent Cooperation Treaty	WO 2015/004430	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
US	14/903,589	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed
South Africa	2016/00858	9.7.2013	Neurodegenerative Disorders (NBP-14) FAMILY 1	Filed

PATENTS

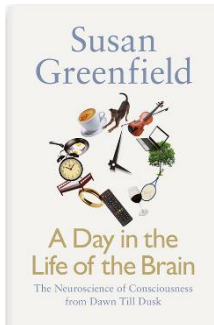
UK	1311036.6	20.06.13	Quantitative biomarkers in serum to predict the future onset of Alzheimer's disease	Filed
UK	0708646.5	24.05.07	T-30 biologically active C-terminal fragment of acetylcholinesterase (Bond and Greenfield)	Filed US filing 7/08
UK Europe	PCT/GB2006/05 0058	17.03.06	Screening Method for Compounds Publication with Anaesthetic Property (Greenfield and Collins)	Publication Int Bureau due Sept 06
UK Europe	WO2005 116239	20.03.04	Diagnostic assays for neurodegenerative diseases (Greenfield)	Granted
UK	0107911.0	29.03.00	Alpha 7 receptor screening assay (Greenfield and Westwell)	Granted UK and USA
UK Europe	2362384	30.12.992 2.12.00	Animal Models for neurodegenerative disease (Greenfield, Deacon and Rawlins)	Granted
Europe US Japan UK US	WO 97/35962 73446 02016350.7	21.03.972 2.03.96	Peptide from a soluble form of AChE, active as a calcium channel modulator(Greenfield and Vaux)	Granted
US	5451580	19.09.95	Method for treating insult to Neurons prone to Parkinson's degeneration employing an ATP- sensitive potassium channel blocker (Greenfield and Murphy)	Granted
US	0826546	27.01.92	Covering method for treating ischemic insult to neurons employing an ATP-sensitive potassium channel blocker. (Greenfield and Murphy)	Granted
US	5236932	18.11.91	Method for treating Parkinson's Disease employing an ATP- sensitive Potassium Channel Blocker (using quinine). (Greenfield and Levesque)	Granted
Canada UK Europe	91306612.2	18.06.91 19.07.91	Method for treating Parkinson's Disease employing an ATP- sensitive Potassium Channel Blocker (using quinine). (Greenfield and Levesque)	Issued Issued
US	554772	19.07.90		
Europe	88303511.5 (Publ. No. 288243)	19.04.88	Acetylcholinesterase (for treating CNS disorders such as Parkinson's Disease). (Greenfield and Smith)	Filed
Canada Japan	564453	19.04.88		Filed
	99296/88 (Publ. No. 52798/88)	20.04.88		Filed

PUBLICATIONS

BOOKS

A Day in the Life of the Brain (2016)

Publisher: Penguin

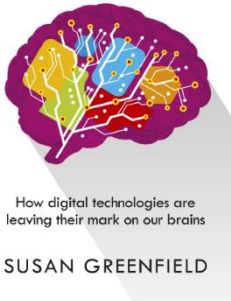


Each of us has a unique, subjective inner world, one that we can never share directly with anyone else. But how do our physical brains actually give rise to this rich and varied experience of consciousness? In this groundbreaking book, internationally acclaimed neuroscientist Susan Greenfield brings together a series of astonishing new, empirically based insights into consciousness as she traces a single day in the life of your brain. From waking to walking the dog, working to dreaming, Greenfield explores how our daily experiences are translated into a tangle of cells, molecules and chemical blips, and thereby probing the enduring mystery of how our brains create our individual selves.

Mind Change: How digital technologies are leaving their mark on our Brains (2014)

Publisher: Random House

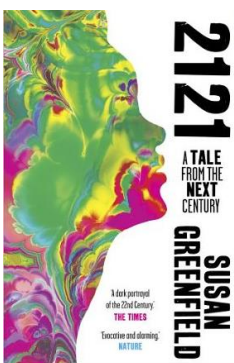
MIND CHANGE



The impact of digital technology on the human brain. The human brain has evolved to adapt to the environment: given the environment is changing in unprecedented as a result of emersion in screen culture, our mental processes might also be changing in an unprecedented way.

2121: A Tale from the Next Century (16 Jan 2014)

Publisher: Head of Zeus.

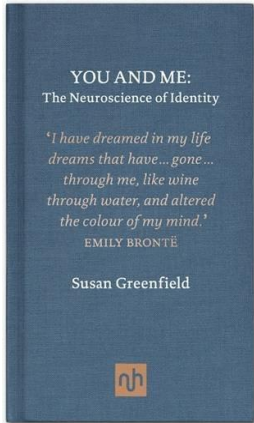


It is many years since the human race gave up its individuality.

Our world is now a place of technicolour, mechanical beauty. Iridescent domes sit upon the ruins of the previous civilization, and small figures wander constantly between them - dancing, singing, running, but never touching. Each of us is immersed in our own virtual reality. We are like children, living in a perpetual summer: ageless, beautiful, and utterly reliant on the lost knowledge of another age. For decades, nothing disturbed our peaceful equilibrium. Until Fred arrived. Until he took one of us from among from us and made her different. Until he showed us what our world was made of...

You and Me: The Neuroscience of Identity (3 Nov 2011)

Publisher: Notting Hill Editions.

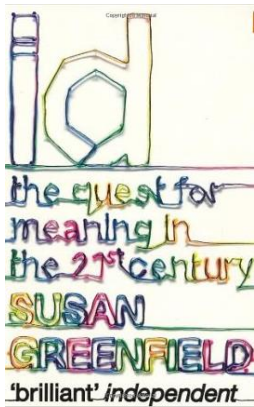


Identity is a term much used yet hard to define. Perhaps for this reason, the concept has long been a favourite with philosophers, and for the very same reason has been avoided by brain scientists, - until now. In this neurobiological exploration of identity, Greenfield briefly reviews the social perspective from finger prints, to faces, to signatures of the many ways we try to identity ourselves, - in vain. The psychiatric perspective however does offer some valuable clues that then leads to an excursion into the physical brain: the neuroscience perspective. But identity cannot just be an objective phenomenon: hence any pertinent brain phenomena have to be seen also, as they are in the following chapter, from an individual perspective. Armed with the insights gained from these diverse approaches, Greenfield attempts to conceive of actual scenarios in the physical brain that would correspond to familiar examples of identity. However, given the physical brain adapts exquisitely to the environment, and the 21st Century environment is changing in unprecedented ways, are we facing correspondingly unprecedented changes to our

identity?

ID: The Quest for Identity in the 21st Century (2 Apr 2009)

Publisher: Sceptre



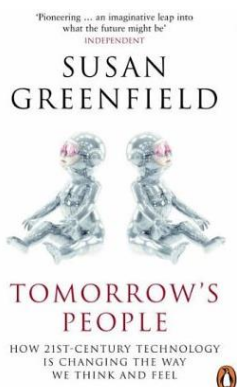
If you've ever wondered what effect video games have on your children's minds or worried about how much private information the government and big companies know about you, ID is essential reading.

Professor Susan Greenfield argues persuasively that our individuality is under the microscope as never before; now more than ever we urgently need to look at what we want for ourselves as individuals and for our future society.

ID is an exploration of what it means to be human in a world of rapid change, a passionately argued wake-up call and an inspiring challenge to embrace creativity and forge our own identities.

Tomorrow's People: How 21st-Century Technology is Changing the Way We Think and Feel (30 Sep 2004)

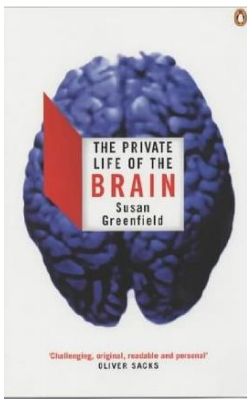
Publisher: Penguin



The book is an exploration of how this century is going to change not just the way we think, but also what we actually think with - our own individual minds. How will new technologies transform the way we see the world? At the beginning of the twenty-first century, we may be standing on the brink of a mind make-over far more cataclysmic than anything that has happened before. As we appreciate the dynamism and sensitivity of our brain circuitry, so the prospect of directly tampering with the essence of our individuality becomes a possibility.

The Private Life of the Brain (28 Feb 2002)

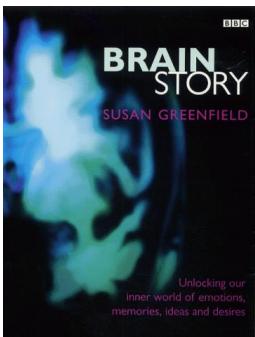
Publisher: Penguin



What is happening in the brain when we drink too much alcohol, get high on ecstasy or experience road rage? Emotion, says internationally acclaimed neuroscientist Susan Greenfield, is the building block of consciousness. As our minds develop we create a personalized inner world based on our experiences. But during periods of intense emotion, such as anger, fear or euphoria, we can literally lose our mind, returning to the mental state we experienced as infants. Challenging many preconceived notions, Susan Greenfield's groundbreaking book seeks to answer one of science's most enduring mysteries: how our unique sense of self is created.

Brain Story: Why Do We Think and Feel as We Do? (20 Jul 2000)

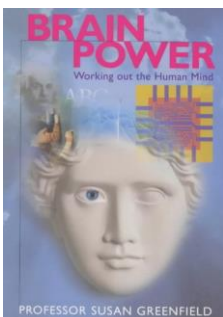
Publisher: BBC Books



In this tour through the brain's workings, Susan Greenfield brings the reader right up to date on the latest theories and controversies of neuroscience. From studies of the bizarre and disturbing effects of brain injuries, she tackles the questions that have baffled philosophers since antiquity.

Brainpower: Working Out the Human Mind by Susan Greenfield (30 Mar 2000)

Publisher: Element

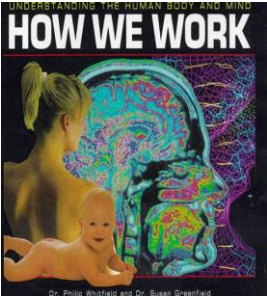


Advances in medical science have accustomed us to the idea that many of our body organs can be replaced by donation. However, it seems inconceivable to transplant the brain. What is it about our brains that make us different as animals and individual as people?

Advances in medical science have accustomed us to the idea that many of our body organs can be replaced with organs donated by some else. However, the one organ that it seems inconceivable to transplant from one person to another is the brain. Why is this? what is it about our brains that makes us different as animals, and individual as people?;The author looks at these and many other questions – at the ways in which our minds identify who we are, what we can do, and how we feel. Under the guidance of Professor Susan Greenfield, the book follows the development of the brain through the stages of a human life, from the beginning in the womb, during infancy and childhood, to the emotional explosion of adolescence, and finally the wisdom of maturity.

How We Work by Susan Greenfield and Phillip Whitfield (31 Oct 1997)

Publisher: Marshall Editions

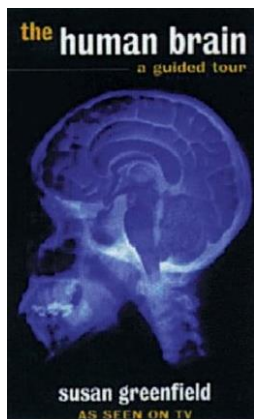


Explaining the body and mind using numerous full-colour graphics to clarify the subjects, the book: includes the latest ideas and discoveries about the human body and brain; employs numerous comparisons with everyday life and the animal world to help explain how the mind works; shows with case histories what happens when aspects of the body and mind malfunction; gives many everyday examples to match theory with reality; and uses a cross-referencing system to make connections between related areas. The book attempts to make sense of the intricate workings of the body and mind by focusing not on what the body and mind are, but what they actually do. Illustrations and text, which employ comparisons and analogies from everyday life, help explain the many functions of the human body and mind. The first section, "How Your Body

Works", describes the body's systems down to the smallest detail, and investigates how they interconnect and function. Every aspect of the mind is explored in "How Your Mind Works", with an explanation of the theory and structure, as well as communication processes and human consciousness in jargon-free language. Susan Greenfield is the author of "Journeys to the Centre of the Mind" and "Concepts in Cellular Neuroscience".

The Human Brain: A Guided Tour (SCIENCE MASTERS) (6 Jul 1997)

Publisher: Phoenix



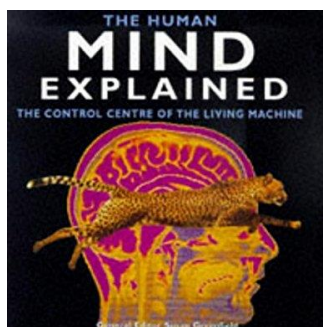
Locked away remote from the rest of the body in its own custom-built casing of skull bone, with no intrinsic moving parts, the human brain remains a tantalising mystery. But now, more than ever before, we have the expertise to tackle this mystery - the last 20 years have seen astounding progress in brain research.

Susan Greenfield begins by exploring the roles of different regions of the brain. She then switches to the opposite direction and examines how certain functions, such as movement and vision, are accommodated in the brain. She describes how a brain is made from a single fertilized egg; the fate of the brain is traced through life as we see how it constantly changes as a result of experience to provide the essence of a unique individual.

'Dr Susan Greenfield ... is rightly admired as a popular communicator and The Human Brain: A Guided Tour will appeal as a Baedeker to the brain, even to the non-scientist' The Times

The Human Mind Explained: The Control Centre of the Living Machine (10 Oct 1996)

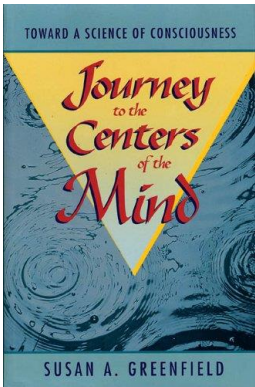
Publisher: Cassell Illustrated



Seeks to explain the mysterious processes of the human brain, delving into everything from synapses to states of mind. This book introduces comparisons with animal brains, and provides human case histories to illustrate specific mental oddities, banishing many myths in the process.

Journey to the Centers of the Mind: Toward a Science of Consciousness (4 May 1995)

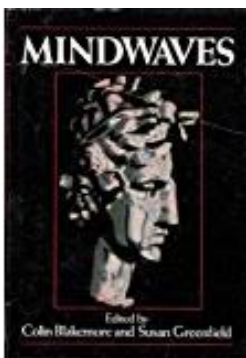
Publisher: W.H. Freeman & Co Ltd



How do our personalities and mental processes, our "states of consciousness", derive from a gray mass of tissue with the consistency of a soft-boiled egg? How can mere molecules constitute an idea or emotion? Some of the most important questions we can ask are about our own consciousness. Our personalities, our individuality, indeed our whole reason for living, lie in the brain and in the elusive phenomenon of consciousness it generates. Thinkers in many disciplines have long struggled with such questions, often in ways that have seemed incompatible, if not downright contradictory. Philosophers have meditated on the subjective experience of consciousness, with little attention to the physical realm, while scientists have sought to establish a causal relation between brain function and mind, often ignoring the qualitative aspects of experience. In *Journey to the Centers of the Mind*, neuroscientist Susan Greenfield offers an intriguing, unifying theory of consciousness that encompasses both phenomenological mental events and physical aspects of brain function. Using information gathered from clues in animal behavior, human brain damage, computer science, neurobiology, and philosophy, Greenfield offers a "concentric theory" of consciousness, and shows how certain events in the brain correspond to our qualitative experience of the world. Demonstrating the ways in which we can interpret the experience of consciousness in terms of interactions among neurons, she explores how much we can learn by continuing to find the links between our physical and mental inner worlds.

Mindwaves: Thoughts on Intelligence, Identity and Consciousness by Colin Blakemore and Susan Greenfield (24 Sep 1987)

Publisher: Wiley-Blackwell



Is the mind an entity that exists apart from the brain? Is the relationship of brain and mind like that of computer hardware and software? Do animals have minds with which they think? These are some of the questions addressed in "Mindwaves" by specialists in brain research.

CHAPTERS AND REVIEWS

Garcia-Rates, S. and Greenfield, S.A. (2017) Cancer and Neurodegeneration: Two Sides, Same Coin? Submitted as an invited editorial to *Oncotarget*

Greenfield, SA, Badin, AS, Ferrati, G and Devonshire, IM. (2017) Optical imaging of the rat brain provides a previously missing link between top-down and bottom-up nervous system function. Submitted to *Neurophotonics* as an invited review.

Small, G. and Greenfield SA (2015) current and Future Treatments for Alzheimer's Disease. *The American Journal of Geriatric Psychiatry* 09/2015; DOI: 10.1016/j.jagp.2015.08.006

Greenfield SA (2013) Discovering and targeting the basic mechanism of neurodegeneration: the role of peptides from the c-terminus of acetylcholinesterase *Chemico-Biological Interactions*. 2013 May 25;203(3):543-6. DOI: 10.1016/j.cbi.2013.03.015. Epub 2013 Apr 3.

Greenfield SA (2012) The Singularity: Commentary on David Chalmers. *Journal of Consciousness Studies* 19, No. 1-2, 2012, pp. 112-118.

Greenfield SA, Zimmermann M. and Bond CE. (2008) Non-hydrolytic functions of ACHE: The significance of C-terminal peptides. *Federation of European Biochemical Societies. FEBS Journal* 275, pp 604-611.

Greenfield SA (2006) New Language for the New Medium of Television. In *Re-thinking TV Perspective on Neuroscience*. Editor Beverley Clarke (Premium Publishing).

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PUBLIC ACTIVITIES

THE ROYAL INSTITUTION, ACHIEVEMENTS AS DIRECTOR 1998 – 2010

- Escalation of public events from the occasional Public Lecture several times a year, to normally some three events a week.
- Increase in membership prior to refurbishment from 2,000 to approximately 3,000
- Setting up a Science Media Centre; www.sciencemediacentre.org
- Setting up a Young Scientists' Centre: this unique initiative provides a 'hands-on' laboratory and seminar room for schoolchildren to conduct open ended, bespoke experiments designed in collaboration with Ri staff and teachers.
- Inaugurating a sister organisation in Adelaide, RiAus, to serve the whole of Australia: this initiative has arisen directly from my two periods of residence in South Australia, where initiatives were developed linking science to society and previous non-scientific sectors. These initiatives now form the agenda for RiAus.
- A major refurbishment of the Ri that has taken 2½ years at a cost of £24M. This 'new' Ri was opened officially by HM The Queen and HRH The Duke of Edinburgh in May 2008: the reinterpretation of the building has freed up 40% more functional space and includes a bistro, bar and restaurant, as well as state of the art nanotechnology labs, web-streaming facilities and interactive exhibition spaces allowing us to display for the first time 80% of our artefacts that form the basis of much modern science.

SPEECHES IN HOUSE OF LORDS, OF DIRECT RELEVANCE TO SCIENCE OUTREACH AND RESEARCH

12th September 2016: Lord Storey to ask Her Majesty's Government how they intend to ensure that all teachers at academies and free schools are fully qualified.

<https://hansard.parliament.uk/lords/2016-09-12/debates/16091219000132/TeachersAcademiesAndFreeSchools>

28th January 2016: The role of adult education and lifelong learning, Moved by Baroness Sharp: that this House takes note of the role of adult education and lifelong learning and the need to develop the skills needed to strengthen the United Kingdom economy

<http://www.publications.parliament.uk/pa/ld201516/ldhansrd/text/160128-0002.htm#16012842000924>

05 March 2015: Women's economic empowerment both nationally and internationally, Moved by Baroness Jolly: That this House takes note of women's economic empowerment and the progress in achieving it that has been made in the United Kingdom and internationally.

<http://www.publications.parliament.uk/pa/ld201415/ldhansrd/text/150305-0001.htm#15030536000284>

09 April 2014: Higher Education, Moved by Lord Ahmad of Wimbledon: That this House takes note of higher education in the United Kingdom.

<http://www.publications.parliament.uk/pa/ld201314/ldhansrd/lhan144.pdf>

13 March 2014: Regenerative Medicine: S&T Committee Report, Moved by Lord Patel: To move that this House takes note of the Report of the Science and Technology Committee on regenerative medicine (1st Report, HL Paper 23).

<http://www.publications.parliament.uk/pa/ld201314/ldhansrd/lhan128.pdf>

13 March 2014: Education: Social Mobility, Moved by Lord Nash: To move that this House takes note of the role of primary and secondary education in improving social mobility.

<http://www.publications.parliament.uk/pa/ld201314/ldhansrd/lhan128.pdf>

- 17 October 2013: Drugs, Moved by Baroness Meacher: That this House takes note of the report of the House of Commons Home Affairs Select Committee Drugs: Breaking the Cycle (HC 184, 9th Report Session 2012–13) and the report of the All-Party Parliamentary Group for Drug Policy Reform, published in January.
<http://www.publications.parliament.uk/pa/ld201314/ldhansrd/text/131017-0001.htm>
- 05 December 2012: Question for Short Debate: Digital Technology. To ask Her Majesty's Government what assessment they have made of the impact of digital technologies on the mind.
<http://www.publications.parliament.uk/pa/ld201011/ldhansrd/text/111205-0002.htm>
- 31 March 2011: Debate on Economy: Growth. Moved by Lord Hollick to call attention to the case for policies to support economic growth and to promote investment, innovation, technology, infrastructure, skills and job creation; and to move for papers.
<http://www.publications.parliament.uk/pa/ld201011/ldhansrd/text/1103310001.htm#11033157000403>
- 25 Feb 2010: Debate on Higher and Further Education: Funding. Moved By Lord Baker of Dorking to call attention to the consequences of the cuts to higher and further education funding that have been announced; and to move for Papers.
<http://www.parliament.the-stationery-office.co.uk/pa/ld200910/ldhansrd/text/100225-0010.htm>
- 12 Feb 2009: Debate on Children: Social Networking Sites. Moved By Lord Harris of Haringey to call attention to the growth in the use of social networking internet sites by children and the adequacy of safeguards to protect their privacy and interests; and to move for papers.
<http://www.publications.parliament.uk/pa/ld200809/ldhansrd/text/90212-0010.htm>
- 03 May 2007: Debate on Health: Stem Cell Therapy. Moved By Lord Alton of Liverpool
http://www.publications.parliament.uk/pa/ld200607/ldhansrd/text/70503w0002.htm#column_WA238
- 03 May 2007: Debate on Schools: Science Teaching. Moved by Lord Broers rose to call attention to science teaching; and to move for Papers
<http://www.publications.parliament.uk/pa/ld200607/ldhansrd/text/70503-0008.htm#07050377000001>
- 11 May 2006: Debate on Science and Technology: response by Lord Sainsbury of Turville
http://www.publications.parliament.uk/pa/ld200506/ldhansrd/vo060511/text/60511w02.htm#60511w02_sbhd7
- 09 Dec 2003: Debate on Science and Politics: response by Lord Sainsbury of Turville
http://www.publications.parliament.uk/pa/ld200304/ldhansrd/vo031209/text/31209-06.htm#31209-06_head0