

The Master and his Emissary:

The Divided Brain and the Making of the Western World

By **Iain McGilchrist** (°1953)

Selected by *Barnes & Noble Review* as one of the best books of 2009 in history and philosophy

Shortlisted for the 2009 Bristol Festival of Ideas Book Prize

Longlisted for the 2010 Royal Society Prize for Science Books

Named one of the best books of 2010 by *The Guardian*



Iain McGilchrist

Yale University Press, editors comment:

Why is the brain divided? The difference between right and left hemispheres has been puzzled over for centuries. In a book of unprecedented scope, Iain McGilchrist draws on a vast body of recent brain research, illustrated with case histories, to reveal that the difference is profound—not just this or that function, but two whole, coherent, but incompatible ways of experiencing the world. The left hemisphere is detail oriented, prefers mechanisms to living things, and is inclined to self-interest, where the right hemisphere has greater breadth, flexibility, and generosity. This division helps explain the origins of music and

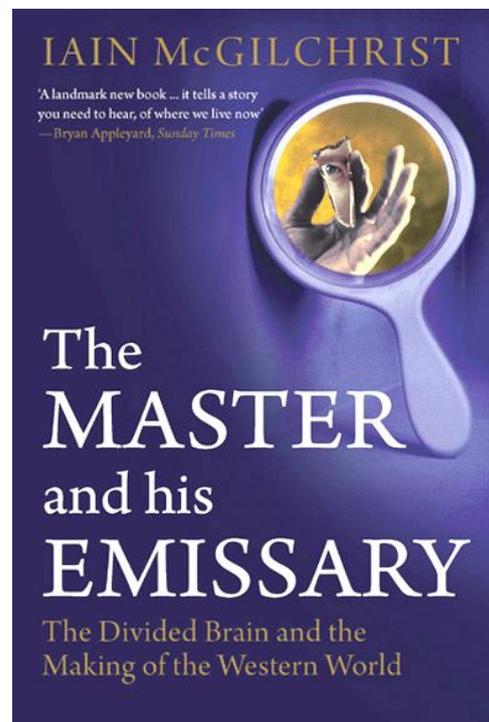
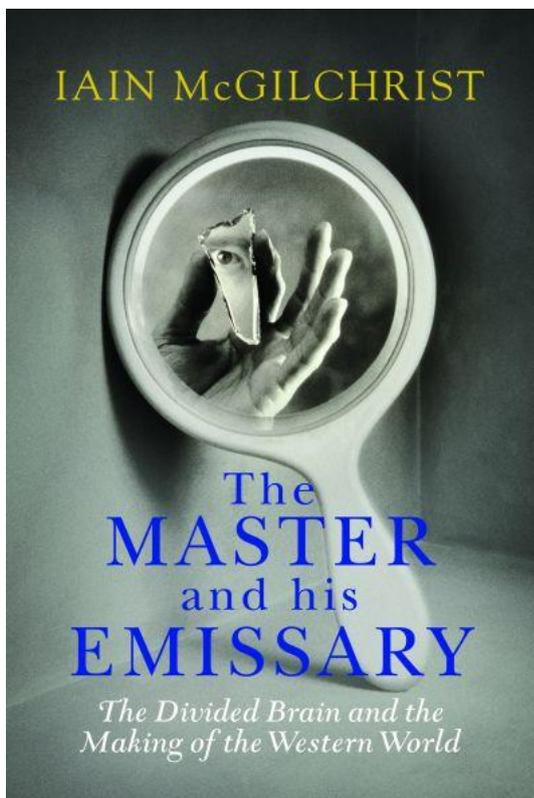
language, and casts new light on the history of philosophy, as well as on some mental illnesses.

In the second part of the book, McGilchrist takes the reader on a journey through the history of Western culture, illustrating the tension between these two worlds as revealed in the thought and belief of thinkers and artists, from Aeschylus to Magritte. He argues that, despite its inferior grasp of reality, the left hemisphere is increasingly taking precedence in the modern world, with potentially disastrous consequences. This is truly a tour de force that should excite interest in a wide readership.

Iain McGilchrist is a former Fellow of All Souls College, Oxford, where he taught literature before training in medicine. He was Consultant Psychiatrist and Clinical Director at the Bethlem Royal and Maudsley Hospital, London, and has researched in neuroimaging at Johns Hopkins University, Baltimore. He now works privately in London and otherwise lives on the Isle of Skye.

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The Master and his Emissary: The Divided Brain and the Making of the Western World

By *Iain McGilchrist*

SOME RESPONSES

'Unbelievably rich ... manages to state in maximally clear fashion issues of the utmost subtlety. The erudition is staggering.'

--- **Professor Louis Sass**, author of *Madness and Modernism* and *The Paradoxes of Delusion* (read more below)

'Really superb! Best book on laterality I have ever read, with profound implications for the nature of consciousness ... McGilchrist turns conventional wisdom about our hemispheric specializations on its head. By reflecting more deeply on dimensions of mind and culture, he coaxes us to understand how the supposedly "non-dominant" right hemisphere, deeper in both feeling and wisdom, has long guided the best of human life, often to be undone by the chattering and confabulating servant on the other side. This is a profound analysis of the divisions within our higher mental apparatus that have been writ large in the history of our species. No wonder the other animals do not speak. They still socialize more through their right hemispheres, allowing the servant in the left to pursue food and facts, and chattering in humans, rather than the more intimate experiences of mind. Through interdisciplinary scholarship unparalleled in recent years, McGilchrist reintroduces us to ourselves, and cultural history: a true masterpiece--a synthesis of decades of pondering a vision that coaxes us to question many conventional "wisdoms". The best book I've read in the past decade ... a groundbreaking and beautifully written book.'

--- **Professor Jaak Panksepp**, Baily Professor of Animal Well-Being Science at Washington State University, and author of the classic works *Affective Neuroscience*, and *A Textbook of Biological Psychiatry*

'I am now reading your stunning book *The Master and his Emissary*. It's a masterpiece.'

--- **Professor Todd Feinberg**, Professor of Neurology & Psychiatry, Albert Einstein College of Medicine, Beth Israel Medical Center, New York

'Excellent scholarship ... I much admire the blend of simplicity and complexity in the book and think it remarkable. Congratulations ... I continue to digest your book. It deserves multiple readings.'

--- **Professor Peter Whitehouse**, Professor of Neurology, Case Western Reserve University

'Wonderfully written - very impressive how you deal with the enormous literature (of which I also know some part): a strong argument, well-grounded - deepest respect and admiration for your achievements. I can't remember having read a book of such depth and density (and clarity) ...'

--- **Professor Jürg Kesselring**, Professor of Neurology, Neuroscience Center Zürich

'An intensely academic exploration of one of the most important aspects of human neurobiology, which directly reflects upon that which is most central to the question of what it means to be human, firmly based in a neurobiological subtext.'

--- **Professor Michael Trimble**, Emeritus Professor of Behavioural Neurology at the Institute of Neurology, Queen Square, London, and author of the classic *Biological Psychiatry*, writing in *Cognitive Neuropsychiatry*

'Clearly more than any ordinary life-time's work ... capitalising on an extraordinary range of knowledge and experience to unite the humanities and brain sciences in this comprehensive way. I know of no one else who could have done it. Really fascinating stuff ... vast amounts to admire and marvel over. [McGilchrist has] read and thought deeply about an astonishing volume of the literature ... the arguments and deductions seem to me to be immaculate ... the sections on language and music have gripped me particularly.'

--- **Professor Alwyn Lishman**, Professor Emeritus of Neuropsychiatry at the Institute of Psychiatry, University of London, and author of the seminal textbook *Organic Psychiatry*

'A remarkable book...[McGilchrist] is immensely erudite. He writes with great clarity, and while the book develops an argument it is also a treasure chest of fascinating detail and memorable quotation. Its thesis is profoundly interesting: most readers who enter here with time to spend will be richly rewarded ... the effort to make sense of the totality of our lives in terms of brain function is exhilarating and worthwhile.'

--- **Professor Adam Zeman**, Professor of Cognitive and Behavioural Neurology at the Peninsula Medical School and School of Psychology, author of *Consciousness: a User's Guide* and *A Portrait of the Brain*, writing in *Standpoint Magazine*

'I want to congratulate you on your remarkable and breathtaking volume ... which instantly entranced me ... Soon after reading the book I recommended it to many of my colleagues across the US, who also were galvanized by your theses ... Again, congratulations on a magnificent piece of scholarship.'

--- **Professor Allan Schore**, Department of Psychiatry and Biobehavioral Sciences, UCLA David Geffen School of Medicine, and author of *Affect Regulation and the Origin of the Self*

'Besides being a brilliant work, this book is an event. McGilchrist lays out a startling, novel account of the importance of the right hemisphere of the brain, and what is more, he turns this into a gripping and dizzying account of the trajectory of the whole of human (but especially of Western) civilisation and offers, in the course of this, *the most powerful argument penned by any living author of the importance of the arts and humanities* (including philosophy, properly understood, the social studies and '*les sciences humaines*') ... *The Master and His Emissary* is a work of extraordinary erudition. McGilchrist seems to be a polymath, who has managed to feel his way into a vast array of different 'literatures'. The book's bibliography is so huge that the publishers excised most of it in the paperback version, so that one must go online to find the full bibliography to check many of the references....there are gems on virtually every page ...

No one who is seriously interested in the focal subject matter of this journal can afford to ignore this book.'

--- **Dr Rupert Read**, Reader in Philosophy at the University of East Anglia, writing in *Phenomenology and the Cognitive Sciences*

'I think your book is one of the best contributions to the world of thought ever written – and certainly badly needed in this historical situation – in academe and beyond ... Thank you for your monumental achievement and contribution.'

--- **Professor Ellen Dissanayake**, School of Music, University of Washington, and author of *Art and Intimacy*, *Homo Aestheticus*, and *What Is Art For?*

'*The Master and his Emissary* is one of the greatest, most insightful books I have ever read ... It has helped reshape my thinking about humanity, and it is underpinning my thinking in relation to other work ...'

--- **Professor Barbara Oakley**, Department of Medical and Biological Engineering, Oakland University, and author of *Evil Genes*, *Pathological Altruism* and *Cold-Blooded Kindness*

'The author brings together his impressive knowledge of clinical psychiatry and an elegant expressive ability ... Every point made is referenced: in fact, almost a quarter of the book's pages are notes and bibliography. I found myself moving back and forth between the text and the notes and marking references that I *must* look up. The bibliography is a valuable source for scholars in the field ... The evidence in support of these conclusions is presented fully and extremely well in the book... the breadth of the author's knowledge is nothing less than extraordinary ... This is, indeed, a fascinating book and one that will stimulate debate and ideas.'

--- **Professor Lesley Rogers**, Centre for Neuroscience and Animal Behaviour, University of New England, Australia, world authority on lateralisation in animals, writing in *Laterality*

'It is no exaggeration to say that this quite remarkable book will radically change the way you understand the world and yourself ... Reading this book, to which you will want to return on a regular basis (one reading

cannot possibly exhaust its multifaceted insights) will help you better understand reality and the way we experience and represent it. It is a genuine *tour de force*, a monumental achievement – I can think of no one else who could have conceived, let alone written, a book of such penetrating brilliance.'

--- **David Lorimer**, Chair of the Wrekin Trust and Director of the Scientific and Medical Network, writing in the *Scientific and Medical Network Review*

'I was not asked to write this review; I asked to be allowed to. I ordered my copy immediately after reading Mary Midgley's *Guardian* review and waited impatiently for it to arrive. When it did, I read it in every spare moment I had, and a lot I hadn't, ending up with underlinings and sometimes manic exclamation marks pencilled onto almost every page ... Iain McGilchrist's qualifications for his massive undertaking are ideal, perhaps unique ... McGilchrist's grasp of this vast field, and the depth of his philosophical and artistic insight, is staggering ... It underpins, validates, explains a whole slew of intuitions about general practice and life which I have felt and tried to express in (inevitably) inadequate words and which I know are widely shared.'

--- **Dr James Willis**, Fellow of the Royal College of General Practitioners, writing in the *British Journal of General Practice*

'Utterly amazing – probably the most exciting book I've ever read (I'm currently working through it for the second time).'

--- **Sue Palmer**, science writer and broadcaster, and author of *Toxic Childhood* and *Twenty-First Century Boys*

'The most comprehensive and coherent account of human brain lateralisation yet published.'

--- **Rita Carter**, prize-winning science writer and author of *The Brain Book*, *Mapping the Mind*, and *Exploring Consciousness*

'It is no exaggeration to say that Part One of the book is a *tour de force* ... [in Part Two] McGilchrist puts on display a remarkable erudition, an ability to discuss with intelligence and insight the history of Western art

and literature, philosophy of a whole range of stripes, musicology (and the relationships between music and the brain), and the varieties of religious experience, just to mention a few of the topics he touches upon ... he has some of the qualities of a Renaissance man.'

--- **Professor Andrew Scull**, Distinguished Professor of Sociology at the University of San Diego, and historian of medicine, writing in *Brain*

'It's rare that you come across a book that changes the way you think, rarer still a book that offers a persuasive critique of your own actual thinking processes, but [this book] can do both these things ... In doing all this, McGilchrist shows great mastery of both the tiny but significant detail (left-hemisphere), and the bigger picture (right-hemisphere) – and the connection between the two. He himself, then, is true to his word ... Given the depth, breadth, even brilliance of its interpretations of disparate material evidently developed patiently over decades, though, no brief account could possibly do this book justice. The only recommendation can be to buy it, and make up your own mind.'

--- **Dr Roger Kingerlee**, writing in *Neuropsychanalysis*

'No-one can read *The Master and His Emissary* and be indifferent to its arguments. This is a book written with great clarity, purpose, and ardor. McGilchrist's erudite and cogent language will attract people from a multiplicity of disciplines inside and outside the fields of neuroscience and the psychological sciences, as well as the educated reader ... each chapter of this volume deserves a review in its own right ... This colossal oeuvre stimulates, intrigues, and propels us beyond the usual study of neuroscience. ... Every page of this book confronts, challenges, and captures our intellects as well as our imaginations.'

--- **Dr Rita Testa**, writing in *Neuropsychanalysis*

'I am reading your important *Master and his Emissary* ... fascinating ... Your book demands careful reading ... This is the first time in my career that I have written such an e-mail, but I did it because, even early in my reading of your book, I have been impressed by your ability to make a persuasive argument and to draw on a wide variety of connections as you make your case.'

--- **Professor Howard Kushner**, Nat C. Robertson Distinguished Professor of Science & Society at Emory University, Atlanta, and historian of medicine

'One of the most exciting and thought-provoking books that I have read in a very long time, and beautifully written into the bargain ... Much of my own historical work has been in fields to which your ideas are highly relevant, so I shall have a lot of rethinking to do. There are quite a few ways that I would want to modify your historical sketch, but one of the great virtues of your approach - to my mind - is its flexibility ... Many congratulations on a tremendous achievement.'

--- **Robin Briggs**, Special Lecturer in Modern History at Oxford University and Fellow of the British Academy

'McGilchrist's demonstration of the damage which has been done, and is increasingly being done, by the dominance of the left hemisphere operating alone, is masterly and totally convincing.'

--- **Professor Keith Sagar**, Professor of English Studies at the University of Nottingham, writing in *Resurgence*

'By far the most interesting and provocative ideas I have encountered recently on the broad subject of neuroscience ... McGilchrist develops a powerful narrative about how each hemisphere of the brain produces a different 'version' or 'take' on the world. *The Master and His Emissary* offers some powerful paradigms for how we might better begin to understand aspects of the most basic functions of the human brain.'

--- **Jonathan Mills**, Director of the Edinburgh International Festival, in the *State of the Arts address to the National Gallery of Victoria, Melbourne, 2010*

'McGilchrist writes well, with a direct engaging style, so that a reader with no background in neuroscience could easily follow his descriptions of brain function...This is a very good book, both informative and erudite.'

--- **Professor Ian Gibbins**, Professor of Anatomy at Flinders University School of Medicine, writing in the *Australian Book Review (ABR)*

'What startled me when I encountered your work was the nature and range of your ideas, reminiscent to me more of the intellectual climate of Renaissance Florence, or Periclean Athens, than of England today. I mean that as the highest praise. Your book was what I hoped scholarship would be, but never was. For this reason, I find it difficult to overstate what your words mean to me.'

--- **Vaughan Pilikian**, poet and filmmaker

'You express in the most eloquent, readable way, and with such vast breadth of knowledge, research, expertise and experience, that which I have 'felt' (and battled with) for so long. I am a musician - and have been all my life. I find myself deeply moved and stirred by the state you report on and by the gauntlet you throw down. You have, to me, created a truly remarkable work - a work I trust will deeply impact and stir the lives of many, many... and for years to come. Thank you.'

--- **Julian Marshall**, musician and composer

'I was astonished by so many aspects of your book ... I was most moved by what you call "betweenness" ... If I had to summarize my river-born understanding, it is precisely what you describe so beautifully as "betweenness" ... Thank you so much for your important work. It is lucid, deep, and wonderfully researched, so very humane and so very desperately needed in this mechanizing, zombifying, fracturing world. It is so very necessary in the midst of hubris.'

--- **Suprabha Seshan**, Director of Gurukula Botanical Sanctuary, Western Ghats, and winner of the UK's top conservation award, the Whitley Prize

'If you are interested in the brain and consciousness, this is one of the best books ever written ... although I have been dipping-into and stepping-away-from the book for more than a year, I still keep coming across sections that jump out at me as if I hadn't seen them before ... for the sheer number and density of insightful and suggestive points, there is little else in this league ...it is a wonderful achievement, especially for the time and place it was published - very much an old style piece of scholarship, written from the heart by a man of exceptional brilliance and erudition who expended two decades of his best efforts on the task.'

--- **Professor Bruce Charlton**, Professor of Theoretical Medicine, University of Buckingham, *charlonteaching* blog

'Absolutely fascinating.'

--- **Jessa Crispin**, Editor of *Bookslut.com*

'At last! A book on neuroscience that is a thrilling read, philosophically astute and with wonderful science ...'

--- **Mark Vernon**, *Guardian* columnist, *Philosophy and Life* blog

'A truly astounding work of scholarship'

--- **John Sandoe**, Favourite Spring Books 2011

'Most groundbreaking psychology text of the last decade? Although I am only 110 pages in, I think the answer is Iain McGilchrist's *The Master and His Emissary: The Divided Brain and the Making of the Western World*...The book is ridiculously well researched. The second chapter alone, where McGilchrist synthesizes an enormous amount of data concerning the functions of each respective hemisphere, has a staggering 535 endnotes, each citing one or more scientific studies. The scholarly work that went into this book is epic ... this book has already stunned me in its scope and significance.'

--- **Gary Williams**, Editor of *philosophyandpsychology.com*

'Massive and wide-ranging ... mind-bending ... a fascinating and unique lens through which to view the history of the world and the way we live ... manages to balance medical/clinical-related content with often astounding insights, analysis and philosophy ... joins my short-list of non-fiction works that I look forward to re-reading over the years.'

--- **Oliver Ho**, *popmatters.com*

'Novel, compelling, and profoundly consequential ... obviously the product of many years of research and thought on the part of a thinker of depth and

originality as well as deep learning across a number of fields that are very seldom combined ... McGilchrist is an unusually good writer, with as much talent for clear and exciting exposition as anyone I can think of ... unbelievably rich ... the formulations are often beautifully done, managing to state in maximally clear fashion issues of the utmost subtlety. The erudition is staggering. The overall arguments are compelling and well-handled. I think the basic thesis is indeed of absolutely crucial cultural and intellectual importance.'

--- **Professor Louis Sass**, Professor of Clinical Psychology at Rutgers, and author of *Madness and Modernism* and *The Paradoxes of Delusion*

'A brilliant, exciting and important book [of] exemplary precision and subtlety ... perhaps the most impressive and important piece of scientific synthesis I have ever read. I kept saying 'thank you, thank you, thank you, for what you are doing and how you are doing it'. The conclusions seem to me extremely robust ... of extraordinary importance for both scientists and humanists. There is no doubt in my mind that the excellence of the book is largely a product of the depth of the writer's expertise in the two fields of science and culture. There is virtually no-one who can match this combination. It is also important that the book is not laboured, but light and user-friendly. Again few writers can match him. But in the end the value of the book is really in the rich and complex exploration of the two hemispheres and their cultural correlates. Most readers will experience the book as a *tour de force*.'

--- **Professor John Onians**, Professor Emeritus of World Art at the University of East Anglia, and author of *Neuroarthistory*

'A wonderful book about brain function and its wider implications ... that two different styles of perception and cognition, holistic versus narrowly focused, are both needed for survival, hence evolutionarily ancient, [is] a very nice insight into why brain division was selected for ... And it's refreshing to see sense being talked about the Libet experiments.'

--- **Professor Michael McIntyre**, Fellow of the Royal Society, and Professor of Applied Mathematics and Theoretical Physics, University of Cambridge

'In a book that I read in the summer after a series of weighty recommendations had made it feel imperative, *The Master and his Emissary* [etc], the author Iain McGilchrist ... reflects at several points on how our sense of time is related to parts of our brain ... one also notices how much religion is gripped by what McGilchrist sees as the spirit of our age, seeking clear and literal certainty, following rigid rules, and competing for control over lives and societies.'

--- **Professor David Ford**, Regius Professor of Divinity at Cambridge, writing in *The Times*

'A dazzling masterpiece, hugely ambitious and the most comprehensive, profound book ever written on brain laterality, which examines how our two brain hemispheres differ, relate to each other, and the huge implications of this discovery.'

We have two brain hemispheres, each capable of functioning independently. Each has a different point of view about the world. The right hemisphere – long

thought of as “non-dominant” – is actually the Master, perceiving the world more directly, holistically and in context; the left is its Emissary, meant to serve the Master by developing more focused attention, when called for, and creating maps of the world. McGilchrist shows, through a brilliantly rich survey of the Western world, how in different eras, the arts, sciences, philosophy and even psychological health flourish when the balance between left and right is maintained. But our brains are plastic, and today, the plastic left hemisphere has become too dominant, inhibiting the right, and thinks itself the Master (this is not simply an anthropomorphism; the left hemisphere does not see its limitations, and confuses the maps it makes for the world it maps). Our art, aesthetics, philosophy, technologies, even our legal systems and bureaucracies show these stifling effects, and new kinds of mental illnesses have emerged. One puts down this beautifully written, profound, philosophically sophisticated book thinking psychiatrist and former Oxford English professor McGilchrist might just be one of the most learned people in Europe.'

--- **Professor Norman Doidge**, University of Toronto & Columbia University, NY, and author of *The Brain That Changes Itself*, 'Book of the Year', *The Globe & Mail*

SOME CRITICAL REVIEWS or Interviews

The Heidegger and his McGilchrist

Posted by **Rupert Read** (Philosopher ° 1966) on October 14, 2011

I've been reading Iain McGilchrist's book **The master and his emissary: The divided brain and the making of the Western world**, and I wanted to blog about it. I'm going to be reviewing it for a journal. Here are some of my main thoughts so far...



This book, it seems to me, isn't just a brilliant work; it's an event. McGilchrist not only lays out a startling, novel account of the importance of the right hemisphere of the brain; he turns this into a gripping and dizzying account of the trajectory of the whole of human (but especially of western) civilisation, and offers in the course of this the most powerful argument penned by any living author of the importance of the arts and humanities. An argument – helpfully, by a scientist — for how and why the arts and the humanities offer an entire different and essential way of visioning (and reclaiming) our world, and for how and why science alone cannot do this but endlessly risks being part of an imperial take-over of the world by the scientific world-picture that naturally emerges from the left hemisphere of the brain once it is off the leash. The 'master' of the title is the right hemisphere; the 'emissary', the left. McGilchrist's basic thesis is that most neurological events and processes need to begin (with the ability to assimilate — to see — the new) and end (with the ability to relate, vitally, humanly, and as a part of a whole(s)) with the right hemisphere. That the left hemisphere is essentially there to be the right hemisphere's servant or emissary. But that the left hemisphere, with its great capacity not only for analysis but also for denial, is reluctant to give back to the right hemisphere the power it is lent with the result that, increasingly, and especially over the last 200 years, the master has been betrayed by its emissary. (N.B. It is crucial to appreciate that McGilchrist is NOT particularly committed to the nowadays-somewhat-ill-reputed view that the two hemispheres are above all the locations for different things or even different activities... That, he suggests, is itself an overly left-brained way of seeing the brain... What McGilchrist thinks centrally differentiates the two hemispheres is precisely rather: their ways of seeing, their styles...)

McGilchrist sees the (increasingly-dominant) left hemisphere world-view as seeing the world as if from the perspective, as we might put it, not even of a brain in a vat, but of a left hemisphere of a brain alone in a vat... We are in danger, then, of being even worse off than Descartes would have it. Here is a remarkable passage from the latter part of the book, from which the reader will be able to get a sense of

the scale of McGilchrist's ambition hereabouts, and a scent of the grand originality with which, to a very large extent, remarkably, he delivers on it:

"[W]hat if the left hemisphere were able to externalise and make concrete its own workings – so that the realm of the actually existing things apart from the mind consisted to a large extent of its own projections? Then the ontological primacy of right-hemisphere experience would be outflanked, since it would be delivering – not 'the Other', but what was already the world as processed by the left hemisphere. It would make it hard, and perhaps in time impossible, for the right hemisphere to escape from the hall of mirrors, to reach out to something that truly was 'Other' than, beyond, the human mind. // In essence this was the achievement of the Industrial Revolution." (p.386)

Building on broadly Heideggerian thinking here, McGilchrist takes the measure of the world-picture that the left hemisphere has delivered to us. The re-grounding that the right hemisphere could bring, by way of reconnecting us to life on Earth (as with other ways in which it could do so, for instance via the arts, or via religion), is according to McGilchrist increasingly closed off to us, with the left hemisphere's changing the very character of the Earth to be something like a 'standing-reserve' of 'resources' – one giant filling-station, to employ Heidegger's terrifyingly apposite metaphor – and moreover one increasingly and actively patterned into the form of invariance, of mechanicity, of straight lines, of lifelessness, and at best (!) of 'management' of all this and of 'nature' itself. The fabric of the world is becoming fabricated, such that even the mirror 'of nature' no longer appears to us natural...

This book has already proved enormously controversial. (For example, Anthony Grayling somewhat slated it, in *The Literary Review*: www.literaryreview.co.uk/grayling_12_09.html . This is somewhat ironic, given the magnificent defence mounted in the book of the humanities, when juxtaposed with Grayling's attempted launch recently of his own 'New College of the Humanities'; it seems to me that Grayling hasn't got the hang of McGilchrist's book...) This controversiality is hardly surprising, for many reasons, but above all because the book goes against the grain. By saying that, I don't mean for a minute to deny that the book has been appreciated by leading figures in neuroscience: such as Ramachandran, Panksepp, Hellige, Kesselring, Schore, Bynum, Zeman, Feinberg, Trimble, and Lishman. No; rather, my point is that the forces of the left hemisphere, deeply-culturally-hegemonic, are bound

to resist it and indeed in many cases to have a profound difficulty comprehending it at all. As already intimated above: McGilchrist suggests that the very way we come to understand the right and left hemispheres is itself among the topoi distorted by our left-hemisphere-dominated world-view. (Thus for instance the way that the right hemisphere has for so long been deemed the 'minor' hemisphere.) He argues that there is a spiralling 'dialectical' relationship between the way in which our brain both limits and facilitates the way we 'take' the world, and between the way that the world's (changing) nature influences but can constrain the way in which our brain is, and thus the way in which our brain both limits and facilitates...

The 'foundation' of the work, in neurology, may offer an unusual bridgehead, a way into our culture and in particular into the world of science, that historically most such defences and articulations of humanity as opposed to the dominance of technology etc. have lacked, however much (consider for instance the project of Hegel) they may have coveted it. As I shall shortly explain, however, McGilchrist's authority and knowledge as a neurologist (and as a psychiatrist) may end up being a double-edged sword.

The master and his emissary is a work of extraordinary erudition. McGilchrist seems to be a polymath, who has managed to feel his way into a vast array of different 'literatures' (The book's bibliography is so huge that the publishers refused to include most of it in the paperback version, and one has to go online to a special full bibliography to check many of the references). One of his influences is Lakoff and Johnson; he leans on their account of metaphor, and explores further its implications, thus expanding the account intimated by them in their masterly *Philosophy in the flesh*. This is congenial to me. (Like McGilchrist, I would be inclined to kindly draw a veil over those fairly-numerous moments in which the content of their important book is patently deformed by a grandstanding scientific imperialism.) I also warmed to McGilchrist's hostility to much else of 'Cognitive Science': there is a powerful argument in the first Part of the book against the disastrous and ubiquitous 'information-processor' metaphor for the mind. McGilchrist shows how 'information' is a concept that only suits the left hemisphere, not the right. Again: McGilchrist in effect suggests that it is as if the brain that much mainstream Cog.Sci. envats is in fact only half a brain, and not even the most crucial half... But McGilchrist's greatest influence of all, also explored in a novel way in the first half of the book, is phenomenology in general, and Heidegger in particular. McGilchrist frequently in this book plays emissary to Heidegger, his 'master'... I mean that metaphor in a tongue-in-cheek way, just to raise perhaps a wry and friendly smile; but I also mean it somewhat in earnest. I had a niggling sense, repeatedly, as I read this book, that McGilchrist's way of working is actually rather less 'right-hemispherical' than is that of his great heroes, who he often explicates to us grippingly in the course of the work: Wittgenstein, Nietzsche, Scheler, Merleau-Ponty, Heraclitus, Goethe, Wordsworth, Blake, and (above all) Heidegger. To give a key for-instance;

there is an obvious danger that his neuro-story involves a homuncular fallacy. For most of the book, McGilchrist writes almost as if the left and right hemispheres really were separate people, with intentions, wills, personalities, etc.

True, McGilchrist does deal with this point reflectively and explicitly at some length in the book on more than one occasion (see especially pp.98-99), pointing out that one perhaps in his game cannot escape having some model or other, and that the available alternatives are either the machine or the person (We might add also: the text, as in Ricoeur). He submits that the model of the person is far more accurate for something that on its own does have the capacity to form intentions, have goals, have values, sustain attention, etc. . Nevertheless, the extent to which McGilchrist buys into this 'model' could I think be regarded as dangerous: For, by splitting the human by hemisphere, he risks in the process occluding the very (holistic etc.) insights that he wishes to underpin. It would be possible to give examples of undue left-brainedness in *The master and his emissary* even in relation to McGilchrist's 'master', Heidegger. For instance, one might worry that when McGilchrist says, very helpfully (p.151), that truth is a process or a progress more than it is an object, still he does not go as far as Heidegger's own analysis does: for Heidegger ultimately stresses that truth is what he calls an event rather than a process, because he takes a process to be something that takes place in time, whilst the event of truth is internally related to the very possibility of temporality and thus is that which facilitates a temporal sequence in which any process might take place. One might also highlight McGilchrist's perhaps-regrettable failure to consider the contribution made by much of the growing political resistance to industrial-growthism etc. (e.g. it might have been worthwhile for him to have looked at the green movement, and/or perhaps at organisations such as 'La Via Campesina', the international peasant movement with 400 million members), a contribution that powerfully manifests the kind of thinking and being that he wants to recommend. The great remaining objection others are likely to bring against McGilchrist's work is probably that his detailed neuro-story is not needed in order to give his account of human civilisation and of the grave threat which it is now under, In other words, that there is (allegedly) insufficient connection between the first Part of McGilchrist's book (which focuses primarily on the brain and on philosophy) and the second Part (which tells us a new history of the present). In other words, that the term 'left brain' and 'right brain' in the end function for McGilchrist largely metaphorically, rather than literally. At the very end of the book – the quotation that follows consists of its final two paragraphs — McGilchrist deals with this objection extremely disarmingly:

"If it could eventually be shown...that the two major ways, not just of thinking, but of being in the world, are not related to the two cerebral hemispheres, I would be surprised, but not unhappy. Ultimately what I have tried to point to is that the apparently separate 'functions' in each hemisphere fit together intelligently to form in each case a single coherent entity; that there are, not just currents here and there in the history of ideas, but consistent ways of

being that persist across the history of the Western world, that are fundamentally opposed, though complementary, in what they reveal to us; and that the hemispheres of the brain can be seen as, at the very least, a metaphor for these... // What [Goethe's Faust, Schopenhauer, Bergson, Scheler and Kant] all point to is the fundamentally divided nature of mental experience. When one puts that together with the fact that the brain is divided into two relatively independent chunks which just happen broadly to mirror the very dichotomies that are being pointed to – alienation versus engagement, abstraction versus incarnation, the categorical versus the unique, the general versus the particular, the part versus the whole, and so on – it seems like a metaphor that might have some literal truth. But if it turns out to be 'just' a metaphor, I will be content. I have a high regard for metaphor. It is how we come to understand the world." (Pp.461-2; cf. also p.7).

Again following Lakoff and Johnson as well as various great literary authors, then, McGilchrist to the end defends the absolute importance of metaphor (a phenomenon which only the right brain understands), and moreover of metaphor that remains metaphorical, and does not have to be 'cashed out'. This could be a partial answer also to my worry, expressed above, about the 'reification' of the left and right brains into quasi-homunculi. It will however still leave a nagging twinge with some readers about how necessary all the detail about the brain in the early part of the book was to the real 'cash-value' of it: the account of these two, coherent, different ways of being in and molding (or not) the world, that comes to a head in the

brilliant account (offered in the final 100 pages of the book) of the growing triumph of the left hemisphere in the Industrial Revolution, Modernism and Post-Modernism. All I can say in response to this worry is: read the book. For me, McGilchrist actually does a remarkable delicate job of ensuring that there is a genuinely historical dimension to his story of the faculties: for example, he has a fascinating discussion in Chapter 7, "Imitation and the evolution of culture", of the possible biological routes through which neurology may respond to culture. The routes through which the very structure of the brain may be substantially responsive to and molded by — and not merely foundational for — the fabric of any given culture. That discussion crucially feeds into the story he then tells of the development of Western culture as a kind of battle of the hemispheres.

Whether what McGilchrist is telling us is a set of fascinating scientific truths about the brain, or a metaphorical history of the present inhabiting the reasons why the human race has reached the desperate near-ecocidal condition it now inhabits (and why it is – why we are — in denial about this), or both, what I found in reading his book is that there are gems on virtually every page, and that, whether or not it is 'just' a metaphor, the way of thinking and of seeing that McGilchrist here offers is itself compelling, rich, and fertile.

I'd be interested to know what other readers of this blog and of this book make of it.

<http://blog.talkingphilosophy.com/?p=3398>

The Master and His Emissary: The Divided Brain and the Making of the Western World by Iain McGilchrist

Mary Midgley (Philosopher, 1919 - 2018) enjoys an exploration of the left-brain/right-brain divide.

[The Guardian](#), Saturday 2 January 2010

This is a very remarkable book. It is not (as some reviewers seem to think) just one more glorification of feeling at the expense of thought. Rather, it points out the complexity, the divided nature of thought itself and asks about its connection with the structure of the brain.



McGilchrist, who is both an experienced psychiatrist and a shrewd philosopher,

looks at the relation between our two brain-hemispheres in a new light, not just as an interesting neurological problem but as a crucial shaping factor in our culture. He questions the accepted doctrine that the left hemisphere (Left henceforward) is necessarily dominant, the practical partner, while the right more or less sits around writing poetry. He points out that this "left-hemisphere chauvinism" cannot be correct because it is always Right's business to envisage what is going on as a whole, while Left provides precision on particular issues. Moreover, it

is Right that is responsible for surveying the whole scene and channelling incoming data, so it is more directly in touch with the world. This means that Right usually knows what Left is doing, but Left may know nothing about concerns outside its own enclave and may even refuse to admit their existence.

Thus patients with right-brain strokes – but not with left-brain ones – tend to deny flatly that there is anything wrong with them. And even over language, which is Left's speciality, Right is not helpless. It usually has quite adequate understanding of what is said, but Left (on its own) misses many crucial aspects of linguistic meaning. It cannot, for instance, grasp metaphors, jokes or unspoken implications, all of which are Right's business. In fact, in today's parlance, Left is decidedly autistic. And, since Left's characteristics are increasingly encouraged in our culture, this (he suggests) is something that really calls for our attention.

The book's title comes from the legend of a wise ruler whose domains grew so large that he had to train emissaries to visit them instead of going himself. One of

these, however, grew so cocky that he thought he was wiser than his master, and eventually deposed him. And this, says McGilchrist, is what the Left hemisphere tends to do. In fact, the balance between these two halves is, like so many things in evolution, a somewhat rough, practical arrangement, quite capable of going wrong. The bifurcation seems to have become necessary in the first place because these two main functions – comprehensiveness and precision – are both necessary, but are too distinct to be combined. The normal sequence, then, is that the comprehensive partner first sees the whole prospect – picks out something that needs investigating – and hands it over to the specialist, who processes it. Thus the thrush's Left is called in to deal with the snail-shell; the banker's Left calculates the percentage. But, once those pieces of work are done, it is necessary for the wider vision to take over again and decide what to do next.

Much of the time this is indeed what happens and it is what has enabled brains of this kind to work so well, both for us and for other animals. But sometimes there is difficulty about the second transaction. Since it is the nature of precision not to look outward – not to bother about what is around it – the specialist partner does not always know when it ought to hand its project back to headquarters for further processing. Being something of a success-junkie, it often prefers to hang on to it itself. And since we do have some control over this shift between detailed and general thinking, that tendency can be helped or hindered by the ethic that prevails in the culture around it.

McGilchrist's suggestion is that the encouragement of precise, categorical thinking at the expense of background vision and experience – an encouragement which, from Plato's time on, has flourished to such impressive effect in European thought – has now reached a point where it is seriously distorting both our lives and our thought. Our whole idea of what counts as scientific or professional has shifted towards literal precision – towards elevating quantity over quality and theory over experience – in a

way that would have astonished even the 17th-century founders of modern science, though they were already far advanced on that path. (Thus, as a shocked nurse lately told me, it is proposed that all nurses must have university degrees. Who, she asked, will actually do the nursing?) And the ideal of objectivity has developed in a way that would have surprised those sages still more.

This notion, which now involves seeing everything natural as an object, inert, senseless and detached from us, arose as part of the dualist vision of a split between body and soul. It was designed to glorify God by removing all competing spiritual forces from the realm of nature. It therefore showed matter itself as dead, a mere set of billiard-ball particles bouncing mechanically off each other, always best represented by the imagery of machines. For that age, life and all the ideals relevant to humanity lay elsewhere, in our real home – in the zone of spirit. (That, of course, was why Newton, to the disgust of later scholars, was far more interested in theology than he was in physics.) But the survival of this approach today, when physicists have told us that matter does not actually consist of billiard balls, when we all supposedly believe that we are parts of the natural biosphere, not colonists from spiritual realms – when indeed many of us deny that such realms even exist – seems rather surprising.

Why do we still think like this? Why can't we be more realistic? McGilchrist's explanation of such oddities in terms of our divided nature is clear, penetrating, lively, thorough and fascinating. Though neurologists may well not welcome it because it asks them new questions, the rest of us will surely find it splendidly thought-provoking. And I do have to say that, fat though it is, I couldn't put it down.

Mary Midgley's *Beast and Man: The Roots of Human Nature* is published by Routledge.

Jessa Crispin (° 1978, book critic and the editor-in-chief of Bookslut) Reviews:

"**The Master and His Emissary: The Divided Brain and the Making of the Western World**" by Iain McGilchrist

Half and Half

The brain's sides have a relationship. Like most, it's complicated.

By Jessa Crispin of Bookslut



Back in junior high school health class, we were told that the brain has two different hemispheres — the left and the right. The left brain, the textbook stated, is responsible for language, math, and science, logic and rationality. The right brain was the artistic one, the creative half of the brain. But that's not quite true.

Neuroimaging and experiments on patients with split brains and brain damage to only one hemisphere have allowed a much more detailed, and fascinating, accounting of how the two parts interact with the world, and how they combine to become a unified consciousness (and, in some cases of mental disorders, how they occasionally don't). Iain McGilchrist has combined scientific research with cultural history in his new book *The Master and His Emissary: The Divided Brain and the Making of the Western World* to examine how the evolution of the brain influenced our society, and how the current make up of the brain shapes art, politics, and science, as well as the rise of mental illness in our time — in particular schizophrenia, anorexia, and autism.

That eighth-grade level science textbook was kind of correct. While the left brain does contain much of the language center of the brain, a person cannot understand context without the right hemisphere. Metaphor, irony, and humor are all processed by the right brain. When engaging in face-to-face conversation, it processes facial expressions to add depth to the meaning. Most activities, from painting to mathematics, are processed by both the left and the right hemispheres of the brain. The differences between them have to be defined in a different way. The left brain brings precision, focus, abstraction, rationality, and fixity. The right brain has a more open view of the world. It provides context, whether finding humor in a punch line or bringing a sense of history to a question posed to it. In a healthy, functioning brain, the right hemisphere sends information about a situation to the left hemisphere, which "unpacks" the information using its tools to find clarity, and then it vocalizes the response, either in thought or expression.

When we look at unhealthy, nonfunctional brains, however, the two halves become much more complex. Patients with only one fully functioning hemisphere or those who have had their corpus callosum (the area that bridges the two hemispheres) severed — either because of injury or as a way to treat debilitating seizures — tell us a lot about the personalities of the two hemispheres. And they do have personalities. When presented with a illogical scenario, the left brain creates logical black holes to convince itself and others it is correct, and it is so

swayed by authority that it refuses to correct obvious wrongs. People who only have functioning right hemispheres might have less access to rational thought, but when Russian scientists tell them that a porcupine is a monkey (an actual study cited in *The Master and His Emissary*), they don't believe it's true. People using only their left hemispheres do. They also refuse, or may actually be unable, to admit they are wrong. They are overly confident of their abilities and intelligence, and they can justify nearly everything to themselves by creating strings of false logic. (As in, monkeys climb trees. Porcupines climb trees. A porcupine *must* be a monkey.)

Another example of this complexity is the way a person's relationship to his body changes with damage to the right hemisphere. People who have suffered a stroke will often have disabilities on the opposite sides of their bodies. When the right hemisphere is left intact, it acknowledges the damage and almost obsesses over it. The left hemisphere will disown a weakened left arm or leg, to the point of believing that the real arm, according to a woman who had a right brain stroke and is quoted by McGilchrist, is hiding "under the bedclothes" and this arm attached to her body "is my mother's. Feel, it's warmer than mine." Other patients with similar damage report that their body parts have been replaced with wood, or they will simply not admit they are disabled. When presented with the proof, their twisted limb held up for them to see, the patient will turn his head or close his eyes.

For a long time, the left brain has been viewed as being the dominant, more highly evolved, more useful part of the brain, possibly because, as McGilchrist says, we are "trapped inside a culture that is so language-determined." We think in language, and with the advent of e-mail and text messaging we communicate in written language more than ever before. The right brain may communicate to us through intuition, but we can, and do, often override that with logic. For a long time it was believed that the corpus callosum's primary focus was the communication between hemispheres. While that is partially true, most of what it does is allow one hemisphere to inhibit the other. This is primarily so that both hemispheres do not attempt to perform the same task (a problem you frequently see in patients with severed corpus callosums — more on that in a minute), but it can also mean that a hemisphere that is not suited for a task can "claim" it anyway, and inhibit the proper hemisphere from contributing. Which hemisphere dominates more tasks than the other can vary from person to person — there are a multitude of horrible online quizzes that will tell you which hemisphere rules your decision making processes — but on a larger scale, you see a pattern forming with certain cultures and with variations depending on where humans have been in their evolutionary history.

Watching experiments with split brain patients from the 1970s, you'll see scientists referring to the right brain as the "silent" and "feminine" side of the brain. It deals with emotions and empathy, and all of that useless stuff. But in reality, McGilchrist reports that patients with damage to their left hemisphere — even to the point of removing the entire hemisphere and with it their ability to communicate with language, and even sign language — actually function better in the world than those with right hemisphere damage. It's not just scientists, but artists, writers, philosophers, religious leaders, and politicians who have created an environment in which the right brain is seen as being weak, and left brain concepts and systems are viewed as being the ideal: logic over intuition, the pursuit of money over community, brain over body, industry over nature. This devaluing of the contributions of the right brain has created a shift in the way we interact with the world. We have created a society that is completely reliant on the left hemisphere, on logic and materialism and abstraction, and in doing so we have created what McGilchrist calls "the predominantly left-hemisphere phenomenon of a competitive, specialised, and compartmentalised world."

It's difficult not to agree that right brain territory has been hijacked by the left brain. Visual art is dominated with abstraction and shocking imagery. (The left brain, hungry for stimulation, prefers the shocking and the novel to the beautiful.) Religion has seen the rise of the super-rational atheist movement while spirituality has been overrun by materialism, another abstract left brain concept. *The Secret* would have you believe that the entire purpose of divinity is to make you rich and thin, and even the evangelists preach that Jesus wants you to have that nice house in the suburbs. Social anxiety disorder would seem to be the domain of the left brain, completely unable to read social cues, trying to interact with other people. It overthinks things, misreads situations, and creates awkwardness by being too self-aware and not letting the right hemisphere do what it does best.

Every age has its own range of mental disorders. We don't suffer much from hysteria anymore, just like we don't hear of the Victorians battling autism as we now do. Some of that is just diagnosis: There may have been autistic men and women in the world before today, but they may have been called something else. McGilchrist, in consensus with many psychiatric historians, believes our society creates specific mental illnesses. McGilchrist just takes it a little further, believing it is how the brain of that age functions that defines its dysfunctions. The way we receive information, the language we use, the environment

<http://www.thesmartset.com/article/article12210901.aspx>

in which we live, the values of our culture — all of these things influence the way we use our brains, and this creates a feedback from the culture back to the brain. Certain eras, such as the Romantic period, praised nature and held ideals about love and beauty and wrote poetry. As a result, the right brain was much more active, and the reigning disorder of the day was melancholia, a problem of the right brain.

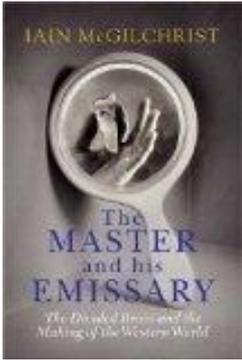
Our contemporary culture, with its loneliness and its materialism and disjointed nature, is typical of left brain dominance. As such, we have autism, which is an almost total dysfunction of the right brain: an inability to read facial expressions, a lack of empathy, failure to recognize metaphor or irony. Schizophrenia is a disorder where logic runs mad. Faulty connections are made, false conclusions drawn, and yet the disordered cannot release themselves from the grip of the delusion because to them it makes perfectly logical sense. Anorexia is a hatred, a mistrust, and a warping of the image of the body. These are left-hemisphere ways of thinking taken to their extreme, and never in the history of mankind have we been afflicted with disorders quite like these. Consider them warning signs, if you will, about what could lay ahead if progress continues in this direction.

But McGilchrist believes the pattern of the evolution of the human brain is circular. Domination of one hemisphere will be checked by the growth of the neglected hemisphere. Life with a dominant right brain is not much better, unless mass suicide inspired by a romantic Goethe novel is your thing. The ideal is the harmonious workings of both hemispheres, as life appeared to be in pre-Socratic Athens. In that time, strides were made in drama and poetry in the right hemisphere, and philosophy and the written language in the left. There are signs we could swing that way again, with most of the scientific advances being made in the very uncertain, quite illogical realm of quantum physics. The left brain hates uncertainty, and while it may be true that you can know where a particle is located or how fast it is moving, but not both at the same time, it doesn't make *sense*. There's a reason why scientists like Wolfgang Pauli made breakthroughs in the quantum field due to visions and dreams — it's processing done by the right hemisphere, because it warps the boundaries of the scientific method. The advances in neuroimaging can also lead us back to our belief in the power of the right hemisphere as we can now see it at work when we can't hear it. It is not the weaker half — in fact it possesses what we think of first when we are listing the things that separate us from animals: empathy, art, humor, culture, and wisdom. • 21
December 2009

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An Interview with Iain McGilchrist by Jessa Crispin (Febr.2010)

It may surprise you --



or maybe not, depending how long you stand in front of your closet deciding what you're going to wear that day -- that you have two people inside of you. One is logical, mathematical, focused. The other is poetic, attentive, intuitive. These are personalities represented by the left hemisphere of your brain and the right hemisphere, respectively. While they were once believed to work in harmony with one another, dividing up tasks like language (left) and music (right), instead neuroimaging has allowed us to see that one hemisphere can dominate and essentially shut out the other. And in our contemporary Western culture, that hemisphere is predominantly the left.

Iain McGilchrist is worried about this left hemisphere preference, and he sees the effects in our society's materialism, our disregard for the environment, our art world's tendency towards the shocking and the abstract, our predatory capitalist system, and the rise of super rationality in religion (the new atheist movement), science, and discourse. Not that he's arguing against logic or competition or abstraction -- but without the balance of the contributions of the right hemisphere, with its appreciation for nature and beauty, for its sense of community and empathy, and its wide-angle view, the effects can be disastrous. Now, that might sound like hippy dippy bullshit to you, but that's probably just your left brain talking.

In *The Master and His Emissary*, McGilchrist uses the Nietzsche story of the same name to illustrate his position. The Master, a wise man who is beloved by his subjects and rules with wisdom and caring, uses an emissary to conduct his business. The emissary begins to believe he is doing all of the important work, and usurps the throne. Only he is so concerned with material goods and ruling with an iron fist, things deteriorate. McGilchrist believes that we are seeing an unprecedented overthrowing of the Master (right brain) by the Emissary (left), and in his book he examines why this matters, how it influences philosophy, art, mental illness, and business, and how this balance of power has changed and shifted through the ages. (Read my review of *The Master and His Emissary* [here](#).)

McGilchrist talked to Bookslut via e-mail about his sweeping and fascinating *The Master and His Emissary*, why he had to encompass centuries of history in his book,

your right brain's clothing preferences, and why he's *Against Criticism*.

J.C.: I am so accustomed to reading these niche-y nonfiction books, the detailed examination of the cultural history of the button or what have you. *The Master and His Emissary* does not lack in ambition or scope, and that was refreshing. Did you ever think you must be mad, though, to try to fit evolution with creativity with Heidegger with anatomy with Athens with schizophrenia? Was that your intention, to sit down and find a connection between the hemispheres of the brain and just about everything in the world?

I.McG.: No! But, although some people (unlike you) might think the book's scope is a sign of me "taking things too far," and have said as much in some of the reviews, such a position is illogical. If, as I believe, the ways in which we can see the world are constrained by the choices offered us by the two brain hemispheres (though not in an all-or-nothing fashion), then that would have to be imaged in the history of both philosophy and culture. Philosophy is a series of attempts to understand the world, and reconcile the paradoxes we encounter in doing so; cultures represent different bodies of beliefs, values and responses to the world, emphasising different aspects of it. How, then, could a clearer understanding of the differences between the two versions of the world offered by our two hemispheres fail to be central to the understanding of either? That's why the neuroanatomy and neuropsychology, along with the mental illnesses that result from hemispheric imbalance, find themselves brought into discussions of creativity, Heidegger and ancient Greece.

Incidentally I am a great fan of the "history of the button." There is a place for that, too. But there is a problem with the way knowledge has become more and more specialised and purely technical. It gets harder and harder not to lose sight of the bigger picture, the context in which all the little bits make sense. In that way this book can itself be seen as an image of how I believe the brain must work: taking the detailed view of the left hemisphere (eg, the mass of specific neuropsychological data I deal with in Part I) back to enrich the comprehensive view offered by the right (the evolution of the Western mind in Part II).

J.C.: You swing between optimism and pessimism (or, call it "realism" if you prefer) about our ability to break the dominance of the left hemisphere over our lives and culture. Is there something individuals can do, rather than just read the articles about "blah blah blah money doesn't bring happiness, it's been scientifically proven"? Because it seems there is this rise of the positive psychology movement, saying that what really brings happiness is this right brain stuff: community, fraternity, beauty, nature. But their methods for achieving these things seem to amount to cognitive behavioral therapy, which seems left-brainy to me. "Here is my check list to achieving happiness."

LMcG.: I think you have spotted me trying, perhaps too hard, to counter my natural pessimism. I do find it very hard to be optimistic at present, because, as I say in the book, the left hemisphere's view pretends to have it all sown up, and people are taken in by that, especially when it appears to come from the mouth of 'science' (usually biologists -- the discoveries of physicists forced them long ago to abandon the Victorian mechanistic model, but the life sciences are slow in catching up). Not that the current arts scene is much better -- post-modernism is no challenge to the left hemisphere's view, but, as I suggest, an expression of it.

I firmly believe that the first step towards change is to become aware of what is happening now, in our own 'take' on the world and that of our culture. It may be a bit of a cop-out for me to say that, but it was hard enough to clarify the problem, without my claiming to have found the solution.

At the cultural level, any optimism I have comes from the marvellous unpredictability of the human mind. In the past one would often have been hard pressed to predict significant shifts in our world view that occurred only a matter of a few years later; and, as I suggest, our progress tends, fortunately, to be more circular (as the right hemisphere understands) than rectilinear (as the left hemisphere thinks). I also believe it is good that we are more open to Far Eastern cultures -- though, as you know, I have great admiration for the strengths of Western culture, too.

At the personal level, I hope the result of reading my book might be to make one more sceptical of some of the natural assumptions of the world we are living in, and perhaps to awaken latent knowledge of one's own. A surprising number of people who have read the book have told me something to the effect that they seemed to become aware of their own latent understanding of themselves and their brain -- what I call the brain cognising itself -- and that it brought into focus things they had been peripherally aware of, but had somehow blocked out. This had the effect of changing the way they looked at the world. If that happens, I could not ask for much more.

Explicit checklists are a bit limited, I agree, though even they have their uses in pointing one in the right direction. Ultimately, though, I believe the best things in life are by-products -- which makes personal plans for happiness less useful than they look.

J.C.: **You started off studying English, is that correct? And then made the switch some time later to psychiatry. What was the spark that led you to go off in another direction?**

LMcG.: It sounds like a big switch, but in a way there was a logical progression. When I arrived in Oxford in the early seventies, I intended to study philosophy and theology, but, as the system was, had to take the entrance exam in something else, which happened to be English literature. My examiner, John Bayley, encouraged me to

read English, and after graduating I was elected to a Fellowship of All Souls College where I had time to pursue a number of interests, particularly philosophy and psychology.

But my experience of teaching English made me think a lot about the 'mind-body' relationship. I felt that what I and others were undertaking ran counter to the grain of the matter we were dealing with -- works of art, written by real, living people, who had grappled with their experience of the world, and left something, also living, behind them, for us to enjoy and understand. What engaged me in any great piece of writing was the utter uniqueness of the experience. What it was like to read Hardy's poems was completely different from what it was like to read anyone else -- at all, ever. Bad writers were quite lumpable together: but the more the writer succeeded in producing something truly living, the more it was completely 'of itself'. Yet when writing about the work of art the only things we could say seemed to be in terms of generalities, exactly the sort of things that could be found elsewhere (Nietzsche again: words make the uncommon common). Being true to the experience of the work defied language, which seemed only to return one to central concepts and abstractions, when the thing one admired was wholly individual, quirkily concrete, incarnate, part of the embodied world of experience to which it related. Getting to know it was more like getting to know a person, than trying to understand a bunch of ideas. It defied analysis into parts, since the whole point was its impact as a whole, in the light of which one felt bound to revise the way in which one would, out of context, have evaluated its parts. Its weaknesses on analysis turned out to be its strengths taken in context.

What has this to do with the mind-body relationship? In the explicit study of literature, we inevitably adopted a cognitive approach to something that became abstract and conceptual, when in fact the whole embodied self, heart and lungs as well as cortex, unconscious as much as conscious, had to be brought into play in relation to a whole other embodied being, the poem or whatever it was that we were experiencing. I found what philosophers had to say about the 'mind-body' issue was curiously subject to the same problem: disembodied, theoretical, scuppered by the nature of denotative language and analysis. (If I had not been in Oxford at the time, I might have made the acquaintance of the European phenomenological tradition -- virtually unheard of there -- at an earlier stage, and have saved myself years of laborious work inventing the wheel. On the other hand, there's nothing like having to get there for yourself.) So after writing a book about the problems of explicitness in the approach to literature, called *Against Criticism*, I went off to find out about the mind-body problem in a more 'embodied' way by training as a doctor. That way, I hoped to discover, as near to first hand as I could, what it was like when afflictions of the brain affected the mind, and when the problems of mind affected the body. Hence neurology and psychiatry.

J.C.: **Did it take 20 years to write because you spent five of those years reading studies about the split brains? Because I feel like I could have done that.**

After reading about the woman whose right brain wanted to wear something different from the left brain, I had the sudden desire to have my corpus callosum paralyzed for a while, so I could ask my right brain its food preferences and what it wanted to wear.

I.McG.: I agree that the split-brain literature is fascinating. And it is remarkable that, as Sperry suggested, there are different sets of values, and therefore different preferences and even 'personalities,' to the hemispheres. In the end, though, most split-brain patients, as you know, carried on, after an initial settling-in period, much as though nothing had happened. What has kept my attention over 20 years of research has been the fact that the literature about normal brains also displays obvious, hugely important differences between the two hemispheres -- but we've completely overlooked them. I believe this is because we have been mesmerised by the idea of the brain as a machine. So we ask what 'functions' it performs in either half. Initially, around the time of the split-brain operations in the '60s and '70s, everyone got excited because they thought they could answer that question. But since we found out that language, visuospatial functions, reason and emotion, go on in both hemispheres, not just one, and that creativity depends on both hemispheres, everybody just gave up looking. They failed to see, despite the hints that Sperry gave them, that the hemispheres are more like persons than machines. So -- no, the 20 years were partly about gathering the information from a widely disparate literature, and partly, to be honest, needing time to think. How to put it across? Because here, too, the problem of the hemispheres obtrudes. I found that, in order to explain any one thing, I needed already to have explained everything else. In other words, the parts needed the whole to be understood before they could themselves be understood. Straightening it out into what any book demands, namely a sequential argument, was like trying to straighten out a cat's cradle without losing the pattern in which, alone, it existed.

J.C.: You wrote a book called "Against Criticism," and you are currently corresponding with someone who occasionally does work that resembles that of a book critic. Should I be wary of you turning on me?

I.McG.: Never! Everything true partakes of the nature of paradox. My book *Against Criticism* was itself, knowingly, a book of criticism. I believe criticism is valuable. It just needs to work 'against itself' in order to succeed: using language, of course, but to get beyond language; using analysis, too -- like language an invaluable tool -- but to get beyond analysis. Which is why the implicit is so important in art and in the criticism of art. Use your right hemisphere as well as your left! Just don't use your left hemisphere only, in criticism or anywhere else.

J.C.: Speaking of criticism, reading the reviews of your book it seemed an awful lot of people missed the part where you stated you don't believe right brain dominance is any better than left brain dominance. Do you sit on your hands to keep from composing emails,

"Dear Mr. AC Grayling: Please read the goddamn book"?

I.McG.: It has been a strain. I am grateful to Grayling for the very generous things he said, though obviously he quite misunderstood the point that we need both hemispheres in balance, not either the right alone or the left, which I do keep saying throughout the book. Sitting on my hands slightly failed, as I did write to the *Literary Review* to make that point (don't know if they will publish it). But he, too, like the anonymous reviewer for *The Economist*, seemed to balk at the idea that something that is true about the way in which a single human being sees the world can be true about the way in which an aggregate of human beings who share a world view (namely, a culture) sees the world.

I had to take a calculated risk, to describe the hemispheres as if they were personalities, with desires and values of their own (no odder that supposing them to be machines, in my view). The left hemisphere evolved to help us manipulate the world. Its disposition is acquisitive, and because it has a simplified model of the world, it thinks it knows it all -- it seems arrogant. Anyone who reads the accounts in my book of experimental research into hemisphere differences would have to acknowledge that. Therefore to liken it to a person who has those qualities is reasonable enough, though of course, like every scientific explanation, it is just another model. I did acknowledge the problems of doing so at some length in my book, and deal with them there, but in the end I have to live with the possible misunderstandings. Inevitably these have turned up. So far I've had at least one rather shrill and superficial review, to the effect that I am an emotionalist who merely want us all to go back to singing Kumbaya on the beach. Incidentally that reviewer, had read the book so carefully that he even got the primary metaphor of the book back to front (he'd only have to have made it as far as p. 14 to understand that). As a philosopher friend wrote to me, "Call me old-fashioned, but I do think it helps to read the book before reviewing it." However this sort of thing is to be expected. The left hemisphere sees only a very simple version of reality, is black and white in its view, tends to arrogant certainty, a view that it "knows it all already" and doesn't have to listen to anything new, and is in denial about its own short-comings. And it has a tendency to paranoia if it feels its position is being threatened. So he really gave me a textbook demonstration of what I was saying.

J.C.: If people are wary of you attributing personalities to the hemispheres, they seem to have no trouble assigning gender. I read a book not too long ago about the evolution of the left hemisphere and it stated the left hemisphere is a misogynist. It doesn't take much digging to find a lot of scientific research describing the right brain -- the silent, submissive, irrational one - - as "feminine." You touch on this briefly while dismissing it in the book, but I was wondering if in your research you figured out how prevalent this thinking is.

I.McG.: You are skilfully luring me into fields I have tried to steer clear of. To answer your question, though, the research I have done has been in the technical scientific literature, where such ideas as one hemisphere being 'feminine' and one 'masculine,' let alone, God help us, 'misogynistic,' would quite rightly be considered ludicrous. However it is true, and I don't think at all controversial, at least in scientific circles, that any brain measurements, whether morphological, physiological, neuroendocrine or neuropsychological, yield different results in men and women. That includes issues of hemisphere asymmetry. All I can say is that the research I refer to in my book is broadly true across both men and women. One general conclusion that has quite a lot going for it is that women tend to demonstrate a lesser degree of hemisphere differentiation than men. You can look on that as a good thing or a bad thing, I imagine, and, depending on the purpose, it might be either.

J.C.: **Your dig at postmodernism reminded me why I can't read David Foster Wallace and his ilk. It's as if those words are coming from a disembodied head, not a human being, which I find painful for 20 pages let alone 1,000. Although what's interesting is the rise of the so-called neuro-novel, the workings of the brain having an influence on contemporary literature -- from Tom McCarthy to Richard Powers, even going back to Stanislaw Lem, and every Oliver Sacks essay or lecture seems to be the seed of a novel. Perhaps your research will inspire a new part of that wave...**

Well, I suppose it might. I'd be delighted if my ideas were taken seriously in the important world of the arts, which is where we learn about ourselves. I have found Stanislaw Lem's ideas -- at least as filtered, I have to admit, by the genius of Andrei Tarkovsky -- inspiring. I think, though, that what you say makes a valuable wider point. The interest in 'brain matters' in the contemporary novel shows that people have come to accept that what we know about the brain is an interesting route to understanding who we, as human beings, are -- perhaps the route, the one with all the charisma -- and they don't want to miss out on that, or be thought to be unaware of the brain debates. But they are so mesmerised by the white coats that they don't seem to see that it is a two-way street. What we know about human beings from philosophy and the arts is equally essential to understanding what the brain is. There is no fixed, unimpeachable place to start one's exploration. I'm afraid that far too many scientists are philosophically naïve: they believe it is transparent that if you can make the machine model fit what you are looking at, it is a machine. What they fail to see is that we can understand anything only 'as a' something else: and depending on what that something else is, we see only the bits that fit that model. So choosing the right model is of critical importance. Until the Enlightenment, the natural model for understanding anything was itself that of a living being, a body, a tree, or a community: now we are so impressed by our ability to make machines, that even living beings, bodies, trees, and communities are modelled as machines -- and as a result reveal only their mechanical aspects.

J.C.: **Speaking of the mind/body divide, to me it's missing a spirit or soul category. We're at a place where you can't even bring divinity into the conversation without making it the only conversation. You briefly, briefly mention Jung and metaphysics, and then you back off very quickly. How much more quickly would the knives have come out if you had brought religious belief into the conversation, do you think? Is this divide more left hemisphere dominance stuff?**

I.McG.: Ah, yes. What an interesting topic. I agree with you about the missing realm of experience. As you will have noticed, I left the issue open, whenever I mentioned it. I didn't want to lose some potential readers over something that, while in itself undoubtedly important, is not necessary to the argument of my book. And Jung is a particularly divisive figure; otherwise reasonable psychiatrists will dig up paving-stones and hurl them at you, if you so much as mention his name. I couldn't give an adequate judgment of him overall, since there is so much to get to grips with, and I don't know him well enough: some of it seems to me wise and full of insight, some of it -- as with anyone so creative and so productive -- rather rash and questionable.

In respect of hemispheres, the situation is complicated. I refer to the book by the neuropsychiatrist Michael Trimble called [The Soul in the Brain](#), which came out last year. His analysis of the literature is appropriately cautious, but he concludes that the posterior right hemisphere is the area most closely linked with spiritual experience, though, as I say in my book, the other main area that comes up is the left frontal area (probably because of its inhibitory influence on the posterior regions of the left hemisphere). But the mechanical model beloved of the left hemisphere -- and that is not just a form of words, the left hemisphere really does code preferentially for machines and man-made tools -- has no room for the category of spirit. The broader issue is fascinating, and I hope to address it in a future book.

J.C.: **Since you left yourself open for this, what are you working on next? Where does one go after writing a book about everything?**

I.McG.: I think I'd like to write a shorter book -- good start, you may say -- looking at contemporary culture in a bit more detail from the standpoint of a psychiatrist. Some, but not all, of that would be to do with the hemispheres. I've been studying the artworks of people with psychotic illnesses for many years, too, and I think there is a study there that would be of fairly broad interest. For one thing, the paintings themselves are absolutely wonderful. There was going to be a bit about that in *The Master and his Emissary*, but it just got unmanageable, and had to go. And eventually I want to write a short book about spiritual experience, but I don't think I'm ready for that yet.

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The Master and His Emissary: The Divided Brain and the Making of the Modern World

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This epic book can first be understood in terms of what it is not. It is not a book about the mind-brain question or the origins of consciousness, although it addresses both of these issues from a philosophical as well as neurological perspective. Nor is it a case series of interesting neurological findings and fascinating patients. However, readers will certainly have a good understanding of Capgras syndrome, Cotard's syndrome, and other rare neuropsychiatric conditions following their journey through *The Master and His Emissary*. In essence, Iain McGilchrist's book is an exploration of the link between the brain's hemispheric asymmetry and the historical development of Western society. This is no small task: chronicling how the left brain's determined reductionism and the right brain's insightful and holistic approach have shaped music, language, politics, and art. The first half of the book provides a thorough understanding of brain lateralization. At the macroscopic level of gross pathology, anatomical differences between the two hemispheres and concepts such as Yakovlevian torque are explained in detail. On the other end of the spectrum, at the most microscopic and molecular level, differences between neurotransmitter activity in the right hemisphere (increased noradrenaline reliance) and left hemisphere (increased dopamine reliance) are expounded upon. Human emotionality is then localized in terms of hemispheric asymmetry: the right hemisphere's dominance of emotional expressivity exists with the notable exception of anger, which is a dopamine-mediated, reward-driven process that is controlled by the left frontal lobe. Through gleanings from imaging studies, neurological case reports, and psychological testing, the author describes sadness, guilt, realism, and empathy as being mediated by the right hemisphere. People with right hemisphere deficits, depending on the site and extent of their lesions, can present with a variety of symptoms that might otherwise be characteristic of schizophrenia, which suggests that an unbridled left hemisphere drives these processes. Cognition is also described in terms of the functional differences between the two hemispheres, notably the right hemisphere's dominance in alertness and sustained attention and the left hemisphere's governance of focused and selective attention. The second half of the book is what separates it from other academic works focused on the neuroscience of

brain asymmetry. This is where the author takes his framework of the left hemisphere's self-obsessed reductionism and the right hemisphere's empathic holism and tries to "understand the structure of the world that the brain has in part created" (p. 1). The author describes at length the left hemisphere's ruthless campaign to control all that it encounters, perhaps based on its increased interconnectivity and self-referential qualities, and describes how this has subsequently affected both modern Western culture and the individuals who live within it. Here are the author's musings of schizophrenia as a "modern disease," a concept buttressed with data showing a spike in the prevalence of chronic psychotic illness after the 18th century and the left hemisphere-dominated industrialization of the Western world. From here, the author proposes that certain essential elements of left-hemispheric schizophrenia psychopathology, such as hyper-rationalism, hyper-reflexive self-awareness, disengaged emotionality, and disembodied existence, have become defining characteristics of Western culture. Of the evidence the author provides to support this thesis, perhaps the most fascinating is the juxtaposition of famous modern art pieces, including the works of Matisse, Magritte, and Picasso, with the artwork of schizophrenia patients and his frank comparisons between the two. Iain McGilchrist describes his topic as "neurophilosophy," which means that his book traverses between the respected fields of Wernicke and Buber throughout its chapters. Perhaps this is why he proudly and primarily identifies himself as a psychiatrist. For indeed all psychiatrists, no matter how biologically or dynamically oriented they might be, have shared intellectual curiosities that span the divide between neuroscience and philosophy. And yet it is clear that this book is not written primarily for the practicing psychiatrist. The author does not discuss at great length how the neuroanatomy of right and left brain asymmetry can help to explain the pathophysiology of mental illness nor how this knowledge can aid in the treatment of this patient population. This aside, Iain McGilchrist's crusade against brain unilateralism results in a brilliantly written book that valiantly addresses the effect hemispheric asymmetry has had on Western civilization. And while the author quotes Ramachandran and Heidegger more frequently than Freud and Bleuler, *The Master and His Emissary* is still certainly a relevant book for any psychiatrist (and any neuroscientist or philosopher for that matter).

<http://ajp.psychiatryonline.org/article.aspx?articleid=115958>

Hersenen

De linkerhelft is de Berlusconi van de hersenen'



Psychiater Iain McGilchrist over de ontwikkeling van de hersenhelften en de arrogantie van de Verlichting

Twintig jaar werkte de Britse psychiater Iain McGilchrist aan *The Master and his Emissary*, zijn boek over de werking van de twee hersenhelften. Elk van de helften onderhoudt een eigen relatie met de wereld, schrijft hij. Maar in verschillende periodes van de

geschiedenis ontkent de linkerhelft van de hersenen het bestaan van de rechterhelft. Met grote gevolgen: er ontstaat een scheve, kortzichtige blik op de wereld. „Er is niets fundamenteel mis met de linker hersenhelft,” zegt McGilchrist. „Het probleem is alleen dat hij zijn eigen beperkingen niet kent. Zo ook met de Verlichting. Het is een van mijn favoriete tijdperken, maar het leidde hier en daar tot de hoogmoedige gedachte dat wanneer we alles weten, ook alle problemen kunnen worden opgelost. Dat is belachelijk naïef. Dat is de opvatting van een kind dat nodig geconfronteerd moet worden met de wereld van volwassenen.”

‘Mijn grootste angst was dat ik genegeerd zou worden. Ik ben tenslotte een nobody.’ Iain McGilchrist zit tegenover me in de bar van een hotel in Londen. Hij is een kleine, bebaarde man met een spontane, opvallend hoge lach. „Ik ben begonnen als literair criticus. Als twintiger schreef ik recensies en artikelen voor alle bekende bladen. Toen werd ik psychiater, trouwde, kreeg kinderen en werkte twintig jaar lang aan één boek. Toen dat vorig jaar eindelijk verscheen, wist echt niemand meer wie ik was.”

Genegeerd werd McGilchrist niet. *The Master and his Emissary* verscheen bij Yale University Press, kreeg overwegend juichende recensies, en werd genomineerd voor prijzen. Bovendien, zegt hij, verkoopt het boven verwachting goed. „Ik voel me vereerd, want ik wist dat ik een onorthodox boek heb geschreven. Het verbaast me niet dat hier en daar in de academische wereld reacties zijn uitgebleven. Veel wetenschappers schrikken terug voor de grote greep. Ze vinden het ook raar wanneer iemand over wetenschap én kunst schrijft. Bovendien willen ze niet als goedgegelovig te kijk staan. De relatie tussen onze twee hersenhelften is een onderwerp waar niemand zijn vingers aan wil branden. Terwijl iedereen toegeeft dat het belangrijk is. Ik heb, kortom, mijn hoofd op het hakblok gelegd.”

In het eerste deel van *The Master and His Emissary* onderzoekt McGilchrist de werking van de twee hersenhelften. Zijn stelling is dat iedere hersenhelft een geheel eigen relatie met de wereld onderhoudt; in het beste geval werken ze samen, in het slechtste geval ontkent de linkerhelft het bestaan van het rechterhelft.

Hoewel zijn beweringen gestaafd worden door uitvoerig wetenschappelijk bewijs („de gebonden editie van mijn boek had een bibliografie van 170 bladzijden”), schrikt hij niet terug voor beeldspraak. Hij gebruikt een allegorie van Nietzsche om de verhoudingen duidelijk te maken: de rechterhelft is de meester die het geheel overziet en de linkerhelft nodig heeft als afgezant om zijn domein precies in kaart te brengen. Wanneer de gezant zichzelf als meester gaat zien en zich niet langer geroepen voelt de verzamelde informatie terug te brengen aan de meester, ontstaat een scheve, kortzichtige blik op de wereld.

Op welk moment besloot u twintig jaar van uw leven aan één boek te geven?

„Mijn eerste boek, dat in 1982 verscheen, heette *Against Criticism*. Daarin worstelde ik al met wat ik ‘aandachtigheid’ noem. Wanneer je iets uit een kunstwerk haalt om tegen het licht te houden, dan is het al niet meer hetzelfde. Dat was mijn probleem met de literaire kritiek: een schrijver had de moeite genomen om een hoogst individueel werk te scheppen waarin alles met elkaar verweven was. In handen van de criticus veranderde dat in een hoop algemeenheden die je overal kon vinden. Mij scheen dat de criticus precies een andere kant opging dan de kunstenaar. Ik zocht naar een meer organische, ‘belichamende’ manier van kijken. Daarom ben ik medicijnen gaan studeren. Ik wilde greep krijgen op de verhouding tussen lichaam en geest, en die tussen het bewustzijn en de hersenen.

„Ik ging tien jaar later studeren dan de meeste mensen, ik had al een gezin. Mijn zoektocht leidde me naar het gebied waar neurologie en psychiatrie elkaar raken. Op een dag woonde ik een lezing bij van John Cutting, een bekende psychiater die onderzoek had gedaan naar de relatie tussen hersenhelften en psychiatrische stoornissen. Hij stelde dat de rechterhersenhelft ons in staat stelt impliciete betekenissen te begrijpen, terwijl de linkerhelft alleen begrijpt wat expliciet is. De rechterhelft zag de dingen niet afzonderlijk, maar als deel van het geheel. Die helft begreep metaforen, ironie, de manier waarop dingen gezegd werden. Dat was precies wat ik in mijn literaire werk gezocht had, maar waar ik toen geen woorden voor had.”

Dat was uw eureka-moment?

„Absoluut! Ik ben na de lezing op Cutting afgestapt en hem later mijn eerste boek gestuurd. Met hem heb ik later onderzoek gedaan naar de verschillen tussen de hersenhelften en hoe die van invloed zijn op de manier waarop we de wereld zien. Daarna werkte ik een aantal jaren in Amerika, aan de John Hopkins Universiteit, waar men zich bezighoudt met neuro-imageing, het in kaart brengen van de verschillende functies van onze hersenen. Daar viel me ook op hoe letterlijk veel Amerikanen denken. Ze begrepen mijn ironie niet. En allerlei zaken die volgens mij impliciet moeten blijven, maakten zij

expliciet. Studenten van de universiteit kregen bijvoorbeeld een boekje waarin stond hoe ze moesten daten.”

Dat past helemaal in uw betoog over het gevaar wanneer de linkerhelft het voor het zeggen krijgt.

„Dat die helften gescheiden zijn, heeft een evolutionaire functie. Wanneer een vogel een graankorrel tussen zijn snavel moet krijgen, moet hij zijn aandacht daarop richten. Daar zorgt de linkerhersen helft voor. Maar hij zou heel kwetsbaar zijn wanneer hij zich op hetzelfde moment niet van zijn omgeving bewust was. Dat soort aandachtigheid is breder, maar ook opener, minder specifiek gericht. Er kan een vijand opduiken, maar ook een ander vogeltje van hetzelfde soort. Dat is het verschil, de linkerhelft weet al waar hij in geïnteresseerd is. Het is de rechterhelft die prioriteiten stelt en die aan de linkerhelft geeft om verder te onderzoeken. De bedoeling is dat die verzamelde kennis teruggaat naar de rechterhelft om geïntegreerd te worden in een bredere context. Als dat niet gebeurt, krijg je problemen.”

Hoe moet ik me dat voorstellen? U stelt dat de verschillende hersenhelften twee verschillende wereldbeelden scheppen. Wanneer u stelt dat de linkerhelft de neiging heeft zichzelf tot alleenheerser uit te roepen, wat gebeurt er dan in onze hersenen?

„Ten eerste moet je vaststellen dat geen van de helften over alle kennis beschikt. Het probleem is dat de rechterhelft dat weet, maar de linkerhelft niet. Een tijdlang is er evenwicht, en wanneer het te veel een bepaalde kant uitgaat, wordt dat vanzelf gecorrigeerd. Maar wanneer het zwaartepunt te veel op de linkerhelft komt te liggen, gaat het mis. In mijn boek beschrijf ik drie perioden waarin je dat ziet gebeuren. In de zesde eeuw voor Christus zag je dat de Griekse cultuur op haar hoogtepunt was, omdat de twee hersenhelften elkaar aanvulden. In de vierde eeuw was die balans verstoord, toen lag het zwaartepunt op de linkerhelft. In het oude Rome zag je hetzelfde. En in de moderne geschiedenis gebeurde het met de Verlichting.

„Die verschuiving kun je als volgt verklaren. Nadruk op het wereldbeeld van de linkerhelft geeft een gevoel van macht en beheersing. Juist de beperkte blik die deze manier van naar de wereld kijken met zich meebrengt, maakt het gemakkelijker de dingen naar je hand te zetten. Dat is verleidelijk. Ten tweede worden concepten uit de rechterhelft expliciet verbeeld door de linkerhelft. Ze worden vastgelegd, zoals je een landschap vastlegt in een landkaart. Die kaart laat een overzichtelijke werkelijkheid zien, die in zichzelf helemaal coherent is. Iedere tegenstrijdigheid, de mess of life is eruit verdwenen. Men kijkt naar die kaart en denkt: waarom de dingen moeilijker maken dan ze zijn? We hebben toch een concept dat werkt? Het wetenschappelijk materialisme, een mechanisch wereldbeeld kan alles verklaren.

„Maar het leven zelf zegt ons dat het niet zo is. Ons bewustzijn wordt er niet door verklaard, om maar iets te noemen. En talloze andere dingen. Maar zo'n gesloten, overzichtelijk wereldbeeld is verleidelijk. Bovendien is de linkerhelft de Berlusconi van de hersenen, hij heeft controle over de media, hij beheerst ons taalvermogen en

het lineair argumenteren, dat is de manier waarop we onszelf en anderen overtuigen.”

U schrikt er niet voor terug de hersenhelften te vermenselijken.

„Inderdaad. Ik beschouw de metafoor als de manier om de wereld te leren kennen. Wanneer je over de werking van onze hersenen spreekt, zul je altijd een beeld gebruiken. Meestal wordt de metafoor van de machine gebruikt. Ik zie niet in wat het verschil is.”

Maar wat zie je daarvan terug in ons brein? Hoe ziet die verschuiving naar de linkerhelft waarover u schrijft eruit?

„Het is geen verandering in de structuur van onze hersenen zelf. Wanneer je het brein van iemand uit het Florence van de 15de eeuw naast dat van iemand van nu zou leggen, zou je waarschijnlijk geen noemenswaardige verschillen zien. Maar er is, denk ik, wel verschil in de wijze waarop het brein functioneert. Wat onze hersenen rekruteren om te kunnen functioneren, slijt als het ware in. Het brein is plastisch, kneedbaar, en op microniveau zul je zien dat wegen die het brein inslaat, in de toekomst opnieuw gebruikt zullen worden. Op dat niveau kun je wel degelijk kleine, structurele veranderingen waarnemen.”

Het tweede deel van uw boek is een waarschuwing. Wanneer de nadruk steeds meer komt te liggen op het wereldbeeld van de linkerhelft, lopen we grote risico's.

„Het probleem is dat wij vanaf de Industriële Revolutie er in geslaagd zijn het wereldbeeld van de linkerhelft te externaliseren. Tot zo'n honderd jaar geleden leefde 98 procent van de mensen in een natuurlijke omgeving. Nu leeft een groot deel van de mensheid tussen de strakke lijnen van een betonnen wereld, waarin de manier waarop ons brein werkt extern is gemaakt. Op televisie en op computerschermen zien we virtuele representaties die de werkelijkheid onzichtbaar maken. We zijn dermate ontworteld door voortdurende beweging, en onze cultuur verandert zo snel, dat we onze intuïtieve manier van ervaringen opdoen niet langer kunnen gebruiken. We verlaten ons op voorstellingen die zijn gefabriceerd door een bureaucratisch systeem van regels. Wanneer ons brein naar buiten kijkt, ziet het een wereld die al geheel volgens de denktrant van de linkerhelft is ingericht.”

Waarin schuilt volgens u het gevaar?

„Allereerst ontstaat de overtuiging dat één rationeel stelsel van regels voldoet voor alle gevallen. Aristoteles waarschuwde daar al voor, dat we niet moeten denken dat een redenering die in één bepaald geval werkt, op alle gevallen toepasbaar zal zijn. We zijn geneigd te denken dat alle filosofische en praktische kwesties zijn op te lossen. We verliezen ons contact met ons lichaam. Het zou zwaar overdreven zijn te zeggen dat de linkerhelft geen binding met het lichaam heeft, maar het is wel een meer abstracte band. De emoties van de linkerhelft spelen zich meer af op het sociale vlak, hij gaat minder diepe, emotionele verbintenissen aan. De linkerhelft negeert het unieke karakter van het individu. De rechterhelft heeft oog voor de verschillen tussen afzonderlijke gevallen, de

linkerhelft ziet kennis als nuttig middel om mensen in groepen in te delen. De linkerhelft vertrouwt op abstracte kennis, beschouwt het afvinken van hokjes op formulieren belangrijker dan de werkelijke mensen en dingen die daarachter schuilgaan. Men zoekt bevestiging van wat men al denkt te weten en probeert dat onder te brengen in een systeem.”

Zijn zulke dingen echt verifieerbaar?

„Ja. Een heel mooi experiment van een aantal jaren geleden liet dat zien. Men hield proefpersonen een bekend syllogisme voor: alle apen klimmen in bomen. Een stekelvarken is een aap. Dus klimmen alle stekelvarkens in bomen. Iemand bij wie beide hersenhelften functioneren zegt: dat klopt niet, want een stekelvarken is geen aap. Iemand bij wie de linkerhelft buiten werking is gesteld, zegt eveneens: dat klopt niet, want mijn ervaring zegt me dat een stekelvarken iets anders is dan een aap. Maar wanneer alleen zijn linkerhelft werkt, zegt hij ineens: ja, dat klopt, want er staat dat een stekelvarken een aap is. En let wel, het ging om een en dezelfde proefpersoon. Voor de linkerhersenhelft is een interne structuur belangrijker dan ervaring met de werkelijkheid.”

Kun je een hersenhelft gemakkelijk buiten werking stellen?

„O ja hoor. In dit geval gebeurde het met ICT, electro convulsive therapy. Een minuut of tien, vijftien is een hersenhelft dan niet echt actief.”

In uw boek lijkt u het tijdperk van de Verlichting te zien als typisch een product van een overactieve linkerhersenhelft. Dat is tegen het zere been van mensen die juist die periode als een tijd van geestelijke bevrijding en zelfontplooiing beschouwen.

„Laat ik eerst zeggen dat ik de linkerhersenhelft voor absoluut noodzakelijk houd. In mijn boek wilde ik de functies van de rechterhelft rehabiliteren, omdat meestal de verdiensten van taal en logica worden geprezen. De rechterhelft weet dat de linkerhelft noodzakelijk is. Er is niets fundamenteel mis met de linkerhersenhelft. Het probleem is alleen dat hij zijn eigen beperkingen niet kent. Zo ook met de Verlichting. Het is een van mijn favoriete tijdperken, maar het leidde hier en daar tot de hoogmoedige gedachte dat wanneer we alles weten, ook alle problemen kunnen worden opgelost. En die oplossingen zullen allemaal met elkaar in overeenstemming zijn. Dat is belachelijk naïef. Dat is de opvatting van een kind dat nodig geconfronteerd moet worden met de wereld van volwassenen. Ik ben niet tegen de Verlichting, maar wel tegen de arrogantie van de Verlichting.”

Stel dat u gelijk heeft, hoe draaien we die ontwikkeling dan terug? Hoe temmen we de neiging tot dominantie van de linkerhersenhelft?

„Wat zou helpen is wanneer we proberen het geheel te overzien. We zien nu vooral snippers informatie, losse feiten. Wanneer we een stap achteruit doen, krijgen we misschien het overzicht terug. Het maakt al veel uit wanneer we ons van onze manier van denken en kijken bewust worden. Ik ben psychiater en ik weet ook wel dat het geen zin heeft tegen een patiënt met problemen te zeggen wat hij moet doen. Dat moet vanuit hemzelf komen. Ik hoop dat mijn boek helpt om mensen anders naar hun leven en naar de wereld te laten kijken. Gelukkig blijkt uit veel reacties dat dit het geval is. Wat het effect daarvan is zal moeten blijken. Het onderwijs in Engeland staat tegenwoordig geheel in teken van meetbare resultaten, doelen die gehaald moeten worden en het beoordelen van prestaties. De leraren die ik vroeger had, wonderlijk onaangepaste, zeer erudiete personages, zouden in dit systeem geen schijn van kans maken. Net zo wordt mij als dokter steeds vaker door mensen die ergens in een kantoor zitten en geen enkele praktijkervaring hebben, verteld wat ik met mijn patiënten moet doen. Alsof ze niet allemaal verschillend zijn en dus een andere aanpak behoeven! Het zou mooi zijn wanneer mensen die drang om alles te willen beheersen opzij zouden kunnen schuiven. De aanhoudende behoefte aan sensaties lijkt me ook het gevolg van een wereld waarmee men ieder direct contact heeft verloren. Alles is zo dood en gevoelloos dat je voortdurend een schok nodig hebt om tot leven te komen.”

In uw slothoofdstuk stelt u zich open voor kritiek. Wanneer zou blijken dat uw beeld van de relatie tussen de verschillende hersenhelften slechts een metafoor zou blijken te zijn, vindt u dat niet erg. Alleen door metaforen, schrijft u, kunnen we de wereld leren begrijpen.

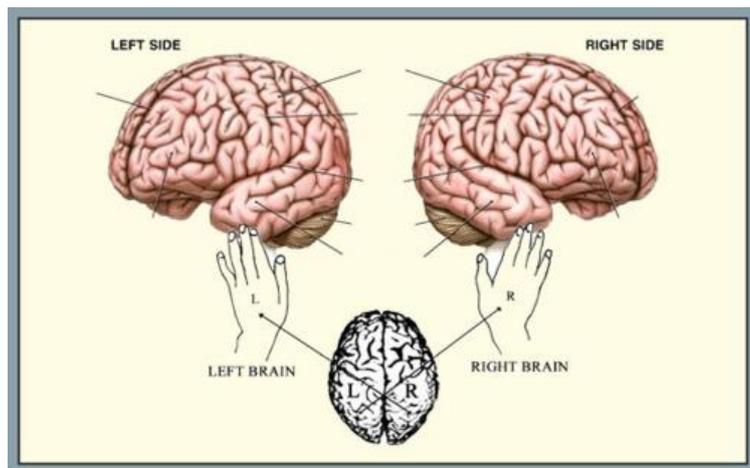
„Natuurlijk gaat het om een hypothese. Ik denk zeker dat er een verband is tussen de verschillende manieren waarop wij de wereld ondergaan en onze twee hersenhelften, het zou gek zijn als het niet zo was. Waarom zouden die twee helften er anders zijn? Maar mocht blijken dat het net even anders is dan ik dacht, dan zit ik daar niet mee. Ik kom met een idee waarvan ik vind dat het waard is om verder te onderzoeken. Ik draag bewijsmateriaal aan. Je kunt me volledig onderuithalen, dat staat iedereen vrij. Maar wel op basis van wetenschappelijk bewijs, graag.”

Iain McGilchrist: *The Master and His Emissary. The Divided Brain and the Making of the Modern World.* Yale University Press, 534 blz. Prijs: 16,-

Eerder sprak Bas Heijne voor de bijlage Boeken met Zadie Smith, Graham Robb, Alessandro Baricco, David Van Reybrouck, Tim Parks, Alain Finkielkraut, John Le Carré, Juan Gabriel Vasquez, Juli Zeh, John Gray en Michele Marzani. De interviews zijn te lezen op www.nrc.boeken.nl.

GARY LACHMAN

on reconciling the two hemispheres of the brain.



Iain McGilchrist

***The Master and His Emissary:
The Divided Brain and the Making of
the Western World***

Yale University Press, November 2010. 544 pp.

For millennia it's been known that the human brain is divided into two hemispheres, the left and the right, yet exactly *why* has never been clear. What purpose this division served once seemed so obscure that the idea that one hemisphere was a “spare,” in case something went wrong with the other, was taken quite seriously. Yet the idea that the brain's hemispheres, though linked, worked independently has a long history. As early as the third century B.C., Greek physicians speculated that the brain's right hemisphere was geared toward “perception,” while the left was specialized in “understanding,” a rough and ready characterization that carries into our own time. In the 1970s and 1980s, the “split brain” became a hot topic in neuroscience, and soon popular wisdom produced a flood of books explaining how the left brain was a “scientist” and the right an “artist.”

Much insight into human psychology can be gleaned from these popular accounts, but “hard” science soon recognized that this simple dichotomy could not accommodate the wealth of data that ongoing research into hemispheric function produced. And as no “real” scientist wants to be associated with popular misconceptions — for fear of peer disapproval — the fact that ongoing research revealed no appreciable *functional* differences between the hemispheres — they both seemed to “do” the same things, after all — made it justifiable for neuroscientists to put the split-brain question on the back burner, where it has pretty much stayed. Until now.

One popular myth about the divided brain that remained part of mainstream neuroscience was the perception of the left brain as “dominant” and the right as “minor,” a kind of helpful but not terribly important sidekick that tags along as the boss deals with the serious business. In his fascinating, groundbreaking, relentlessly researched, and eloquently written work, Iain McGilchrist, a consultant psychiatrist as well as professor of English — one wants to say a “scientist” as well as an “artist” — challenges this misconception. The difference between the hemispheres, McGilchrist argues, is not in *what* they do, but in *how* they do it. And it's a difference that makes all the difference.

Although each hemisphere is involved in virtually everything the brain does, each has its own take on the world, or attitude toward it, we might say, that is radically opposed to that of the other half. For McGilchrist, the right hemisphere, far from minor, is fundamental — it is, as he calls it, “the Master” — and its task is to present reality as a unified whole. It gives us the big picture of a living, breathing “Other” — whatever it is that exists outside our minds — with which it is in a reciprocal relationship, bringing that Other into being (at least for our experience) while it is itself altered by the encounter. The left hemisphere, although not dominant as previously supposed, is geared toward manipulating that Other, on developing means of controlling it and fashioning it in its own likeness. We can say that the right side presents a world for us to live in, while the left gives us the means of surviving in it. Although both hemispheres are necessary to be fully alive and fully human (not merely fully “functioning”: a left brain notion), their different perspectives on the outside world often clash. It's like looking through a microscope and at a panorama simultaneously. The right needs the left because its picture, while of the whole, is fuzzy and lacks precision. So it's the job of the left brain, as “the Emissary,” to unpack the *gestalt* the right presents and then return it, increasing the quality and depth of that whole picture. The left needs the right because while it can focus on minute particulars, in doing so it loses touch with everything else and can easily find itself adrift. One gives context, the other details. One sees the forest, the other the trees.

It seems like a good combination, but what McGilchrist argues is that the hemispheres are actually in a kind of struggle or rivalry, a dynamic tension that, in its best moments (sadly rare), produces works of genius and a matchless zest for life, but in its worst (more common) leads to a dead, denatured, mechanistic world of bits and pieces, a collection of unconnected fragments with no hope of forming a whole. (The right, he tells us, is geared toward *living* things, while the left prefers the *mechanical*.) This rivalry is an expression of the fundamental asymmetry between the hemispheres.

Although McGilchrist's research here into the latest developments in neuroimaging is breathtaking, the newcomer to neuroscience may find it daunting. That would be a shame. *The Master and His Emissary*, while demanding, is beautifully written and eminently quotable. For example: "the fundamental problem in explaining the experience of consciousness," McGilchrist writes, "is that there is nothing else remotely like it to compare it with." He apologizes for the length of the chapter dealing with the "hard" science necessary to dislodge the received opinion that the left hemisphere is the dominant partner, while the right is a tolerated hanger-on that adds a splash of color or some spice here and there. This formulation, McGilchrist argues, is a product of the very rivalry between the hemispheres that he takes pains to make clear.

McGilchrist asserts that throughout human history imbalances between the two hemispheres have driven our cultural and spiritual evolution. These imbalances have been evened out in a creative give-and-take he likens to Hegel's dialectic, in which thesis and antithesis lead to a new synthesis that includes and transcends what went before. But what McGilchrist sees at work in the last few centuries is an increasing emphasis on the left hemisphere's activities — at the expense of the right. Most mainstream neuroscience, he argues, is carried out under the aegis of scientific materialism: the belief that reality and everything in it can ultimately be "explained" in terms of little bits (atoms, molecules, genes, etc.) and their interactions. But materialism is itself a product of the left brain's "take" on things (its tendency toward cutting up the whole into easily manipulated parts). It is not surprising, then, that materialist-minded neuroscientists *would* see the left as the boss and the right as second fiddle.

The hemispheres work, McGilchrist explains, by inhibiting each other in a kind of system of cerebral checks and balances. What has happened, at least since the Industrial Revolution (one of the major expressions of the left brain's ability to master reality), is that the left brain has gained the upper hand in this inhibition and has been gradually silencing the right. In doing so, the left brain is in the process of re-creating the Other in its own image. More and more, McGilchrist argues, we find ourselves living in a world re-presented to us in terms the left brain demands. The danger is that, through a process of "positive feedback," in which the world that the right brain "presences" is one that the left brain has already fashioned, we will find ourselves inhabiting a completely self-enclosed reality. Which is exactly what the left brain has in mind. McGilchrist provides disturbing evidence that such a world parallels that inhabited by schizophrenics.

If nothing else, mainstream science's refusal to accept that the whole can be anything more than the sum of its parts is one articulation of this development. The right brain, however, which knows better — the whole always comes before and is more than the parts, which are only segments of it, abstracted out by the left brain — cannot argue its case, for the simple reason that logical, sequential argument isn't something it does. It can only show and provide the intuition that it is true. So we are left in the position of knowing that there is something more than the bits and pieces of reality the left brain gives us, but of not

being able to say what it is — at least not in a way that the left brain will accept.

Poets, mystics, artists, even some philosophers (Ludwig Wittgenstein, for example, on whom McGilchrist draws frequently) can *feel* this, but they cannot provide the illusory certainty that the left brain requires: "illusory" because the precision such certainty requires is bought at the expense of knowledge of the whole. The situation is like thinking that you're in love and having a scientist check your hormones to make sure. If he tells you that they're not quite right, what are you going to believe: your fuzzy inarticulate feelings or his clinical report? Yet because the left brain demands certainty — remember, it focuses on minute particulars, nailing the piece down exactly by extracting it from the whole — it refuses to accept the vague sense of a reality larger than what it has under scrutiny as anything other than an illusion.

This may seem an interesting insight into how our brains operate, but we might ask what it really means for us. In a sense, all of McGilchrist's meticulous marshalling of evidence is in preparation for this question, and while he is concerned about the left brain's unwarranted eminence, he in no way suggests that we should jettison it and its work in favour of a cosy pseudo-mysticism. One of his central insights is that the kind of world we perceive depends on the kind of attention we direct toward it, a truth that phenomenologists like Edmund Husserl and Martin Heidegger — both invoked by McGilchrist — established long ago. In the homely maxim, to a man with a hammer everything looks like a nail. To the right brain, the world is — and, if we're lucky, its "isness" produces in us a sense of wonder, something along the lines of a Zen *satori* or a sudden delight in the sheer interestingness of things. (As Heidegger and a handful of other thinkers said, that there should be *anything* rather than nothing is the inescapable mystery at the heart of things, a mystery that more analytical thinkers dismiss as nonsense.)

To the left brain, on the other hand, the world is something to be controlled, and understandably so, as in order to feel its "isness" we have to survive. McGilchrist argues that in a left-brain dominant world, the emphasis would be on increasing control, and the means of achieving this is by taking the right brain's presencing of a whole and breaking it up into bits and pieces that can be easily reconstituted as a re-presentation, a symbolic virtual world, shot through with the left brain's demand for clarity, precision, and certainty. Furthermore, McGilchrist contends that this is the kind of world we live in now, at least in the postmodern West. I find it hard to argue with his conclusion. What, for example, do technologies like HD and 3D do other than re-create a "reality" we prefer to absorb electronically?

McGilchrist contends that in pre-Socratic Greece, during the Renaissance, and throughout the Romantic movement of the late eighteenth and early nineteenth centuries, the two hemispheres reached a brilliant accord, each augmenting the other's contribution. Through their creative opposition (as William Blake said, "Opposition is True Friendship") they produced a high culture that respected the limits of certainty and honored the implicit,

the tacit, and the ambiguous (Keats's "negative capability"). But since the Romantics, the left brain has increasingly gained more ground; our use of "romantic" as a pejorative term is itself a sign of this. With the rise of modernism and then postmodernism, the notion that there is anything outside our representations has become increasingly jejune, and what nature remains accessible to us is highly managed and resourced. McGilchrist fears that in the rivalry between its two halves, the left brain seems to have gained the upper hand and is steadily creating a hall of mirrors, which will soon reflect nothing but itself, if it doesn't do so already.

The diagnosis is grim, but McGilchrist does leave some room for hope. After all, the idea that life is full of surprises is a right brain insight, and as the German poet Hölderlin understood, where there is danger, salvation lies also. In some Eastern cultures, especially Japan, where the right brain view of things still carries weight, McGilchrist sees some possibility of correcting our imbalance. But even if you don't accept McGilchrist's thesis, the book is a fascinating treasure trove of insights into language, music, society, love, and other fundamental human concerns. One

of his most important suggestions is that the view of human life as ruthlessly driven by "selfish genes" and other "competitor" metaphors may be only a ploy of left brain propaganda, and through a right brain appreciation of the big picture, we may escape the remorseless push and shove of "necessity." I leave it to the reader to discover just how important this insight is. Perhaps if enough do, we may not have to settle for what's left when there's no right.

Gary Lachman is the author of more than a dozen books on the links between consciousness, culture, and the western counter-tradition, including Jung the Mystic, and A Secret History of Consciousness. He is a contributor to the Independent on Sunday, Fortean Times, and other journals in the US and UK, and lectures frequently on his work. A founding member of the pop group Blondie, as Gary Valentine he is the author of the memoir New York Rocker: My Life in the Blank Generation.

<http://bit.ly/vYVmpN>

Neuropsychology, Coming Alive with the Right Metaphor - Iain McGilchrist
(edited: TOWARDS – december 2011 issue 1)

NEUROPSYCHOLOGY
Coming Alive with the Right Metaphor

Interview with Psychiatrist Iain McGilchrist
by Narda Azaria Dalgleish

“It is not that the right hemisphere connects - because what it reveals was never separated; it does not synthesise - what was never broken down into parts; it does not integrate - what was never less than whole.

Iain McGilchrist *The Master and his Emissary*

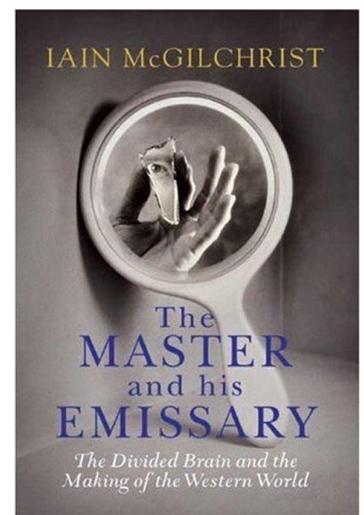
Leading Psychiatrist and writer Iain McGilchrist studied theology and philosophy whilst teaching English literature at Oxford. The initial idea of writing the book came to him in the early 80's before he started training in medicine. At the time, Iain had been troubled by problems of the academic study of literature, in that the whole process of literary criticism seemed to involve making explicit what had to remain implicit, thus misunderstanding by that process what is embodied, both in us and in works of art. He studied what was then thought of as the 'mind-body problem', but found the philosophers too disembodied in their approach. Consequently Iain decided to train in medicine and gain, as far as possible, first-hand experience of how the brain and body actually affect the mind, and vice versa.

“Metaphor is not just a reflection of what has been, but the means whereby the truly new, rather than just the novel, may come about ... All understanding, whether of the world or even of ourselves, depends on choosing the right metaphor. The metaphor we choose governs what we see. Even in talking about understanding we cannot escape metaphors.

Iain McGilchrist, *The Master and his Emissary* p 179



The Master and his Emissary, is a groundbreaking book, not only because it gathers and interprets a comprehensive body of recent research on the brain (revealing a profound difference in the way the two hemispheres experience the world). Not only because it establishes a new, much bigger and unified frame of reference for understanding its findings within the scientific and the medical sectors. Not only because



it correlates these findings with the thought and belief of artists and philosophers throughout the history of Western culture. Not only because it warns that, despite its inferior grasp of reality, the effects of left hemisphere dominance are increasingly taking precedence and thereby causing disastrous consequences; and not only because it implies that our global crisis is a spiritual crisis. But, also, and perhaps more importantly, because this is the first time that a book of such monumental scientific scope, unfolds, through an effusion of 'primary' evidence, the incomparable magnitude of the human potential to apprehend and be creatively expressive of its ultimate reality – a living, undivided conscious whole; thus corroborating, perhaps unintentionally, the bedrock premise of so many great esoteric traditions.

For more information visit Iain McGilchrist [Homepage](#)

'The title of the book, The Master and His Emissary, is loosely based on a story in Nietzsche about a wise spiritual master, who was the ruler of a small but prosperous domain, and who was known for his selfless devotion to his people. As his people flourished and grew in number, the bounds of this small domain spread; and with it the need to trust implicitly the emissaries he sent to ensure the safety of its ever more distant parts. It was not just that it was impossible for him personally to order all that needed to be dealt with: as he wisely saw, he needed to keep his distance from, and remain ignorant of, such concerns. And so he nurtured and trained carefully his emissaries, in order that they could be trusted. Eventually, however, his cleverest and most ambitious vizier, the one he most trusted to do his work, began to see himself as the master, and used his position to advance his own wealth and influence. He saw his master's temperance and forbearance as weakness, not wisdom, and on his missions on the master's behalf, adopted his mantle as his own – the emissary became contemptuous of his master. And so it came about that the master was usurped, the people were duped, the domain became a tyranny; and eventually it collapsed in ruins.'

Narda: When you mentioned the failure of our education system in a recent talk, you said that education is not a thing that can be inserted in another thing like a widget into a machine, but it's a relationship that though indescribable, you intimated it's about 'a manner, a tone, an enquiring mind, an openness, a model of what a certain way of being might be for those who are still in the process of becoming who they are.' Which metaphor would you choose for 'Being' as the educational context for the process of becoming who we are?

Iain McGilchrist: That's quite a question! Of course there can't be a metaphor for being as such, since it is the core mystery, along with time, as Heidegger saw, and we can't compare it – or time, for that matter – with anything else at all. But I would try to answer you by saying that we are all in the process of becoming what we are, and that everything that is, is also only becoming. And so there never is an 'is' in the static sense. We are always, all our lives, work in progress – and so, actually, is everything that 'is'.

“ If we see things as separate, fixed, certain, and interacting only as billiard balls may be said to interact – clashing and flying apart unchanged by the interaction – then we have a rather skewed view of our relations with one another and the planet, and we have a skewed view of what it is we do when we learn and when we begin to understand the world. Our sense is radically impoverished and misleading.

I suppose one of my cardinal points is that everything, for us as human beings, exists under two aspects: one is static, fixed, isolated and certain, and that corresponds with 'being as representation' (what the left hemisphere delivers); and the other is flowing, changing, connected and uncertain, and that corresponds with 'being in itself', which is also a 'being as becoming' (what the right hemisphere delivers). But ultimately the first is only a special way of conceiving the second, *once time has been removed from the picture*. The reality, as Heraclitus saw, and others in the East have seen before and since, is that 'everything flows'.

Now all that probably sounds very rarefied and mystical. But it has immediate consequences for how we see the world and our relationship to it. If we see things as separate, fixed, certain, and interacting only as billiard balls may be said to interact –



Photo: Zhou Maoshu – *Appreciating Lotuses, 15th century, Tokyo National Museum, source.*

clashing and flying apart unchanged by the interaction – then we have a rather skewed view of our relations with one another and the planet, and we have a skewed view of what it is we do when we learn and when we begin to understand the world. Our sense is radically impoverished and misled. It becomes as if we exist only as processors of bits of information in a world that also exists only as a heap of bits. Our governing metaphor is the machine, something we put together from parts. But in my belief our governing metaphor should rather be the tree, or the river, or the family, something that grows organically, changes, and evolves, and where the fretting about the relationship

between parts and whole reveals itself to be based on a misunderstanding.

Narda: Yes, and it's intriguing to notice how these governing metaphors bring in more complementary angles to this learning process. But I wonder what you mean, Iain, by 'fretting about the relationship between the parts and the whole' - as I may be one of those in error?

I'm asking this because for me, knowing about the proper relationship between the parts and the whole was for many years, and still is, a major engagement in the process of my education. I simply had to know about my possibility to explore, as a 'leaf', metaphorically speaking, the fact that I have no existence whatsoever apart from the existence of the tree; that the tree is 'me' utterly; and that though I am none other than the tree, I am not the tree nor shall ever 'become' it. As a drop of water, I dread to think how I would be like without the given insight that when I am frozen, boiling, misty, fizzy, coloured, bitter, toxic, sweet, etc., all these qualities are only partial or passing states of 'my' primordial wateriness. Without these didactic pointers I'd be lost in paradoxical confusions, despair and hopelessness!

Iain McGilchrist: I think you are expressing here very well what I mean. The apparent 'parts' of something are an accidental consequence of a certain way of looking at the world. In reality every 'part' has to be seen as connected to everything else. In the book I say: 'It is not that the right hemisphere connects – because what it reveals was never separated; it does not synthesise – what was never broken down into parts; it does not integrate – what was never less than whole'.

But you also draw attention to how we, as individuals, are distinct. And it seems essential that here are these boundaries. Boundaries are creative. According to the creation myth, God created the world by dividing the light from the darkness, the sea from the dry land, etc. In other words differentiation is part of creation. But this is not a differentiation that leads to a

sundering, but to an unfolding of what was there before – no longer implicitly or potentially present, but explicitly and actually present. One of the themes of my book is that we need both division and union, but that we need them – division and union – to be unified.



Horizon after sunset, detail, [source](#).

Narda: Your nagging question in the book, Iain, ‘If the brain is all about making connections why is it so clearly and profoundly divided?’ – Why is understanding the answer to this question so important?

Iain McGilchrist: Another big question! It is a fascinating question, really, because it is so obvious, so central and so simple, and yet has never really been addressed at all. It has been taken for granted that ‘that is just how it is’. But evolution never works at random: its conservation of this divide – indeed its accentuation of it, since the divide has become more pronounced with evolution, not less so – must fulfill some fairly basic need. I think it does, and that the key here is to do with attention.

Essentially all living creatures need to be able to attend to the world minutely, in order to get hold of things that they need to manipulate and to use, mainly for food and shelter. For this they

“ It is the right hemisphere which has the job of reintegrating the two visions, or ‘takes’, and trying to hold them together. It always sees more of the picture, literally, than the left hemisphere, and it is also more able to hold two apparently conflicting pieces of information in mind without having to collapse them into one consistent reality – it can do ‘both/and’ where the left hemisphere has to have ‘either/or’.

require a very narrow beam of precisely focused attention, devoted to something that has already been prioritised. But they need also to keep watch in the broadest possible way for whatever else exists, without preconception, be it friend or foe. This is a relational form of attention – the priority is the

creature’s relationship to the world at large. Since the way in which we attend to the world alters what we find there, these two kinds of attention bring into being for us two different, incompatible worlds, with different qualities and values, both of which, however, must be experienced simultaneously. Hence, I believe, the importance of the hemispheric divide. It makes possible two otherwise conflicting realms of consciousness, two ‘takes’ on the world, simultaneously. In our daily lives we need constantly to combine them, without being aware that we are doing so.

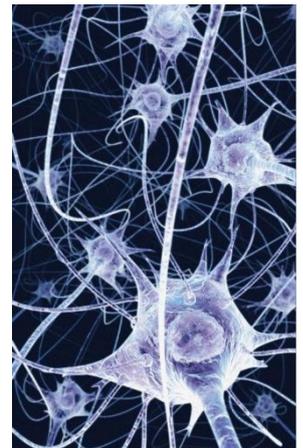
Narda: Yes, fascinating indeed, especially as the divide between the hemispheres has become accentuated with human evolution. What also comes to mind – apart from the basic multi-functionality that the division ‘enables’ – is how well this metaphor of the divided brain corresponds, at least from a metaphysical perspective, with the dual nature of reality; that, although singular in itself, it is simultaneously a particle and a wave; an interior and exterior; absolute and relative; transcendent and immanent; all-inclusively one and many; hidden and apparent; infinite and finite; ‘actor’ and acted-upon; objective and subjective and so on. What this implies to me is that we must necessarily have an inherent, super-special aptitude for having a unified perception, ie one

that ‘interfaces’ contraries *consciously*, without making their essential uniqueness uniform (some may think ‘unified vision’ means uniformity, or loss of uniqueness.) Is that what the right hemisphere ‘does’ after receiving processed ‘data’ back from the left?

Iain McGilchrist: Again you are right on target here. There do seem to be these two aspects of reality that have to be accommodated by modern physics and that were accommodated in some ancient oriental philosophies. When my book came out, Peter Barab sent me a copy of his book, *The Complementary Nature of Reality*, which he, too, had been working on for twenty years and which coincidentally was published the same month. In it he draws attention to these necessary complementary aspects of reality, and when he read my work he immediately recognized the point I was making about the two ways our brains have of constituting reality. The question for him and me is this: does the cosmos look like this because our brains mediate it to us using the two modes of apprehension of the two hemispheres? or are the two hemispheres adapted in the way they are in order to capture and deal with these two pre-existing aspects of reality? I am not sure if there exists a way to get purchase on that question. However it is the right hemisphere, as you say, which has the job of reintegrating the two visions, or ‘takes’, and trying to hold them together. It always sees more of the picture, literally, than the left hemisphere, and it is also more able to hold two apparently conflicting pieces of information in mind without having to collapse them into one consistent reality – it can do ‘both/and’ where the left hemisphere has to have ‘either/or’.

Right Image: Brain Neurones [source](#)

Narda: I love this ‘both/and’! But I want to mention also that thanks to this reply I now come to think that I didn’t quite get the subtitle of your book to begin with... I somehow juxtaposed the two parts: ‘*The divided brain*’ with ‘*the making of the western world*’, assuming that the latter was the consequence of our left hemisphere disconnection from reality caused by the increasing brain divide! So if, indeed, this divide accentuation has *no* evolutionary bias to the left hemisphere, may we infer from this and from all the rest of the evolutionary changes in the brain that the ultimate current of our human evolution flows towards the imperatives of the right hemisphere?



Iain McGilchrist: I certainly didn’t mean that the western World was a consequence of overemphasis on the left hemisphere – that has occurred only relatively recently. If there is an evolutionary imperative, it is to keep the two modes of attention apart, but for the left hemisphere’s relatively simple take on the world (for the purposes of manipulation only) to be taken up into the vision of the right hemisphere. It has a tendency to think it knows it all – it doesn’t know what it is that it doesn’t know. Therein lies the danger.

Narda: Another aspect of this imperative is ‘tending’ in the sense of service. What does service mean in this context?

Iain McGilchrist: This is a complex question. To the left hemisphere, getting for oneself is the goal. To the right hemisphere, which understands reciprocal relationships and the essential ‘betweenness’ of things, we can never be wholly distinct, and our fate is shared. So service is a giving which is

also a receiving. But there is another point here. Ultimately the right hemisphere is aware of the (according to the left hemisphere) paradoxical nature of existence – that often opposites coincide. So that in yielding we conquer, in losing we may be enriched. This truth is held by all the great traditions of wisdom with which I have any acquaintance.

Narda: I'd like to go back to the question of education as a relationship. You say there is evidence, contrary to common belief, that the direction of neurones is not linear, sequential, or unidirectional but reciprocal and reverberative. You say, 'It seems that this reciprocity, this betweenness, goes to the core of our being. Further than even this, there is fascinating evidence that betweenness and reciprocity exist at the level of cell structure and function within the single neurone, even at the molecular level, as the brain comes to understand something and lay down memory traces' ('The Master..etc', p.194) You suggest that this reciprocity may happen even at a subatomic level. What does this reverberative, reciprocal factor imply about the way we may come to know ourselves?

Iain McGilchrist: I drew attention to this because people might say, 'Well, you know, it is all very well you talking about how the right hemisphere of the brain construes knowing something as a back and forth, 'reverberative', process, but the brain itself surely processes information in a linear, sequential fashion – each neurone sending a message to the next, and so on'. But in fact this is not the case. Marcel Kinsbourne, one of the most distinguished living neuroscientists, writes: 'Counter to the traditional image of the brain as a unidirectional information thoroughfare, when cell stations in the brain connect, the traffic is almost always bi-directional. The traffic is not in one direction, with a little feedback, either. Areas interact equally in both directions, directly reciprocally, or indirectly by looping across several cell stations, so that the neural traffic reverberates through its starting point. The forebrain is overwhelmingly an arena of reverberating reciprocal influence.' And there is constant reciprocal feedback within the cell and its organelles. Although it does not teach us anything direct about our knowledge of ourselves, I think it explodes one of the main obstacles to seeing the right hemisphere's mode of apprehension and attending to the world as the fundamental way in which we can understand anything at all.

An important implication of this is that it matters a lot where we start the process, where the first approximation to understanding begins. Because it is possible to exclude some aspects of the picture right at the outset by choosing a model or metaphor as the starting point that will never, from then on, allow certain aspects of reality to be revealed. We only see what we expect to see – there is a vast psychological literature on this. So, more and more, we can only harden up the vision we already have. It is hard indeed to break out of the system we make for ourselves.

Narda: Yes, and where we start the process can also imply that we could respond and relate 'originally' – from the origin. We increasingly talk about our interconnectedness and interdependence but rarely attribute them to the unity of our being as origin; I really cannot see how a complete shift in consciousness can come about without, inevitably, shifting us to a new language of oneness. Considering the complexity, richness and exponential mutability of modern language, what would a universal vernacular sound like under the 'domain' of the right hemisphere's paradigm of the unity of all being?

Iain McGilchrist: I am not sure I would agree about the 'complexity, richness and exponential mutability of modern language'. We cannot do to language what it cannot sustain.

Language is a living thing that evolves with a culture at its own pace, and cannot be forced. If we attend to the real meaning of the words we use, it can anchor us and save us from many fallacies. The fact that there is a sort of Babel does not mean that language is complicit with the assault on it. And we need both the left hemisphere's take *and* the right hemisphere's – something that only the right hemisphere sees. The Master knows he needs his Emissary: it is only the Emissary that thinks he doesn't need the Master. People often ask me, when I describe what the left hemisphere's world would look like, 'well, what would the right hemisphere's world look like?' The answer is: remarkably balanced. It would understand the importance of both division and union. It would see the importance of the union of the two.

Narda: Thank goodness for the unprecedented, global, sweeping eruption of the social justice movement throughout this year, but are we still failing to diagnose and address the mother of all our man-made systemic diseases? Which is that hardly any university, if any, teaches their students how to question their existence in the real context of their 'fullest potential', nor does it teach them about their inherent aptitude to learn and verify reality through self-knowledge? Can I be cheeky and ask – were you to be given a University to run, with a full license for change, what would you do? How would it look like, say, in ten, twenty, years' time?

Iain McGilchrist: Ah, so much to say, and so little skill to say it. Fortunately I have never been attracted to positions of influence. There is plenty I would *not* do. I would not micro-manage and over-control the process. I would appoint good teachers; people who had a philosophical and enquiring mind, enthusiasts for their subject, and let them get on with the job. I think university should come later in life: too many students don't really know why they are doing what they are doing, and see it as a way to increase earning potential – hardly surprising when we openly preach that education is instrumental, rather than a good in itself. Nothing can be understood without a philosophical context, and without sustained attention. Nowadays we downplay the teaching of the humanities, which provided that context, and the patient application of curious and respectful attention. Self-respect and respect for others go hand in hand, and sadly many people grow up with neither. We betray our charges if we do not expect and demand much from them. We sell out on self-discipline, worry about being demanding because it might be elitist, and focus far too much on getting answers, when the only virtue is in asking the right questions. I'm afraid that teaching is too conventional: what passes as unorthodox is often just another orthodoxy, and there is a risk that disdain born of ignorance becomes a substitution for intelligent and respectful skepticism.

Narda: You speak a lot about the false certainty that presides under the domination of the left hemisphere, and of the healthy uncertainty under the right hemisphere. And it seems that the kinds of certainties you are talking about are to do with assumptions held as truths, or with prediction of accidental outcomes. But if there *is* a kosher kind of certainty that is not attached to an assumption or outcome, would it not be the certainty in truth, or reality itself? Is it not an essential necessity for us – especially today when 'our future' is so evidently uncertain and frightening – to know with unshakable certainty, even if we can't see or understand it fully, that each of us is inseparably connected to reality as our inexhaustible potential?

Iain McGilchrist: As I say somewhere in the book, the only certainty is that those who are certain they are right are certainly wrong. That is the only truth to which there can be no exceptions.

Narda: What would you say, or how would you be, Iain, with a patient who has sunk into an abyss of despair and hopelessness? Is there any centre-point they could hold onto as a verifiable reality?

Iain McGilchrist: It is very hard to dispel despair, and what one says or does depends on the circumstances and the person in front of you. With true depression, it often seems as if it doesn't matter what one says or does, because everything is somehow poisoned, and has lost the power it might normally have to pull someone away from the abyss. In these circumstances one has to hope that the mere fact of one's presence and undivided attention can communicate the sense to the other party that they are not alone. Mindfulness – the art of, as much as possible, being present in the moment, and aware of all the sensations and perceptions that come from the world around one, can sometimes help bring people back from the abyss. That perhaps is the 'verifiable reality' you refer to, as distinct from the world of phantasmagoria which besieges the depressed mind.



Martin Heidegger, source

Narda: You quote Heidegger two or three times in the book saying, 'Where there is danger, that which will save us also grows'. Do you see any signs of the growth of that which will save us?

Iain McGilchrist: The force of that remark of Heidegger's lies in the idea that something healing can arise from the very thing that presents a threat. So

the left hemisphere can help us to see things that may lead us out of the place we seem to be stuck in. More and better analytical work can illuminate the limitations to analytic thinking. The very loss of authenticity in the left hemisphere's world can also prompt us to re-evaluate and move towards something more authentic. I think we can see this happening in the crisis of capitalism, for example. The extraordinary response to my book suggests that our society is ripe for a change of outlook, and that a purely materialistic approach has had its day. But we need to act fast, because we do not have the luxury of time. Our fate may overtake us before we realize what needed to be done.

Narda: You stress the importance of 'depth of community'. Could you explain?

Iain McGilchrist: Robert Putnam's wonderful book *Bowling Alone* reveals the extent of what sociologists call the loss of social capital in the years since the Second World War. Social capital refers to a sort of belonging and connectedness which exists in a real community who meet regularly, know one another, and interact with, and care about, one another. It is more important than anything else, even mental and physical well-being, in predicting happiness. People sometimes speak as though they thought the barrage of virtual communication to which we are subjected somehow equated to a real community, with real embodied people in a real place on earth, as though 400

'friends' on Facebook were as good as one or two friends in the non-virtual world.

Narda: In the second half of your book you mention with affection the mosaic of the Deesis at the Chora Church in Istanbul ('Chora' meaning Place, Land, Field). It struck me that the mosaics in the entrance describe Christ as the 'Land of the Living' - (it struck me, because I like the idea that 'to be', or, to be a human being in the fullest sense, means to be a 'place-of-manifestation' of the Alive). I'd love to hear about what you feel is the meaning and importance of art, and about your response to the Deesis mosaic in Chora.



Deesis image source, Christ, detail, source, Mary, detail, source.)

Iain McGilchrist: I first saw these mosaics about 40 years ago, and I found it almost impossible to tear myself away from them. I don't think one needs to be a Christian or a believer in any one faith to understand their power. Apparently they say nothing, and yet they leave nothing about the human predicament unsaid. They exemplify how astonishingly moving and life-changing true art can be. Too much art nowadays is commodified, self-conscious, setting out primarily to be clever, to make a name for the artist, and to establish monetary value. Yet we do not know the name of the person or persons who completed these mosaics. The artist didn't think that important. In a secular age, we need the arts more than ever to evoke a sense of the transcendent, to transmit what you call 'the Alive'.

Narda: Indeed! I would like to express my profound gratitude to you, Iain! Thank you for being so graciously generous with your time and patient with me. This interview has been by far the most deliciously challenging, enlarging and rewarding.

http://towardsmagz.org/?page_id=320

Iain McGilchrist

Na te zijn afgestudeerd in de Engelse letterkunde aan de Universiteit van Oxford begon Iain McGilchrist (°1953) met succes aan een loopbaan als docent en literatuurcriticus. In 1982 publiceerde hij "Against Criticism".

Twee jaar later begon hij aan de studie medicijnen en psychiatrie. In de jaren negentig zette hij in Londen een praktijk als psychiater op. McGilchrist is ervan overtuigd dat de menselijke geest en hersenen alleen kunnen worden begrepen in een brede maatschappelijke en culturele context.

Naast zijn werk als psychiater werkte hij twintig jaar aan *The Master and his Emissary*, over de linker- en rechter hersenhelft. Het boek werd door veel Britse critici lovend besproken.

<http://waarnemingvandewerkelijkheid.blogspot.com/2011/04/hersenen.html>

The Master and his Emissary is a groundbreaking book,

not only because it gathers and interprets a comprehensive body of recent research on the brain, revealing a profound difference in the way the two hemispheres experience the world,

not only because it establishes a new, much bigger and unified frame of reference for understanding its findings within the scientific and the medical sectors,

not only because it correlates these findings with the thought and belief of artists and philosophers throughout the history of Western culture,

not only because it warns that, despite its inferior grasp of reality, the effects of left hemisphere dominance are increasingly taking precedence and thereby causing disastrous consequences,

and not only because it implies that our global crisis is a spiritual crisis,

but, also, and perhaps more importantly, because this is the first time that a book of such monumental scientific scope, unfolds, through an effusion of 'primary' evidence, the incomparable magnitude of the human potential to apprehend and be creatively expressive of its ultimate reality – a living, undivided conscious whole; thus corroborating, perhaps unintentionally, the bedrock premise of so many great esoteric traditions.

Narda Azaria Dagleish