



TITLE: The Divided Brain and the Making of the Western World

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Iain McGilchrist: The division of the brain is something neuroscientists don't like to talk about anymore. It enjoyed a sort of popularity in the '60s and '70s after the first split brain operations, and it led to a sort of popularisation which has since been proved to be entirely false. It's not true that one part of the brain does reason and the other does emotion; both are profoundly involved in both. It's not true and language resides only in the left hemisphere, it doesn't, important aspects are in the right. It's not true that visual imagery is only in the right hemisphere, lots of it is in the left.

And so in a sort of fit of despair people have given up talking about it but the problem won't really go away because this organ which is all about making connection is profoundly divided. It's there inside all of us. And it's got more divided over the course of human evolution so that the ratio of the corpus colosum to the volume of the hemispheres has got smaller over evolution. And the plot thickens when you realise that one of the main, if not the main, function of the corpus colosum is in fact to inhibit the other hemisphere.

So something very important is going on here about keeping things apart from one another. And not only that, the brain is profoundly asymmetric, it's broader at the back on the left and broader on the right at the front and slightly juts forward and backward. And it's as though somebody's got hold of the brain from underneath and given it a sort of sharp twist clockwise.

What is all that about? If one just needed more brain space one would do it symmetrically, the skull is symmetrical, the box in which all this is contained is symmetrical. Why go to the trouble to expand some bits of one hemisphere and some bits of another unless they were doing rather different things.

What are they doing? Well it's not just we who have these divided brains; birds and animals have them as well. I think the simplest way to think of it is if you imagine a bird trying to feed on a seed against a background of grit or pebbles it's got to focus very narrowly and

clearly on that little seed and to be able to pick it out against that background.

But it's also, if it's going to stay alive, it's got to actually keep a quite different kind of attention open, it's got to be on the lookout for predators or for friends ((0:02:23.9?)) specifics but for whatever else is going on. And it seems that birds and animals quite reliably use their left hemisphere for this narrow focused attention to something it already knows is of importance to it and they keep their right hemisphere vigilant broadly for whatever might be without any commitment as to what they might be. And they also use their right hemispheres for making connections with the world, so they approach their mates and bond with their mates more using the right hemisphere.

But then you come to the humans and it's true that actually in humans too this kind of attention is one of the big differences. The right hemisphere gives sustained, broad, open, vigilance, alertness where the left hemisphere gives narrow, sharply focused attention to detail. And people who lose their right hemispheres have a pathological narrowing of the window of attention.

But humans are different; the big thing about humans is their frontal lobes and the purpose of that part of the brain - to inhibit, to inhibit the rest of the brain, to stop the immediate happening; so standing back in time and space from the immediacy of experience. And that enables us to do two things. It enables us to do what neuroscientists are always telling us we're very good at which is outwitting the other party, being Machiavellian. And that's interesting to me because that's absolutely right. We can read other people's minds and intentions and if we so want to we can deceive them.

But the bit that always curiously missed out here is that it also enables us to emphasise for the first time because there's a sort of necessary distance from the world. If you're right up against it you just bite. But if you can stand back and see that other

individual is an individual like me who might have interests and values and feelings like mine, then you can make a bond. There's a sort of necessary distance as there is in reading - too close you can't see anything, too far you can't read it.

So the distance from the world that is provided is profoundly creative of all that is human both the Machiavellian and the Erasmian.

Now to do the Machiavellian stuff to manipulate the world which is very important we need to be able to use, interact with the world and use it for our benefit. Food is the starting point. But we also with our left hemispheres grasp using our right hand things and make tools. We also use that part of language to grasp things as we say it pins them down. So when we already know something's important and we want to be precise about it we use our left hemispheres in that way.

And to do that we need a simplified version of reality. It's no good if you're fighting a campaign having all the information on all the plant species that grow in the terrain of battle. What you need is to know the specifics of where certain things are that matter to you and so you have a map and you have little flags. It's not reality but it works better.

The newness of the right hemisphere makes it a devil's advocate it's always on the lookout for things that might be different from our expectations. It sees things in context. It understands implicit meaning, metaphor, body language, emotional expression in the face. It deals with an embodied world in which we stand embodied in relation to a world that is concrete. It understands individuals not just categories. It actually has a disposition for the living rather than the mechanical. And this is so marked that even in the left hander they're actually using their right hemisphere in daily life to manipulate tools with the left hand, it is their left hemisphere not their right hemisphere in which tools and machines are coded.

So this is very interesting. And it changes the view of the body. The body

becomes an assemblage of part in the left hemisphere. If I had to sum it all up I would get away from all those things that we used to say, reason and imagination. Let me make it very clear for imagination you need both hemispheres. Let me make it clear for reason you need both hemispheres. So if I had to sum it up I'd say the world at a left hemisphere dependent on denotative language and abstraction yields clarity and power to manipulate things that are known, fixed, static, isolated, decontextualised, explicit, general in nature but ultimately lifeless. The right hemisphere by contrast yields a world of individual, changing, evolving, interconnected, implicit, incarnate living beings within the context of the lived world, but in the nature of things never fully graspable, never perfectly known and to this world it exists in a certain relationship.

The knowledge is mediated by the left hemisphere is however within a closed system. It has the advantage of perfection but the perfection is bought ultimately at the price of emptiness. There's a problem here about the nature of the two worlds. They offer us to versions of the world and obviously we combine them in different ways all the time. We need to rely on certain things to manipulate the world but for a broad understanding of it we need to use knowledge that comes from the right hemisphere.

And it's my suggestion to you that in the history of western culture things started in the 6th Century BC in the Augustan era and in the 15th/16th Century in Europe with a wonderful balancing of these hemispheres but in each case it drifted further to the left hemisphere's point of view.

Nowadays we live in a world which is paradoxical. We pursue happiness and it leads to resentment and it leads to unhappiness and it leads, in fact, to an explosion of mental illness. We've pursued freedom but we now live in a world which is more monitored by CCTV cameras and in which our daily lives are more subjected to what Tocqueville called "a network of small

complicated rules that cover the surface of life and strangled freedom."

More information - we have it in spades but we get less and less able to use it, to understand it, to be wise. There's a paradoxical relationship as I know as a psychiatrist between adversity and fulfilment, between restraint and freedom, between the knowledge of the parts and wisdom about the whole.

It's the machine model again that is supposed to answer everything but it doesn't. Think about this - even rationality is grounded in a leap of intuition. There is no way you can rationally prove that rationality is a good way to look at the world. We intuit that it is very helpful. And this is not new. At the other end of the process the rationality we know from ((Godel's theorem?)), we know from what Pascal was saying hundreds of years before Godel that the end point of rationality is to demonstrate the limits to rationality.

In our modern world we've developed something that looks awfully like the left hemisphere's world. We prioritise the virtual over the real. The technical becomes important. Bureaucracy flourishes. The picture however is fragmented. There's a lot of uniqueness, the how has become subsumed in what. And the need for control leads to a paranoia in society that we need to govern and control everything.

Why this shift? I think there are three reasons. One is the left hemisphere's talk is very convincing because it shaved everything that it doesn't find fits with its model off and cut it out. So this particular model is entirely self consistent largely because it's made itself so. I also call the left hemisphere the Berlusconi of the brain because it controls the media, it's the one with which we... it's very vocal on its own behalf. The right hemisphere doesn't have a voice and it can't construct these same arguments.

And I also think, rather more importantly, there's a sort of hall of mirrors effect; the more we get trapped into this the more we undercut and ironise things that might have led us out of it and we just get

reflected back into more of what we know about what we know about what we know. And I just want to make it clear I'm not against whatever it is the left hemisphere has to offer, nobody could be more passionate in an age in which we neglect reason and we neglect careful use of language, nobody could be more passionate than myself about language and about reason. It's just that I'm even more passionate about the right hemisphere and the need to return what that knows to a broader context.

It turned out that Einstein's thinking somehow presaged this thing about the structure of the brain. He said, "The intuitive mind is a sacred gift and the rationale mind is a faithful servant. We have created a society that honours the servant but has forgotten the gift."